

**CLASS-XI**  
**ENGLISH CORE (301)**  
**SAMPLE PAPER- 2025-26**

**TIME ALLOWED: 3 HOURS**

**MAXIMUM MARKS: 80**

**GENERAL INSTRUCTIONS:**

1. This question paper has 16 questions. All questions are compulsory.
2. This question paper comprises 3 sections-
  - Reading Comprehension (26 marks)
  - Writing Skills & Grammar (23 marks)
  - Literature (31 marks)
3. Attempt all questions based on the specific instructions for each part.
4. Write the correct question number and part number in your answer sheet.
5. Separate instructions are given with each question/part, wherever necessary.
6. Ensure that questions of each section are answered together.
7. Adhere to the word limit wherever prescribed.
8. Do not write anything on the question paper.

**Section –A (Reading Skills)**

**(26 Marks)**

Typology	Reading Skills	Conceptual understanding, decoding, analysing, inferring, interpreting, appreciating literary conventions and vocabulary, summarising and using appropriate format/s
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**I. Reading Comprehension through Unseen Passages**

**1. Read the following passage very carefully:**

**(10)**

1. They were from an impoverished family that had a bad reputation throughout the entire village. For every day that he would work, Gheesu would take it easy for three. And Madho was so lazy that for every hour he worked, he would smoke his pipe for another. It was because of this that no one would hire them. If at home they had two handfuls of grain, then they said ‘to hell with work’. When they were out of food entirely, Gheesu would climb into a tree and tear off some wood that Madho would then sell in the market, and as long as the money from that lasted, the two of them would wander about without a care in the world.

2. There was no dearth of work in the village. It was a farming village and, for those willing to work hard, there was an unlimited number of ways to earn some money. But people called on them only when the straits were so dire that they were resigned to hiring two men who did the equivalent of one man’s work. If only they were sadhus! They seemed like they had the natural disposition—they had already mastered renunciation and ascetic indifference! Theirs was an odd life. At home, except for two or three earthenware kitchen items, they owned nothing else. For clothes, torn rags hung from their naked bodies. They lived free from the world’s snares and yet were insolvent beneath numerous debts. Everyone slighted them, but they didn’t care. Madho and Gheesu’s destitution was so great that people lent them money, knowing they would never be repaid.

3. At harvest time they would surreptitiously pick peas or dig potatoes to fry them up to eat. Gheesu had passed sixty years devoted to such roguery, and like a good son, Madho followed in his father's footsteps, believing himself content. Gheesu's wife had died some time before, and Madho had gotten married the previous year. From the time that Madho's wife had come, she had tried to civilize them in some way. From her daily work routine, she was able to secure for them two seers of flour and fill the stomachs of these two shameless men. From the time that she had come, both of them had become even lazier and they began to strut about, flouting their new status.

(Source- Adapted from 'The Shroud' by Munshi Premchand)

**1.A) On the basis of your reading the passage, answer the following questions by choosing the best of the given options:** (1x5=5)

i. Choose an option which describes the roguery of Gheesu.

- a) He outshone his father in his renunciatory ways.
- b) For every day that he would work, Gheesu would take it easy for three.
- c) He would climb into a tree and tear off some wood.
- d) For every hour he worked, he would smoke his pipe for another.

ii. The option that best describes the central idea of the passage is-

- a) Madho and Gheesu's affluent lifestyle
- b) lackadaisical attitude of Madho and Gheesu towards life
- c) Madho's marriage and its impact on their laziness
- d) Madho and Gheesu's mastery in renunciation as sadhus

iii. Which of the following options reflects the tone of the narrator in the statement - '*But people called on them only when the straits were so dire that they were resigned to hiring two men who did the equivalent of one man's work*'.

- a) commending                      b) nostalgic
- c) sarcastic                         d) sympathetic

iv. Two statements, Assertion (A) and Reason (R) are given below. Read them and choose the correct answer from the options that follow :

Assertion (A) : Like a good son, Madho followed in his father's footsteps.

Reason (R) : Madho was a dutiful son, who always obeyed his father.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is the incorrect explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

v. Select the option that uses a synonym of the word '*surreptitiously*' as used in the given excerpt - '*.....they would surreptitiously pick peas or dig potatoes*'.

- a) The hunter used to catch rabbits *cunningly*.
- b) The city people *recklessly* raced their cars on the highway.
- c) She hoped to sign a contract with the music company *secretly*.
- d) The Supreme Court has ordered the High Court to deal with the pending cases *immediately*.

**1.B) Answer the following questions:**

**(1x5=5)**

- vi. Explain the ironic undertone in the statement- 'If only they were sadhus!'
- vii. Madho's wife's reformatory approach towards Gheesu and Madho went futile. Do you agree? Justify.
- viii. The father-son duo's destitution seems to be largely self-inflicted. Illustrate with an example from the passage.
- ix. Cite an example to prove that Gheesu and Madho were thick-skinned.
- x. Inferring from the context clues in paragraph 2, find a word which means the same as 'shortage'.

**2. Read the following passage carefully:**

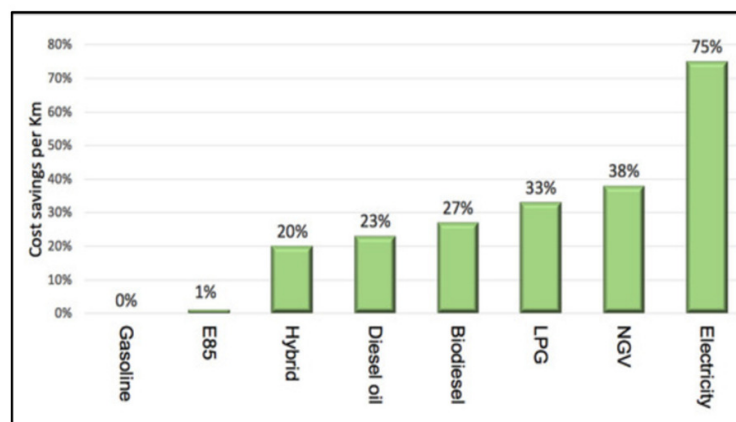
**(8)**

1. Electric Vehicles (EVs) are gaining momentum due to several factors, including price reduction, climate and environmental awareness. The automotive industry is an important world-wide industry in terms of research and development. More technological elements are introduced in the vehicles towards passenger and pedestrian safety. However, the rising number of vehicles has led to a dramatic increase in air pollution levels in urban environments.

2. According to a report by the European Union, the transport sector is responsible for nearly 28% of the total CO<sub>2</sub> emissions, while the road transport is accountable for over 70% of the transport sector emissions. Therefore, the authorities of developed countries are encouraging the use of EVs to avoid the concentration of air pollutants and other greenhouse gases. EVs promote sustainable and efficient mobility through initiatives like tax incentives, purchase aids, free public parking or free use of motorways.

3. EVs offer various advantages over traditional combustion vehicles. Apart from zero emissions, the manufacture processes are more respectful of the environment. The engines are simpler and more compact, leading to cheaper maintenance and fewer breakdowns. EVs do not suffer from the inherent wear and tear produced by engine explosions, vibrations or fuel corrosion. The energy cost per kilometer is lower in EVs and travelling is more comfortable, due to the absence of vibrations or engine noise.

4. EVs are more efficient than traditional vehicles. The overall well to wheel (WTW) efficiency of gasoline vehicles ranges from 11% to 27%, whereas diesel vehicles range from 25% to 37%. In contrast, EVs fed by a natural gas power plant show a WTW efficiency ranging from 13% to 31%, whereas EVs fed by renewable energy show an efficiency up to 70%.



(The image shows a comparison of savings in cost per kilometer offered by vehicles powered by various sources)

5. EVs face significant battery-related challenges. The driving range is typically limited from 200-350 km with a full charge. Large battery packs are expensive, heavy and take up considerable vehicle space. In the coming years, EVs will have an important role in Smart cities. Therefore, more efforts to facilitate the

charging process and improve batteries are needed. However, researchers are working on improved battery technologies to increase driving range and decrease charging time, weight and cost. These factors will ultimately determine the future of EVs.

(Source-MDPI- Journals/Smart Cities/Vol.-4- A Review on Electric Vehicles: Technologies and Challenges)

**2.A) On the basis of your reading the passage, answer the following questions by choosing the best of the given options:** **(1x4=4)**

i. Choose the option which does not give EV an edge over traditional combustion vehicles.

- a. absence of vibrations or engine noise
- b. battery-related challenges
- c. simpler and more compact engines
- d. cheaper maintenance cost

ii. Select the idiom that conveys a similar meaning as ‘gaining momentum’ in para-1.

- a. in the limelight
- b. putting the mockers on
- c. basking in the sun
- d. gathering steam

iii. Identify the odd one out which doesn’t help EVs to promote sustainable mobility.

- a. tax incentives
- b. purchase aids
- c. paid public parking
- d. free use of motorways

iv. Statement-A: EVs seem to rule the day for being eco-friendly

Statement-R: Their manufacture processes boast of zero emissions.

- a. Both A and R are true and R is the correct explanation of A.
- b. Both A and R are true but R is NOT the correct explanation of A.
- c. A is true but R is false.
- d. A is false but R is true.

**2.B) Answer the following questions:**

**(1x4=4)**

v. In spite of technological elements being introduced in vehicles for safety, the rising number of vehicles is posing a threat. Justify the irony behind the statement.

vi. Comment on the efficiency of EVs over traditional vehicles.

vii. A few redeeming factors to determine the future of EVs are - \_\_\_\_\_.

viii. Find a word in para-3 which means the same as ‘in-built’.

**3. Read the following passage carefully:**

**(8)**

1. *Matricaria chamomilla* L. called German chamomile, has multitherapeutic and cosmetic qualities that have earned it the title of ‘star of medicinal plants’. ‘Chamomile’ originates from two Greek words *Chemos* and *Melos*, that mean ‘ground apple’. Worldwide, it is marketed with its commercial trade name ‘blue oil’.

2. Chamomile was well-known in ancient Egypt, Rome, and Greece and is commercially cultivated in Brazil, Russia, Yugoslavia, France, Germany and Hungary. In India, known as Babuna in Hindi, it is grown in Jammu and Kashmir, U.P., Punjab and Maharashtra. Since, chamomile has a high tolerance to soil alkalinity, it can be grown well on loamy soil with pH ranging from 9 and 9.2. It is capable of withstanding cold temperatures between 2°-20°C. The optimum temperature range for its seed germination is 10°C-20°C.



3. Chamomile is used in numerous medicine preparations. Its flower heads are used as a mild sedative for digestion, in baby massage oils and to treat colds and coughs. The powdered medication is applied externally to haemorrhoids and inflammation of the mouth, eyes and throat. Chamomile is used as a natural treatment for skin dryness, irritation and acne. It helps to brighten and hydrate the skin and is found in a variety of facial creams and hair care serums. Chamomile is used in the food industry primarily as a flavouring agent in herbal teas, baked foods and beverages and as a decorative garnish in candies and jams. The demand for chamomile oil and flower is increasing steadily on a global scale and therefore, its cultivation is emphasized.

(Source- Agri-India TODAY Vol-05, June 2025 By- Anamika Sajwan, Harshita Bora, Mukesh Kumar and V K Rao)

**3.A On the basis of your reading of the above passage, make notes using headings and sub-headings. Use recognizable abbreviations wherever necessary. Suggest a suitable title for the passage.** (5)

**3.B Write a summary of the above passage in not more than 50 words using the notes made by you.** (3)

## SECTION – B (GRAMMAR & CREATIVE WRITING SKILLS)

(23 Marks)

Typology	Grammar & Creative Writing Skills	Conceptual understanding, application of rules, analysis, reasoning, appropriacy of style and tone, using appropriate format and fluency, inference, evaluation and creativity
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## II. GRAMMAR

**(4) A. Fill in the blanks using the correct form of the verbs given in the brackets. Attempt ANY TWO.** (1X2=2 marks)

i) If she had studied harder, she \_\_\_\_\_(would pass/had passed/could pass/would have passed) the exam last month.

ii) He said he \_\_\_\_\_ (will call/called/would call/will have called) me when he finishes work.

iii) As soon as he \_\_\_\_\_ (complete/completes/completed/will complete) his assignment, he will go out with his friends.

**B. Complete the sentences using suitable clauses-**

(1X2=2 marks)

i) I won't go to the beach unless \_\_\_\_\_.

ii) \_\_\_\_\_ was surprising.

**(5) Transform the following sentences as per the instructions given below:** (1X3=3 marks)

i. She said to her mother, "Would you clean my room tomorrow, as I will be late?" (Change to reported speech)

ii. In spite of his illness, he went to school. (Change to compound sentence)

iii. Although she was tired, she continued working. (Rewrite using 'despite')

## III. CREATIVE WRITING SKILLS

**(6). Attempt ANY ONE of the two, in about 50 words.**

3

A. You are the Principal of Sunflower International School, Mumbai. Draft an advertisement for the classified column of the newspaper in not more than 50 words for the post of school estate manager. Mention all qualifications and experience required for the post. **3**

**OR**

B. Your pet cat named Hazel is missing from the Central Park, Ram Nagar, Gujarat. Draft an advertisement for the 'Kennel and Livestock' column of the newspaper in not more than 50 words. Provide all the necessary information about your pet and other relevant details. **3**

**(7). Attempt ANY ONE of the two, in about 50 words. **3****

A. The vision of Viksit Bharat@2047, celebrating the centenary year of Indian independence, can truly be realized with a fit and healthy youth. Inspired by this idea, your school is going to organize its annual exhibition on the theme – 'Fit Bharat, Vikasit Bharat'. As the Cultural Head of the school, design an informative poster to inspire the students to participate actively. (50 words) **3**

**OR**

B. You are Abhinav/Anju of Green Valley school, Ajmer. You are participating in the Zonal Poster Designing Competition being held in your school. The theme of the contest is - 'Respect, Inclusion, Acceptance: Let's Build a Better School Community'. Design a poster on the above theme in 50 words. **3**

**(8). Attempt ANY ONE of the two, in about 120-150 words. **5****

A. According to a recent research- staying away from gadgets serves as a booster dose for healthy minds and happy souls. As the school counsellor, write a speech in 120-150 words to be delivered in the special assembly addressing the students on the theme- 'Digital Detox: A Step Towards Mental Health'. **5**

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| <ul style="list-style-type: none"><li>● Digital Detox- Intentional break from technology</li><li>● Benefits- reduced stress and anxiety, improved sleep, enhanced creativity</li><li>● How to implement- time management, more time to hobbies, spend time in nature, mindful usage of gadgets</li></ul> |
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**OR**

B. 'Youth participation in community service is crucial for both the development of young individuals and the well-being of the community'. Promoting the above idea draft a speech to be delivered by you in the school assembly, encouraging students to join hands for social causes. (Word limit 120-150 words) **5**

- |   |
|---|
| <ul style="list-style-type: none"><li>● Community Service- A way to give back to society, contribute to the well-being of others, sense of social responsibility</li><li>● Benefits – Addresses community needs, fosters sense of connection, personal growth, gives a sense of purpose</li></ul> |
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**(9). Attempt ANY ONE of the two, in about 120-150 words. **5****

A. In the light of the growing influence of fast fashion and its associated benefits and drawbacks, prepare a debate in about 120-150 words in favour or against the motion- 'Fast Fashion is a Threat to Sustainability'. You may take help from the following cues. **5**

Favour- pollution, waste, carbon emissions, labour exploitation, production requires overconsumption of water and energy, lack of durability, threat to traditional craftsmanship
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Against- affordability, access latest trends, variety, convenience, creates jobs in manufacturing and retail industry

**OR**

B. Delivery of health care from a distance using electronic information and technology like video conferencing, remote monitoring to give mental health services, follow up care, etc. is gaining momentum in the field of medical services. Write a debate in about 120-150 words in favour of or against the motion- 'Telemedicine- A New Horizon in the Field of Health'. You may take help from the following cues. **5**

Favour- increased access, convenience, cost effectiveness, improved efficiency, reduced risk of infection  
Against- diagnostic errors, technical challenges, privacy concerns, no personal interaction, limited access

**SECTION – C (LITERATURE)**

**(31 Marks)**

Typology	Literature	Recalling, reasoning, appreciating literary conventions, inference, analysis, creativity with fluency and critical thinking
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**IV. Reference to the Context**

**(10) Read the given extract carefully and answer the questions that follow: (1x3=3 marks)**

A. The Laburnum top is silent, quite still  
In the afternoon yellow September sunlight,  
A few leaves yellowing, all its seeds fallen.  
Till the goldfinch comes, with a twitching chirrup  
A suddenness, a startlement, at a branch end.

i. The above extract highlights a dramatic shift in the mood of the poem. Select the option that correctly describes the shift. 1

- a. lost to enlightened                      b. desolate to elated  
c. anxious to humorous                  d. sad to calm

ii. Find a word/phrase from the above extract that the poet uses to describe the autumn season. 1

iii. Identify the poetic device used in the phrase "September sunlight". 1

- a. simile                                      b. repetition  
c. allegory                                  d. alliteration

**OR**

B. I do not understand this child  
Though we have lived together now  
In the same house for years. I know  
Nothing of him, so try to build  
Up a relationship from how  
He was when small.

i. Choose the option that describes the relationship between father and son as suggested by the speaker's tone. 1

- a) unbreakable                      b) long
- c) strained                          d) cordial

ii. As he reflects upon the growing distance between him and his son, the father decides to - 1

- a) go back to his old memories when the child was young
- b) develop physical proximity by living in the same house
- c) share a warm and close family life
- d) teach his son some moral values

iii. Explain the irony in the lines above. 1

**(11) Read the given extract carefully and answer the questions that follow: (1x3=3 marks)**

A. In the evening a change came over her. She did not pray. She collected the women of the neighbourhood, got an old drum and started to sing. For several hours she thumped the sagging skins of the dilapidated drum and sang of the home-coming of warriors. We had to persuade her to stop to avoid overstraining. That was the first time since I had known her that she did not pray.

(i) Identify what the grandmother's act of singing of the 'homecoming of warriors' symbolizes in the context of the story? 1

- (a) her excitement to see her grandson return
- (b) a metaphor for her own death and spiritual release
- (c) celebration of a festival with villagers
- (d) her attempt to distract herself from illness

(ii) Choose the correct antonym of the word 'dilapidated'. 1

- (a) deteriorated                      (b) rickety
- (c) worn out                          (d) spruce

(iii) The grandson did not see his grandmother pray for the first time because she- 1

- a) was angry with the Gods
- b) was busy with neighbours
- c) was feeling uneasy
- d) had forgotten

**OR**

B. "But no problem, sir", he assured us, "if there is no snow." What was the likelihood of that I asked. "Not knowing, sir, until we get there."

From the gently rolling hills of Ravu, the short cut took us across vast open plains with nothing in them except a few gazelles that would look up from nibbling the arid pastures and frown before bounding away into the void. Further on, where the plains became more stony than grassy, a great herd of wild ass came into view. Tsetan told us we were approaching them long before they appeared. "Kyang," he said, pointing towards a far-off pall of dust. When we drew near, I could see the herd galloping en masse, wheeling and turning in tight formation as if they were practising manoeuvres on some predetermined course. Plumes of dust billowed into the crisp, clean air.

i. Pick out the meaning of the phrase 'practising manoeuvres' in the context of the chapter. 1

- (a) rehearsing military or army movements in the valley
- (b) performing spiritual rituals near to monastery
- (c) practising meditation by Tibetan monks

(d) animals moving playfully in the plains

ii. Which one of the following words can be replaced by 'empty space' without changing its meaning. 1

- a) void                      b) arid
- c) pall                      d) pasture

iii. Which of the following options is an accurate comment on the overall tone of the situation reflected by the narrator's determination to reach Mount Kailash. 1

- (a) It reflects a tone of despair and resignation.
- (b) It reflects a tone of calm and acceptance.
- (c) It reflects a tone of courage and resolve.
- (d) It reflects a tone of indifference and detachment.

**(12) Read the given extract carefully and answer the questions that follow: (1x4=4 marks)**

A. I had remembered it. But I had waited a long time to go there. Initially after the Liberation I was absolutely not interested in all that stored stuff, and naturally I was also rather afraid of it. Afraid of being confronted with things that had belonged to a connection that no longer existed; which were hidden away in cupboards and boxes and waiting in vain until they were put back in their place again; which had endured all those years because they were 'things.' But gradually everything became more normal again. Bread was getting to be a lighter colour, there was a bed you could sleep in unthreatened, a room with a view you were more used to glancing at each day. And one day I noticed I was curious about all the possessions that must still be at that address.

i) The narrator delayed visiting the address for a long time because \_\_\_\_\_ 1

- (a) She could not remember the address.
- (b) She wanted to give herself time to gather courage.
- (c) She hoped Ms. Dorling would return.
- (d) She felt at home in the surroundings.

(ii) Which emotion is most strongly reflected in the narrator's words? 1

- (a) joy and excitement              (b) grief and detachment
- (c) surprise and shock              (d) grief and anxiety

(iii) Comment on 'everything became more normal again'. 1

- (a) Life became joyful and celebratory.
- (b) The post war recovery had started.
- (c) People were moving to new cities.
- (d) The war had not affected the town at all.

(iv) Explain the significance 'Bread was getting to be lighter colour'. 1

- (a) It shows that the economy was improving.
- (b) The quality of food was degrading.
- (c) It refers to food wastage.
- (d) It indicates growing inflation.

**OR**

B. Mourad was considered the natural descendant of the crazy streak in our tribe. Before him was our uncle Khosrove, an enormous man with a powerful head of black hair and the largest moustache in the San Joaquin Valley, a man so furious in temper, so irritable, so impatient that he stopped anyone from talking by roaring. It is no harm; pay no attention to it.

i. Identify the one who is described as the natural descendant of the 'crazy streak' in the family. 1

- (a) Aram (b) Mourad  
(c) John Byro (d) Uncle Khosrove

(iii) What does the phrase 'crazy streak' in the context of the Garoghlanian tribe imply? 1  
(a) The family was insane. (b) Some members had an eccentric nature.  
(c) They suffered from mental illness. (d) They were unpredictable thieves.

iii) Choose the option that shows Uncle Khosrove's reaction to problems. 1  
(a) He calmly listens and solves them.  
(b) He tells everyone and discusses about them.  
(c) He gets scared and cries.  
(d) He reacts aggressively.

iv) The theme most reflected in the story is- 1

- (a) The struggle for freedom (b) Honour Vs guilt  
(c) Cruelty of fate (d) Appearances are deceptive

**13. Answer the following questions in about 40-50 words each: (2X3=6 marks)**

a. The theme of motherhood has been subtly woven in by Ted Hughes in the poem 'Laburnum Top' primarily through the depiction of the Goldfinch's action. Discuss.

**OR**

Walt Whitman uses rain as a powerful metaphor for the cyclic nature of life, the interconnection of all things and the creative process. Elucidate. (The Voice of the Rain)

b) Grandmother embodies both cultural tradition and inner resilience in the story 'The Portrait of a Lady'. Elaborate.

**OR**

Analyse and comment on the reasons behind King Tut's death being a mystery for archaeologists and historians. (Discovering Tut: The Saga Continues)

**14. Answer ANY ONE of the following questions in about 40-50 words: (1x3=3 marks)**

a) The story 'The Address' depicts the impact of war on human relationships. Explore the emotional and material consequences as discussed in the text.

**OR**

b) Can humour be a strong means to communicate the underlying role of mothers and their needs for their empowerment within the family? Explain with reference to the play 'Mother's Day'.

**15. Answer ANY ONE of the following questions in about 120-150 words: (1x6=6 marks)**

a) The journey to Mount Kailash is both a physical and spiritual experience. Describe how the author reflects this duality in his narrative. (Silk Road)

**OR**

b) Professor Gaitonde's experience in the parallel world highlights the impact of individual decisions on the course of history. Discuss how the story combines scientific theory with imagination to explore this idea. (The Adventure)

**16. Answer ANY ONE of the following questions in about 120-150 words: (1x6=6 marks)**

a) Vikram Seth presents an ironic account of justice and governance. Expound on the deeper message about power and public perception as conveyed through the poem. (The Tale of the Melon City)

**OR**

b) Explicate how the story 'Birth' explores the theme of transformation – both personal and professional – in the life of Dr Andrew Manson?

## ENGLISH CORE

### Marking Scheme and Hints to Solutions

**Note:**

1. The marking scheme provides suggested value points and not the complete answers.
2. Any other relevant answer not given herein but given by the candidate be also suitably rewarded.

Q.No.	Value Points/Key	Marks allotted to each value point/Key point	Total Marks
	<b>SECTION-A (READING SKILLS) (26 MARKS)</b>		
1.	<p>A. i. b) For every day that he would work, Gheesu would take it easy for three.</p> <p>ii. b) lackadaisical attitude of Madho and Gheesu towards life</p> <p>iii. (c) sarcastic</p> <p>iv. c) A is true but R is false.</p> <p>v. c) <i>secretly</i>.</p> <p>B. vi. Gheesu and Madho seem to have the natural disposition of sadhus and appear to pay no attention to material possessions or social norms, much like sadhus. However, it is not out of spiritual discipline or higher purposes. Instead, they do so out of laziness, negligence and avoidance of work.</p> <p>vii. Madho's wife tried to civilize them in some way but to no avail. As she arranged for their food and basic needs, they became lazier and more indolent.</p> <p>viii. (any one)</p> <ul style="list-style-type: none"> <li>- There was no dearth of work as it was a farming village, but because of their careless and lethargic attitude, no one would hire them.</li> <li>- They intentionally led an indolent lifestyle and worked only when forced upon by dire circumstances.</li> <li>- As long as money lasted or there was food in the house, they would wander about without a care in the world.</li> <li>- Any other relevant point from the passage</li> </ul> <p>ix. (any one)</p> <ul style="list-style-type: none"> <li>- They had mastered renunciation and ascetic indifference in terms of brazenness.</li> <li>- They were insolvent beneath numerous debts.</li> <li>- Everyone slighted them, but they didn't care. People lent them money, knowing they would never be repaid.</li> <li>- Any other relevant point from the passage</li> </ul> <p>x. dearth</p> <p>A.</p> <p>i. b. battery-related challenges</p> <p>ii. d. gathering steam</p> <p>iii. c. paid public parking</p> <p>iv. c. A is true but R is false.</p> <p>B.</p> <p>v. the rising number of vehicles has led to a dramatic increase in air pollution levels in urban environments.</p> <p>vi. EVs fed by a natural gas power plant show a WTW efficiency ranging from 13% to 31%, and EVs fed by renewable energy show an efficiency up to 70%. The overall well to wheel (WTW) efficiency of gasoline</p>	<p>1 mark each X 5</p> <p>1 mark each X 5</p> <p>1 mark each X 4</p> <p>1 mark each X 4</p>	<p>5</p> <p>5</p> <p>4</p> <p>4</p>



3.	<p>vehicles ranges from 11% to 27%, whereas diesel vehicles range from 25% to 37%.</p> <p>vii. improved battery technologies to increase driving range and decrease in charging time, weight and cost</p> <p>viii. Inherent</p> <p>(A) Note Making</p> <p>Title- Chamomile- Star of Medicinal Plants</p> <p>(Any other suitable title)</p> <p>Numbering and indenting</p> <p>Key/glossary</p> <p>Notes/Content</p> <p style="text-align: center;"><u><b>Chamomile- Star of Medicinal Plants</b></u></p> <p>1. NOMENCLATURE AND ORIGIN</p> <p>1.1 Matricaria chamomilla L. or German chamomile</p> <p>1.2 origin - Greek words Chemos &amp; Melos</p> <p>1.3 commercial trade name 'blue oil'</p> <p>1.4 Hindi - 'Babuna'</p> <p>2. CULTIVATION</p> <p>2.1 PLACES OF CULTIVATION</p> <p>2.1.1 well-known in ancient Egypt, Rome &amp; Greece</p> <p>2.1.2 commercially cultivated in Brazil, Russia, Yugoslavia, France, Germany &amp; Hungary</p> <p>2.1.3 grown in J&amp;K, U.P., Punjab, and Maha.</p> <p>2.2 CONDITIONS OF CULTIVATION</p> <p>2.2.1 alkaline soil / loamy soil (pH range 9-9.2)</p> <p>2.2.2 Cold temp. (2°C-20°C) optimum: 10°C-20°C.</p> <p>3. USES</p> <p>3.1 Medicinal Uses:</p> <p>3.1.1 mild sedative for digestion</p> <p>3.1.2 baby massage oils</p> <p>3.1.3 treats colds and coughs</p> <p>3.1.4 treat haemorrhoids, inflammation of mouth, eyes, throat</p> <p>3.2 Cosmetic Uses:</p> <p>3.2.1 for skin dryness, irritation &amp; acne</p> <p>3.2.2 brightens &amp; hydrates skin</p> <p>3.2.3 facial creams &amp; haircare serums</p> <p>3.3 Food Industry:</p> <p>3.3.1 flavoring agent in herbal teas, baked F &amp; B</p> <p>3.3.2 decorative garnish in candies &amp; jams</p> <p>4. INCREASING DEMAND</p> <p>4.1 demand steadily ↑</p> <p>4.2 cultivation emphasized</p> <p>Key to Abbreviations: (4-5)</p> <p>U.P. - Uttar Pradesh (Indian state)</p> <p>J&amp;K - Jammu &amp; Kashmir (Indian state)</p> <p>Temp. - temperature</p> <p>F &amp; B – Food and beverages</p> <p>↑ - increasing</p> <p>(B) Summary:</p>	<p>2</p> <p>1</p> <p>1</p> <p>1</p>	5
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	<p>The summary should include all the important points given in the notes.</p> <p>Content Expression</p> <p>2 1</p> <p>3</p>	
	<p><b>SECTION – B (GRAMMAR &amp; CREATIVE WRITING SKILLS)</b></p>	
4.	<p>A. Fill in the blanks using the correct form of the verbs given in the brackets. (Attempt any two)</p> <p>i. would have passed ii. would call iii. completes</p> <p>1 mark each X 2</p> <p>2</p>	
	<p>B. Complete the sentences using suitable clauses- (Attempt any two)</p> <p>i) ....it stops raining (or any other relevant adverbial clause of condition, simple present tense) Any other relevant answer ii) What I saw..... (noun clause, starting with what/whatever etc.) Any other relevant answer to be considered</p> <p>1 mark each X 2</p> <p>2</p>	
5.	<p>Transform the following sentences as per the instructions given below:</p> <p>i. She asked her mother if her mother would clean her room the next day, as she would be late. ii. He was ill but he went to school. iii. Despite being tired, she continued working. ('of' is not used with despite)</p> <p>1 mark each X 3</p> <p>3</p>	
6.	<p>Advertisement (Classified) – any one</p> <p>A. Format: The format should include: Box, Heading, Contact details Content Expression Value Points:</p> <p>1 1 1</p> <p>3</p> <p>Heading - SITUATION VACANT</p> <ul style="list-style-type: none"> <li>• required suitable candidate</li> <li>• for post of school estate manager</li> <li>• criteria- age, gender, qualification, experience</li> <li>• salary package</li> <li>• other requirements (if any)</li> <li>• contact details – name, telephone no., address</li> <li>• Any other relevant details</li> </ul> <p><b>OR</b></p> <p>B. Format: The format should include: Box, Heading, Contact details Content Expression Value Points:</p> <p>Heading - KENNEL AND LIVESTOCK</p> <ul style="list-style-type: none"> <li>• description of the pet- breed, colour, age, any identification mark (what &amp; how)</li> <li>• location (where)</li> <li>• date (when)</li> </ul>	

7.	<ul style="list-style-type: none"> <li>• any other relevant details</li> <li>• contact details – name, telephone no., address</li> </ul> <p>Poster – any one</p> <p>A. Format: The format should include: Box, Heading/s, details of issuing authority</p> <p>Content</p> <p>Expression</p> <p>Value points:</p> <ul style="list-style-type: none"> <li>• Relevant slogans to encourage health and fitness, Vikasit Bharat</li> <li>• Details of exhibition- date, venue, time</li> <li>• Issuing authority</li> <li>• Any other relevant details</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p>B. Format: The format should include: Box, Heading/s, details of issuing authority</p> <p>Content</p> <p>Expression</p> <p>Value points:</p> <ul style="list-style-type: none"> <li>• Relevant slogans to encourage inclusivity and acceptance</li> <li>• Content supporting the theme</li> <li>• Details of the participant</li> <li>• Any other relevant details</li> </ul> <p>Speech – any one</p> <p>A. Format- salutation, self-introduction and statement of topic</p> <p>Content</p> <p>Expression</p> <ul style="list-style-type: none"> <li>- Grammatical accuracy, appropriate words, spellings</li> <li>- Coherence &amp; Cohesion - relevance of ideas and style, use of linkers.</li> </ul> <p>Value points:</p> <ul style="list-style-type: none"> <li>- Impact of excessive screen time- stress, anxiety, loneliness</li> <li>- Benefits of digital detox- improved mental health, better sleep, increased focus, stronger relationships</li> <li>- Ways for digital detox- set boundaries, reduce screen time, turn off notifications, engage in offline hobbies, seek support, practise mindfulness</li> <li>- Any other relevant details</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p>B. Format- salutation, introduction of self and topic</p> <p>Content</p> <p>Expression</p> <ul style="list-style-type: none"> <li>- Grammatical accuracy, appropriate words, spellings</li> <li>- Coherence and relevance of ideas and style.</li> </ul> <p>Value points:</p> <p>Benefits for youth</p> <ul style="list-style-type: none"> <li>- Fosters sense of civic responsibility</li> <li>- Enhances leadership skills</li> <li>- Develops life skills, build character</li> <li>- Inspiration for others</li> </ul> <p>Impact on community</p>	<p>1</p> <p>1</p> <p>1</p>	<p>3</p>
8.	<p>A. Format- salutation, self-introduction and statement of topic</p> <p>Content</p> <p>Expression</p> <ul style="list-style-type: none"> <li>- Grammatical accuracy, appropriate words, spellings</li> <li>- Coherence &amp; Cohesion - relevance of ideas and style, use of linkers.</li> </ul> <p>Value points:</p> <ul style="list-style-type: none"> <li>- Impact of excessive screen time- stress, anxiety, loneliness</li> <li>- Benefits of digital detox- improved mental health, better sleep, increased focus, stronger relationships</li> <li>- Ways for digital detox- set boundaries, reduce screen time, turn off notifications, engage in offline hobbies, seek support, practise mindfulness</li> <li>- Any other relevant details</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p>B. Format- salutation, introduction of self and topic</p> <p>Content</p> <p>Expression</p> <ul style="list-style-type: none"> <li>- Grammatical accuracy, appropriate words, spellings</li> <li>- Coherence and relevance of ideas and style.</li> </ul> <p>Value points:</p> <p>Benefits for youth</p> <ul style="list-style-type: none"> <li>- Fosters sense of civic responsibility</li> <li>- Enhances leadership skills</li> <li>- Develops life skills, build character</li> <li>- Inspiration for others</li> </ul> <p>Impact on community</p>	<p>1</p> <p>2</p> <p>2</p>	<p>5</p>

9.	<ul style="list-style-type: none"> <li>- Positive change</li> <li>- Strengthens community</li> <li>- Helps bridging generational divides</li> <li>- Addresses societal issues</li> <li>- Any other relevant details</li> </ul> <p>Debate – any one</p> <p>A. Format- salutation, specification whether in favour or against, introduction of self and topic</p> <p>Content</p> <p>Expression</p> <ul style="list-style-type: none"> <li>- Grammatical accuracy, appropriate words, spellings</li> <li>- Coherence and relevance of ideas and style.</li> </ul> <p>Value points:</p> <p>Favour-</p> <ul style="list-style-type: none"> <li>- Contributes to pollution, deforestation</li> <li>- Increases waste in landfills</li> <li>- Low quality material, short life span</li> <li>- Inputs from the question</li> <li>- Any other relevant point</li> </ul> <p>Against-</p> <ul style="list-style-type: none"> <li>- Budget-friendly prices</li> <li>- Provides wide range of choices</li> <li>- Reduces unemployment</li> <li>- Inputs from the question</li> <li>- Any other relevant point</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p>B. Format- salutation, specification whether in favour or against, introduction of self and topic</p> <p>Content</p> <p>Expression</p> <ul style="list-style-type: none"> <li>- Grammatical accuracy, appropriate words, spellings</li> <li>- Coherence and relevance of ideas and style.</li> </ul> <p>Value points:</p> <p><b>FAVOUR</b></p> <ul style="list-style-type: none"> <li>- Saves time</li> <li>- Receive test results and prescriptions without hassle</li> <li>- Helps monitor older adults at home</li> <li>- Cost effective</li> <li>- Inputs from the question</li> <li>- Any other relevant point</li> </ul> <p><b>AGAINST</b></p> <ul style="list-style-type: none"> <li>- Difficult in remote areas</li> <li>- Security of personal data- a concern</li> <li>- May lead to inaccurate diagnosis</li> <li>- Inputs from the question</li> <li>- Any other relevant point</li> </ul>	<p>1</p> <p>2</p> <p>2</p>	5
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SECTION C (LITERATURE) (31 Marks)			
10	<p>Reference to the Context</p> <p>A.</p> <p>i. b. desolate to elated</p> <p>ii. September/leaves yellowing/all its seeds fallen</p> <p>iii. d. alliteration</p> <p style="text-align: center;"><b>OR</b></p> <p>B.</p> <p>i. c) strained</p> <p>ii. a) go back to his old memories when the child was young young</p> <p>iii. living in the same house but there is no communication between them</p> <p>Reference to the Context</p> <p>A.</p> <p>i. b) a metaphor for her own death and spiritual release</p> <p>ii. (d) spruce</p> <p>iii. d) had forgotten</p> <p style="text-align: center;"><b>OR</b></p> <p>B</p> <p>i (d) animals moving playfully in the plains</p> <p>ii. void</p> <p>iii. (d) It reflects a tone of indifference and detachment.</p> <p>Reference to the Context</p> <p>A.</p> <p>i. (b) She wanted to give herself time to gather courage.</p> <p>ii. (b) grief and detachment</p> <p>iii. (b) The post war recovery had started.</p> <p>iv. (a) It shows that the economy was improving.</p> <p style="text-align: center;"><b>OR</b></p> <p>B.</p> <p>i. (b) Mourad</p> <p>ii. (b) Some members had an eccentric nature.</p> <p>iii. (d) He reacts aggressively.</p> <p>iv. (b) Honour Vs guilt</p> <p><b>Answer the following questions in about 40-50 words each:</b></p> <p>a) any one</p> <ul style="list-style-type: none"> <li>- embodying qualities of nurturing and protection</li> <li>- care and vigilance in feeding her young ones</li> <li>- portrayed as a symbol of satisfaction and return to her role of protector</li> <li>- (Any two relevant points)</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>- Identifies itself with the poem of the Earth.</li> <li>- It rises from land and sea, transforms into clouds</li> <li>- returns to Earth to nourish life-cyclical journey.</li> </ul>	<p>1 mark each X 3</p> <p>1 mark each X 3</p> <p>1 mark each X 4</p> <p>Content-2 Expression- 1</p>	<p>3</p> <p>3</p> <p>4</p> <p>2x3=6</p> <p>3</p>

	<ul style="list-style-type: none"> <li>- (Any two relevant points)</li> </ul> <p>b) any one</p> <ul style="list-style-type: none"> <li>- Grandmother follows traditional practices like prayer</li> <li>- village schooling</li> <li>- shows inner strength by accepting change</li> <li>- silently, maintaining dignity in old age and facing death without fear or complaint.</li> <li>- (Any two relevant points)</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p>King's Tut death a mystery</p> <ul style="list-style-type: none"> <li>- Died at a young age with no clear evidence of how he died</li> <li>- His body was found broken and theories included murder, illness or accident.</li> <li>- Absence of records and damage to his burial made the mystery deeper</li> <li>- (Any two relevant points)</li> </ul>	Content-2 Expression- 1	3
14.	<p><b>Answer the following questions in about 40-50 words each:</b></p> <p>a) -The war strained relationships.</p> <ul style="list-style-type: none"> <li>- Ms. Dorling's opportunism and the narrator's sense of betrayal show how war can erode trust and human values.</li> <li>- (Any two relevant points)</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p>b) - Yes, humour acts as a powerful tool for social change.</p> <ul style="list-style-type: none"> <li>- Humour lowers resistance to criticism, making the audience reflect without feeling attacked.</li> <li>- (Any two relevant points)</li> </ul> <p><b>Answer the following question in about 120-150 words:</b></p>	Content-2 Expression- 1	1x3=3  3
15.	<p>a) Journey to Mount Kailash</p> <ul style="list-style-type: none"> <li>- Filled with harsh physical challenges-extreme altitude, rough terrain and illness.</li> <li>- Mt. Kailash a holy place- as they travel, pray and feel closer to God. -- The peaceful mountains help them feel calm and understand themselves better.</li> <li>- (Any three relevant points)</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p>b) In Adventure, Jayant Narlikar masterfully blends science and fiction through the character of professor, a historian who accidentally slips into a parallel world.</p> <p>The story is based on Catastrophe and quantum physics which suggests - multiple possible realities. So, the story combines science with creativity. It uses a scientific theory to create an exciting and thoughtful tale about history and possibilities.</p> <ul style="list-style-type: none"> <li>- (Any three relevant points)</li> </ul> <p><b>Answer the following question in about 120-150 words:</b></p>	Content-3 Expression- 3	1x6=6  6
16.	<p>a) - Story is funny and strange, where King wants to be fair.</p> <ul style="list-style-type: none"> <li>- Everyone blames others.</li> <li>- In the end king himself is hanged-just to keep the idea of justice alive- which is unfair</li> </ul>	Content-3 Expression- 3	6  1x6=6

	<ul style="list-style-type: none"> <li>- people accept melon as their king just because they want peace. This shows how people sometimes accept foolish things just to avoid trouble.</li> <li>- The poet criticizes how power structures can be meaningless if people are passive or blindly obedient, revealing the hollowness behind ceremonial justice and symbolic leadership.</li> <li>- (Any three relevant points)</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p>b) - Initially disillusioned by his profession and personal life Dr. Andrew approaches the delivery mechanically.</p> <ul style="list-style-type: none"> <li>- the baby is stillborn.</li> <li>- his relentless efforts to revive the child, is driven not by duty but by desperation and compassion, marking a personal transformation.</li> <li>- Professionally, it cements his confidence in medicine as a noble, life-saving practice.</li> <li>- (Any three relevant points)</li> </ul>	Content-3 Expression- 3	6
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प्रतिदर्श प्रश्न पत्र (2025-26)

विषय : हिंदी (आधार)

(विषय कोड - 302)

कक्षा - ग्यारहवीं

निर्धारित समय : 3 घंटे	अधिकतम अंक : 80
<b>सामान्य निर्देश :</b> <ul style="list-style-type: none"><li>यह प्रश्न-पत्र तीन खण्डों में विभाजित है।</li><li>'खंड-क' में 'अपठित बोध' पर आधारित प्रश्न पूछे गए हैं। सभी प्रश्नों के उत्तर देना अनिवार्य है।</li><li>'खंड-ख' में 'अभिव्यक्ति और माध्यम' से प्रश्न पूछे गए हैं। प्रश्नों में आंतरिक विकल्प दिए गए हैं।</li><li>'खंड-ग' में पाठ्यपुस्तक - 'आरोह' तथा 'वितान' से प्रश्न पूछे गए हैं। प्रश्नों में आंतरिक विकल्प दिए गए हैं।</li><li>तीनों खंडों के प्रश्नों के उत्तर देना अनिवार्य है।</li><li>यथासंभव तीनों खंडों के प्रश्नों के उत्तर क्रमशः लिखिए।</li></ul>	

खंड 'क' (अपठित बोध)

1. निम्नलिखित गद्यांश पर आधारित पूछे गए प्रश्नों के उत्तर लिखिए: (10)
- आज सभी लोग भौतिक सुख-सुविधाओं के पीछे भाग रहे हैं। हर कोई जल्द से जल्द सफल और समृद्ध होना चाहता है, चाहे रास्ता कोई भी हो। ऐसे समय में सबसे बड़ा संकट ईमानदारी पर आया है। कबीर का दोहा है, 'साईं इतना दीजिए जामे कुटुम समाय, मैं भी भूखा न रहूँ साधु भी भूखा न जाए।' इस दोहे का अर्थ केवल रोजी-रोटी की माँग नहीं है। कबीर यहाँ ईश्वर से प्रार्थना कर रहे हैं कि उन्हें इतना ज्ञान, प्रेम, करुणा और सच्चाई मिले कि जीवन सादगी और संतुलन से चल सके। इस दोहे को यदि नैतिक धरातल पर देखा जाए तो यह सच्ची संतुष्टि और सच्चे जीवन-मूल्यों की माँग है, न कि ज्यादा कमाई की। ईमानदारी की राह कठिन है। लालच चारों तरफ से घेरकर खड़ा रहता है। मन ज़रा फिसला नहीं कि फिसलन भरी ढलान मनुष्य को पतन की खाई तक ले जाती है।
- कई बार जीवन में ऐसे मौके आते हैं जब हम सोचते हैं- बस इस बार थोड़ा समझौता कर लें, आगे नहीं करेंगे। लेकिन यही सोच धीरे-धीरे आदत बन जाती है। गलत काम करने में मन लगने लगता है, और तब वह 'थोड़ा-सा समझौता' जीवन का हिस्सा बन जाता है। इंसान अपनों को भी ठगने लगता है, अपने हित के लिए किसी भी हद तक जाने लगता है। इस सबका कारण सिर्फ एक होता है-अनुचित ढंग से कमाए धन का लालच और उससे मिलने वाली भौतिक सुख-सुविधाएँ। लेकिन यह सुख सतही होता है। ऐसा धन डर और चिंता के साथ आता है। समाज में बदनामी का डर, जाँच एजेंसियों की चिंता और लगातार झूठ बोलने की मज़बूरी - ये सब जीवन को बोझिल बना देते हैं। इसके विपरीत, ईमानदारी से कमाया गया धन चाहे कम हो, लेकिन उससे मन में संतोष होता है, आत्मविश्वास होता है।
- इसीलिए कबीर कहते हैं, 'देखि पराई चुपड़ी मत ललचावे जीव, रुखा सूखा खाइ के ठंडा पानी पीव।' सादा जीवन और संतोष से भरा भोजन तन और मन, दोनों को ताज़गी देता है। वहीं तिकड़म की कमाई से आई थाली में स्वाद नहीं, विष होता है। यह जीवन को दुख और पछतावे से भरता है। सच यह है कि भले ही समाज में कुछ समय के लिए ऐसे लोग ऊँचे



पदों पर और सम्मान हासिल करते दिखें, लेकिन देर-सवेर उनका असली चेहरा सामने आ ही जाता है। लोगों की नज़र में उनका मान घटता है और वे उपेक्षित हो जाते हैं।

साभार - नवभारत टाइम्स 8 मई 2025 (द स्पीकिंग ट्री)

(i) समझौते की आदत मन को ले जाती है -

(1)

(क) समृद्धि की ओर

(ख) सादगी की ओर

(ग) संतोष की ओर

(घ) गर्त की ओर

(ii) गलत तरीके से अर्जित धन से प्राप्त होने वाला सुख है -

(1)

(क) स्थायी

(ख) सतही

(ग) विचित्र

(घ) अलौकिक

(iii) निम्नलिखित कथनों पर विचार कीजिए -

(1)

कथन (I) समाज में बदनामी का भय जीवन को बोझिल बना देता है।

कथन (II) सच्ची संतुष्टि अधिक धन अर्जन से संभव है।

कथन (III) ज्ञान और सच्चाई जीवन में संतुलन लाते हैं।

कथन (IV) भौतिक सुख-सुविधाएँ आत्मिक सुख प्रदान करती हैं।

गद्यांश के अनुसार कौन-सा/से कथन सही हैं -

(क) केवल कथन (I) और कथन (II) सही हैं।

(ख) केवल कथन (I) और कथन (III) सही हैं।

(ग) केवल कथन (II) और कथन (IV) सही हैं।

(घ) केवल कथन (I), (III) और कथन (IV) सही हैं।

(iv) कब अनुचित करने में मन रमने लगता है ?

(1)

(v) 'नैतिकता' और 'भौतिकता' का हमारे जीवन पर क्या प्रभाव पड़ता है?

(2)

(vi) 'देख पराई चुपड़ी, मत ललचावे जीव' के माध्यम से यहाँ किस ओर संकेत किया गया है ?

(2)

(vii) 'तिकड़म की कमाई' के जीवन पर पड़ने वाले प्रभाव को गद्यांश के आधार पर स्पष्ट कीजिए।

(2)

2. निम्नलिखित पद्यांश पर आधारित पूछे गए प्रश्नों के उत्तर लिखिए:

(8)

हवा गरम है

और धमाका एक हलकी-सी रगड़ का

इंतज़ार कर रहा है

कठुआए हुए चेहरों की रौनक  
 वापस लाने के लिए  
 उठो और हरियाली पर हमला करो  
 जड़ों से कहो कि अँधेरे में  
 बेहिसाब दौड़ने के बजाय  
 पेड़ों की तरफ़दारी के लिए  
 ज़मीन से बाहर निकल पड़ें  
 बिना इस डर के कि जंगल  
 सूख जाएगा  
 यह सही है कि नारों को  
 नई शाख नहीं मिलेगी  
 और न आरा मशीन को नींद की फ़ुरसत  
 लेकिन यह तुम्हारे हक़ में है  
 इससे इतना तो होगा ही  
 कि रुख़ानी की मामूली-सी गवाही पर  
 तुम दरवाज़े को अपना दरवाज़ा  
 और मेज़ को  
 अपनी मेज़ कह सकोगे।

(i) कविता में कवि ने प्रतीकात्मक रूप से अभिव्यक्त किया है -

(1)

- (क) प्रकृति और पर्यावरण के प्रति संवेदना
- (ख) व्यवस्था के प्रति आक्रोश और विद्रोह
- (ग) भारत का गौरवशाली इतिहास
- (घ) राजनीतिक व्यवस्था के प्रति संयम

(ii) कथन और कारण को ध्यानपूर्वक पढ़कर नीचे दिए गए विकल्पों में से सर्वाधिक उपयुक्त विकल्प चुनकर लिखिए-

(1)

**कथन (A):** कवि लोगों को पेड़ों की तरफ़दारी के लिए ज़मीन से बाहर निकलने का आह्वान करता है।

**कारण (R):** हरियाली पर हमला किए बिना जंगल को बचाया नहीं जा सकता।

- (क) कथन (A) सही और कारण (R) गलत है।
- (ख) कथन (A) गलत और कारण (R) सही है।
- (ग) कथन (A) और कारण (R) दोनों सही हैं किंतु कारण (R) कथन (A) की सही व्याख्या नहीं करता है।
- (घ) कथन (A) और कारण (R) दोनों सही हैं और कारण (R) कथन (A) की सही व्याख्या करता है।

(iii) कॉलम-1 को कॉलम-2 से सुमेलित कीजिए और सही विकल्प चुनकर लिखिए:

(1)

	कॉलम-1		कॉलम-2
I	हवा गरम है	1	केवल नारों से बदलाव नहीं आता
II	हरियाली पर हमला करो	2	खुलकर पहल करना
III	जमीन से बाहर निकल पड़े	3	माहौल में बेचैनी और असंतुलन है
IV	नारे को नई शाख नहीं मिलेगी	4	समृद्धि के एकाधिकार को चुनौती देना

(क) I - 4, II - 1 III - 2 IV - 3

(ख) I - 2, II - 3, III - 1, IV - 4

(ग) I - 3, II - 4 III - 2, IV - 1

(घ) I - 1, II - 1 III - 2 IV - 3

(iv) कवि ने 'चेहरों की रौनक' को वापस लाने की बात क्यों कही है?

(1)

(v) कवि ने 'दरवाज़े को अपना दरवाज़ा' कहने की शर्त क्या बताई है?

(2)

(vi) 'आरा मशीन' को नींद की फुरसत क्यों नहीं मिलेगी?

(2)

#### खंड-ख (अभिव्यक्ति और माध्यम)

3. निम्नलिखित दिए गए विषयों में से किसी एक विषय पर लगभग 120 शब्दों में रचनात्मक लेख लिखिए: (6X1=6)

(क) तनाव की सर्वोत्तम औषधि: सच्चे मित्र

(ख) प्रतिभा पलायन की समस्या

(ग) भारतीय परिवारों में बुजुर्गों की स्थिति

4. निम्नलिखित में से किसी एक विषय पर लगभग 120 शब्दों में औपचारिक पत्र लिखिए:

(5X1=5)

प्लास्टिक की थैलियों पर प्रतिबंध होने के बावजूद इनके बढ़ते प्रयोग को कम करने हेतु अपने सुझाव दीजिए और विकल्प बताते हुए किसी प्रतिष्ठित समाचार पत्र के संपादक को पत्र लिखिए।

#### अथवा

सरकार द्वारा 'एक पेड़ माँ के नाम' जैसी योजनाएँ चलाई जा रही हैं, ऐसी योजनाओं से सकारात्मक परिणाम पाने हेतु सुझाव देते हुए सचिव, पर्यावरण विभाग को पत्र लिखिए।

5. (i) निम्नलिखित प्रश्नों को ध्यानपूर्वक पढ़कर किन्हीं चार प्रश्नों के लगभग 40 शब्दों में उत्तर लिखिए: (2X4=8)

(क) "संचार अनुभवों की साझेदारी है।" प्रसिद्ध संचार शास्त्री विल्बर श्रैम के इस कथन के पक्ष में अपने विचार व्यक्त कीजिए।

- (ख) किसी घटना, विचार या समस्या के समाचार बनने के लिए मुख्यतः किन तत्वों/ कारकों की आवश्यकता होती है?
- (ग) "डायरी अपने अंदर जाने-अनजाने इकट्ठे होते भार से मुक्ति का माध्यम है।" स्पष्ट कीजिए।
- (घ) पटकथा लेखन की संरचना पर प्रकाश डालिए।
- (ङ) शब्दकोश में नवीन शब्दों को स्थान देने का क्या आधार है?

(ii) निम्नलिखित प्रश्न का लगभग 60 शब्दों में उत्तर लिखिए:

(3X1=3)

(क) टिप्पणी (टिप्पण) से क्या अभिप्राय है? टिप्पणी लेखन संबंधी आवश्यक निर्देशों को संक्षेप में लिखिए।

### खंड-ग ('आरोह भाग-1' और 'वितान भाग-1' पुस्तकों पर आधारित)

6. निम्नलिखित काव्यांश पर आधारित पूछे गए प्रश्नों के सर्वाधिक उपयुक्त उत्तर वाले विकल्प चुनकर लिखिए:

(1X5=5)

कपट के शोर में  
 सही होते हुए भी दब जाना-बुरा तो है  
 किसी जुगनू की लौ में पढ़ना-बुरा तो है  
 मुट्ठियाँ भींचकर बस वक्त निकाल लेना-बुरा तो है  
 सबसे खतरनाक नहीं होता  
 सबसे खतरनाक होता है  
 मुर्दा शांति से भर जाना  
 न होना तड़प का सब सहन कर जाना  
 घर से निकलना काम पर  
 और काम से लौटकर घर आना  
 सबसे खतरनाक होता है  
 हमारे सपनों का मर जाना  
 सबसे खतरनाक वह घड़ी होती है  
 आपकी कलाई पर चलती हुई भी जो  
 आपकी निगाह में रुकी होती है

(i) 'मुर्दा शांति से भर जाना' - पंक्ति का अर्थ है -

- (क) अत्यधिक संवेदनशील होना
- (ख) मानसिक शांति होना
- (ग) अन्यायी का विनाश करना
- (घ) गतिहीन या जड़ हो जाना

(ii) कवि के अनुसार कैसा जीवन खतरनाक है?

(क) पराधीन

(ख) निष्क्रिय

(ग) संवेदनशील

(घ) पराजित

(iii) कॉलम 1 को कॉलम 2 से सुमेलित कीजिए और सही विकल्प चुनकर लिखिए :

कॉलम 1		कॉलम 2	
1	सपनों का मर जाना	(i)	आवाज़ दबा देना
2	खतरनाक वह घड़ी	(ii)	निराशावादी होना
3	कपट के शोर में	(iii)	गतिहीनता का भाव

(क) 1- (iii), 2- (ii), 3- (i)

(ख) 1- (ii), 2- (iii), 3- (i)

(ग) 1- (ii), 2- (i), 3- (iii)

(घ) 1- (iii), 2- (i), 3- (ii)

(iv) इस काव्यांश में कवि ने पाठकों के लिए क्या संदेश दिया है?

(क) खतरनाक स्थिति से बचकर रहें।

(ख) खतरनाक स्थितियों में भी संयम बनाए रखें।

(ग) क्रूर और अन्यायी का साथ न दें।

(घ) अन्याय के विरुद्ध डट कर खड़े हों।

(v) 'मुठ्ठियाँ भींचकर बस वक्त निकाल लेना' से कवि का क्या तात्पर्य है?

(क) अनावश्यक क्रोध करना

(ख) बुराई का खुलकर विरोध न करना

(ग) अत्यधिक सहनशील होना

(घ) अन्यायी को प्रोत्साहित करना

7. निम्नलिखित प्रश्नों को ध्यानपूर्वक पढ़कर किन्हीं दो प्रश्नों के लगभग 60 शब्दों में उत्तर दीजिए: (3X2=6)

(क) राजनीति और समाज में जो कुछ चल रहा है उसे खारिज करना और विकल्प की तलाश करना गज़ल का केंद्रीय सूत्र बन गया है, कवि दुष्यंत कुमार द्वारा रचित 'गज़ल' के आधार पर स्पष्ट कीजिए।

(ख) 'घर की याद' कविता पारिवारिक मूल्यों की कहानी है, सिद्ध कीजिए।

(ग) 'ओ चराचर मत चूक अवसर' इस पंक्ति के माध्यम से कवयित्री अक्कमहादेवी क्या संदेश देना चाहती हैं?

8. निम्नलिखित प्रश्नों को ध्यानपूर्वक पढ़कर किन्हीं दो प्रश्नों के लगभग 40 शब्दों में उत्तर दीजिए: (2X2=4)

(क) मीरा की कविता में प्रेम की गंभीर अभिव्यंजना है। मीरा द्वारा रचित पद के आधार पर सिद्ध कीजिए।

(ख) 'चंपा काले काले अच्छर नहीं चीन्हती' नामक कविता पलायन के लोक अनुभवों को मार्मिकता से अभिव्यक्त करती है। सिद्ध कीजिए।

(ग) 'ठंडी होती दिनचर्या में जीवन की गर्माहट मन का हरापन' पंक्ति से कवयित्री निर्मला पुतुल का क्या आशय है?

9. निम्नलिखित गद्यांश पर आधारित पूछे गए प्रश्नों के सर्वाधिक उपयुक्त उत्तर वाले विकल्प चुनकर लिखिए:

(1X5=5)

मैं उत्तर-पच्छिम में खैबर के दरें से लेकर धुर दक्खिन में कन्याकुमारी तक की अपनी यात्रा का हाल बताता और यह कहता कि सभी जगह किसान मुझसे एक-से सवाल करते, क्योंकि उनकी तकलीफें एक-सी थीं-यानी गरीबों, कर्जदारों, पूँजीपतियों के शिकंजे, जमींदार, महाजन, कड़े लगान और सूद, पुलिस के जुल्म, और ये सभी बातें गुँथी हुई थीं, उस ढाँचे के साथ, जिसे एक विदेशी सरकार ने हम पर लाद रखा था और इनसे छुटकारा भी सभी को हासिल करना था। मैंने इस बात की कोशिश की कि लोग सारे हिंदुस्तान के बारे में सोचें और कुछ हद तक इस बड़ी दुनिया के बारे में भी, जिसके हम एक जुज हैं। मैं अपनी बातचीत में चीन, स्पेन, अबीसिनिया, मध्य यूरोप, मिस्त्र और पच्छिमी एशिया में होने वाले कशमकशों का जिक्र भी ले आता। मैं उन्हें सोवियत यूनियन में होने वाली अचरज-भरी तब्दीलियों का हाल भी बताता और कहता कि अमरीका ने कैसी तरक्की की है। यह काम आसान न था, लेकिन जैसा मैंने समझ रखा था, वैसा मुश्किल भी न था। इसकी वजह यह थी कि सारे पुराने महाकाव्यों ने और पुराणों की कथा-कहानियों ने, जिन्हें वे खूब जानते उन्हें इस देश की कल्पना करा दी थी, और हमेशा कुछ लोग ऐसे मिल जाते थे, जिन्होंने हमारे बड़े-बड़े तीर्थों की यात्रा कर रखी थी, जो हिंदुस्तान के चारों कोनों पर हैं। या हमें पुराने सिपाही मिल जाते, जिन्होंने पिछली बड़ी जंग में या और धावों के सिलसिले में विदेशों में नौकरियाँ की थीं। सन् तीस के बाद जो आर्थिक मंदी पैदा हुई थी, उसकी वजह से दूसरे मुल्कों के बारे में मेरे हवाले उनकी समझ में आ जाते थे।

**(i) 'सभी किसानों की एक जैसी समस्याएँ किसकी देन थीं?**

- (क) जमींदारों के द्वारा स्थापित टैक्स के ढाँचे की
- (ख) पूँजीपतियों और महाजनों के झूठ-फ़रेब की
- (ग) विदेशी सरकार द्वारा स्थापित अन्यायपूर्ण ढाँचे की
- (घ) भ्रष्टाचारी नेताओं द्वारा अंग्रेजों की गुलामी की

**(ii) "मैं अपनी बातचीत में चीन, स्पेन, अबीसिनिया, मध्य यूरोप, मिस्त्र और पच्छिमी एशिया में होने वाले**

**कशमकशों का जिक्र भी ले आता।"- अन्य देशों के विषय में भारतवासियों को बताने के पीछे नेहरू जी का क्या उद्देश्य था?**

- (क) किसानों के दृष्टिकोण में व्यापकता लाना
- (ख) भारतीयों को विदेशों से हीन सिद्ध करना
- (ग) अपने ज्ञान एवं जानकारी से परिचित करवाना
- (घ) किसानों को अन्य देशों की गुलामी का उदाहरण देना

**(iii) निम्नलिखित कथनों पर विचार कीजिए -**

- I. सन तीस की आर्थिक मंदी के विषय में ग्रामीण जागरूक थे।
- II. सभी किसान दक्खिन में कन्याकुमारी तक की यात्रा कर चुके थे।
- III. हिंदुस्तान के सभी बड़े-बड़े तीर्थ देश के चारों कोनों पर हैं।
- IV. नेहरू जी के लिए गाँव के किसानों को समझा पाना बिल्कुल आसान न था।

**गद्यांश के अनुसार कौन-सा/से कथन सही है/हैं -**

- (क) कथन I और III सही हैं

(ख) कथन II और IV सही हैं

(ग) केवल कथन I सही है

(घ) केवल कथन II सही है

(iv) प्रस्तुत गद्यांश में नेहरू जी का जलसों में जाने के पीछे मुख्यतः क्या उद्देश्य होता था?

(क) अंग्रेजों के विरोध में देश में क्रांति की ज्वाला फैलाना

(ख) भारतीय संस्कृति और धर्म का विदेशों में प्रचार करना

(ग) हिंदुस्तान के वास्तविक स्वरूप से देशवासियों को परिचित कराना

(घ) भाषण देकर स्वयं को भारत का श्रेष्ठ नेता सिद्ध करना

(v) कथन और कारण को ध्यानपूर्वक पढ़कर नीचे दिए गए विकल्पों में से सर्वाधिक उपयुक्त विकल्प चुनकर लिखिए-

कथन (A): सारे पुराने महाकाव्यों ने और पुराणों की कथा-कहानियों ने, जिन्हें किसान खूब जानते उन्हें इस देश की कल्पना करा दी थी।

कारण (R): किसान अशिक्षित या कम पढ़े-लिखे होने के बावजूद अपनी संस्कृति और परिवेश से पूर्णतः परिचित थे।

(क) कथन (A) सही और कारण (R) गलत है।

(ख) कथन (A) गलत और कारण (R) सही है।

(ग) कथन (A) और कारण (R) दोनों सही हैं किंतु कारण (R) कथन (A) की सही व्याख्या नहीं करता है।

(घ) कथन (A) और कारण (R) दोनों सही हैं और कारण (R) कथन (A) की सही व्याख्या करता है।

10. निम्नलिखित प्रश्नों को ध्यानपूर्वक पढ़कर किन्हीं दो प्रश्नों के लगभग 60 शब्दों में उत्तर दीजिए: (3X2=6)

(क) "परमात्मा से यही प्रार्थना है कि वह आपको सदैव नदी के किनारे वाला बेमुरौवत, उदुंद किंतु धर्मनिष्ठ दारोगा बनाए रखे।"- प्रस्तुत कथन धन के ऊपर धर्म की जीत को किस प्रकार सिद्ध करता है?

(ख) फिल्म-निर्माण केवल व्यावसायिक हित के लिए नहीं किया जाता बल्कि कई बार साधनहीनता के बीच अपनी कला-दृष्टि को साकार करने का संघर्ष भी है। 'अपू के साथ ढाई साल' पाठ के आलोक में इस कथन को सिद्ध कीजिए।

(ग) "उसकी आँखों में एक सर्जक की चमक थी।"- प्रस्तुत कथन का आशय 'गलता लोहा' पाठ के आधार पर स्पष्ट कीजिए।

11. निम्नलिखित प्रश्नों को ध्यानपूर्वक पढ़कर किन्हीं दो प्रश्नों के लगभग 40 शब्दों में उत्तर दीजिए:- (2X2=4)

(क) "बिछड़न-समय बड़ा करुणोत्पादक होता है।" 'विदाई संभाषण' पाठ के आधार पर कथन की विवेचना कीजिए।

(ख) 'जामुन का पेड़' कहानी में पेड़ के नीचे दबे कवि की स्थिति की प्रतीकात्मकता स्पष्ट कीजिए।

(ग) अखबार यदि किसी इश्यू को उठा ले और लगातार उस पर चोट करता रहे तो फिर वह थोड़े से लोगों की बात नहीं रह जाती। सबकी बन जाती है.... 'रजनी' पाठ में आए इस कथन का क्या तात्पर्य है?

12. निम्नलिखित प्रश्नों को ध्यानपूर्वक पढ़कर किन्हीं दो प्रश्नों के लगभग 100 शब्दों में उत्तर दीजिए: (5X2=10)

(क) शास्त्रीय संगीत और चित्रपट संगीत में अद्भुत सामंजस्य स्थापित कर संगीत-जगत पर अपनी अमिट छाप छोड़ने वाली स्वर-साम्राज्ञी लता मंगेशकर के गायन की किन विशेषताओं ने उन्हें विश्व में लोकप्रिय बनाया? लता जी का गायन संगीत के क्षेत्र में आने वाली पीढ़ियों के लिए किस प्रकार प्रेरणा-स्त्रोत है?

(ख) 'राजस्थान की रजत बूँदें' पाठ पर्यावरण संबंधी किस समस्या को उजागर कर उसका समाधान प्रस्तुत करती है? सीमित संसाधन समाज में अनुशासन स्थापित करने और समाज को जोड़ने का काम भी करते हैं, पाठ के आधार पर अपने विचार लिखिए।

(ग) 'आलो आँधारि' पाठ में बेबी हालदार के जीवन का संघर्ष उसे पढ़ने-लिखने और एक लेखिका के रूप में अपनी पहचान बनाने के लिए प्रेरित करता है। बेबी की संघर्ष से सफलता-प्राप्ति तक की यात्रा में पुरुष-वर्ग की क्या भूमिका रही? बेबी का संघर्ष समाज की अन्य स्त्रियों को किस प्रकार प्रेरित करता है? अपने विचार लिखिए।



अंक-योजना - प्रतिदर्श प्रश्नपत्र 2025-26

विषय - हिंदी (आधार)

(विषय कोड - 302)

कक्षा- ग्यारहवीं

निर्धारित समय : 3 घंटे	अधिकतम अंक : 80
<p>सामान्य निर्देश :</p> <ul style="list-style-type: none"> <li>अंक-योजना का उद्देश्य मूल्यांकन को अधिकाधिक वस्तुनिष्ठ बनाना है।</li> <li>वस्तुपरक प्रश्नों के उत्तरों का मूल्यांकन निर्दिष्ट अंक-योजना के आधार पर ही किया जाए।</li> <li>वर्णनात्मक प्रश्नों के अंक योजना में दिए गए उत्तर-संकेत अंतिम नहीं हैं। ये सुझावात्मक एवं सांकेतिक हैं।</li> <li>यदि परीक्षार्थी इन सांकेतिक बिंदुओं से भिन्न, किंतु उपयुक्त उत्तर दे तो उसे अंक दिए जाएँ।</li> <li>मूल्यांकन कार्य निजी व्याख्या के अनुसार नहीं, बल्कि अंक-योजना में निर्दिष्ट निर्देशानुसार ही किया जाए।</li> </ul>	

प्रश्न संख्या	अपेक्षित मूल्यांकन बिंदु	निर्धारित अंक	कुल अंक
1.	<p>खंड 'क' (अपठित बोध)</p> <p>(i) (घ) गर्त की ओर</p> <p>(ii) (ख) सतही</p> <p>(iii) (ख) केवल कथन (I) और कथन (III) सही हैं।</p> <p>(iv) जब हम थोड़ा-थोड़ा समझौता करना शुरू कर देते हैं।</p> <p>(v)</p> <ul style="list-style-type: none"> <li>अधिकांश लोग भौतिकता के पीछे भाग कर स्वयं को चिंता, डर, झूठे दिखावे में झोंक रहे हैं।</li> <li>सच्ची संतुष्टि और सच्चे जीवन-मूल्य तो नैतिकता का अनुसरण करके ही प्राप्त किए जा सकते हैं।</li> <li>लालच और ईर्ष्या की खाई में गिरने से बचना है तो नैतिकता का दामन थामना होगा। (समग्र के आधार पर)</li> </ul> <p>(vi)</p> <ul style="list-style-type: none"> <li>व्यक्ति को अपनी स्थिति में संतुष्ट रहना।</li> <li>दूसरों की समृद्धि या सुख को देखकर लालच या ईर्ष्या न करना। (समग्र के आधार पर)</li> </ul>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>2</p> <p>2</p>	10

2.	(vii)			
	<ul style="list-style-type: none"> <li>ऐसी कमाई डर और चिंता को बढ़ाती है।</li> <li>समाज में बदनामी का डर, एजेंसियों की जाँच की चिंता और लगातार झूठ बोलने की मज़बूरी जीवन को बोझिल बना देती है।</li> <li>असंतुष्ट जीवन के साथ-साथ मान-सम्मान की क्षति होती है। (समग्र के आधार पर)</li> </ul>	2		
	(i) (ख) व्यवस्था के प्रति आक्रोश और विद्रोह	1		
	(ii) (क) कथन (A) सही और कारण (R) गलत है।	1		
	(iii) (ग) I - 3, II - 4 III - 2, IV - 1	1		
	(iv)			
	<ul style="list-style-type: none"> <li>कठोर होते जा रहे लोगों के चेहरों पर मानवीय संवेदनाएँ लौटाने के लिए कवि 'चेहरों की रौनक' अर्थात् उम्मीद और ज़िंदादिली को नए सिरे से जगाने की बात कर रहा है। (समग्र के आधार पर)</li> </ul>	1		
	(v)			
	<ul style="list-style-type: none"> <li>कवि के अनुसार भागने की बजाय अगर हालात से जूझोगे तो तुम पर किया गया हर एक प्रहार यहाँ तक कि रुखानी अर्थात् तुम्हारे विरुद्ध इस्तेमाल किया गया हथियार भी तुम्हारे खरेपन की गवाही देगा।</li> <li>ऐसे में मेज़-कुर्सी तो क्या, हर एक संपदा में तुम हक से अपनी भागीदारी जतला सकोगे। (समग्र के आधार पर)</li> </ul>	2		
	(vi)			
	<ul style="list-style-type: none"> <li>यहाँ 'आरा मशीन' उन चुनौतियों की प्रतीक है, जिनका सामना साहस, बेबाकी और ईमानदारी की राह पर बढ़ने वाले लोगों को करना ही पड़ता है।</li> <li>अन्याय के विरुद्ध उठ रहे स्वरों को कुचलने के मकसद से दमन रूपी आरा मशीन का सक्रिय होना स्वाभाविक है। (समग्र के आधार पर)</li> </ul>	2		
<b>खंड-'ख' (अभिव्यक्ति और माध्यम)</b>				
3.	आरंभ	1		
	विषयवस्तु	3		
	प्रस्तुति	1		
	भाषा	1		
4.	विषयवस्तु	3		
	प्रारूप	1		
	भाषा	1		
				6

5.(i)	<p>(क)</p> <ul style="list-style-type: none"> <li>▪ दैनिक जीवन में संचार के बिना रह पाना असंभव</li> <li>▪ मानव जब तक जीवित है तब तक संचार-प्रक्रिया में निरंतरता</li> <li>▪ मानव को सामाजिक प्राणी बनाने में संचार-प्रक्रिया की अहम भूमिका।</li> </ul> <p>(ख)</p> <ul style="list-style-type: none"> <li>▪ नवीनता</li> <li>▪ निकटता</li> <li>▪ प्रभाव</li> <li>▪ जनरुचि</li> <li>▪ टकराव या संघर्ष</li> <li>▪ महत्वपूर्ण लोग</li> <li>▪ उपयोगी जानकारीयों</li> <li>▪ अनोखापन</li> <li>▪ पाठक वर्ग</li> <li>▪ नीतिगत ढाँचा</li> </ul> <p>(कोई भी तीन बिंदु स्वीकार्य)</p> <p>(ग)</p> <ul style="list-style-type: none"> <li>▪ मनुष्य सामाजिक प्राणी होने के कारण अनेक समस्याओं से जूझता है।</li> <li>▪ परिणामतः उस पर मानसिक एवं भावनात्मक दबाव।</li> <li>▪ इन दबावों से मुक्ति का सशक्त माध्यम - डायरी लेखन।</li> <li>▪ डायरी स्वयं से संवाद करने का अवसर प्रदान करती है।</li> <li>▪ यही संवाद इन दबावों से मुक्ति की ओर पहला कदम है।</li> </ul> <p>(विद्यार्थियों द्वारा दिए गए अन्य तर्कसंगत विचार भी स्वीकार्य)</p> <p>(घ)</p> <ul style="list-style-type: none"> <li>▪ फ़िल्म या दूरदर्शन की पटकथा में पात्र-चरित्र, नायक-प्रतिनायक, घटनास्थल, दृश्य, कहानी का क्रमिक विकास एवं समाधान आदि सम्मिलित होता है।</li> <li>▪ इसकी कथा फ़्लैशबैक या फ़्लैश फ़ॉरवर्ड तकनीक से भी प्रस्तुत की जा सकती है।</li> </ul> <p>(ङ)</p> <ul style="list-style-type: none"> <li>▪ जब तक किसी शब्द और उसके अर्थ को समाज की मान्यता नहीं मिल जाती, तब तक उसे शब्दकोश में स्थान नहीं दिया जाता।</li> <li>▪ समाज में प्रचलित एवं लोगों द्वारा स्वीकृत भाषिक दृष्टि से शुद्ध शब्द शब्दकोश में स्थान प्राप्त करते हैं।</li> </ul>	<p>2</p> <p>2</p> <p>2</p> <p>2</p>	<p>5</p> <p>8</p>
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5.(ii)	<ul style="list-style-type: none"> <li>कार्यालय में किसी भी विचाराधीन पत्र अथवा प्रकरण को निपटाने के लिए उस पर जो राय, मंतव्य, आदेश अथवा निर्देश दिया जाता है वह टिप्पणी कहलाता है।</li> </ul> <p><b>आवश्यक निर्देश:</b></p> <ul style="list-style-type: none"> <li>टिप्पणी के प्रारंभ में मूल पत्र में अंकित कार्यालय की क्रम संख्या का उल्लेख किया जाता है।</li> <li>इसके उपरांत मूल पत्र में दिए गए विवरण या तथ्य का सार, उसकी व्याख्या और संबंधित नियमों का हवाला देते हुए अपनी राय दी जाती है।</li> <li>टिप्पणी लिखने के बाद सहायक अधिकारी के हस्ताक्षर दाहिनी ओर एवं जिस अधिकारी को टिप्पणी प्रस्तुत की जाती है उसका पदनाम बायीं ओर लिखा जाता है।</li> <li>टिप्पणी संक्षिप्त, विषय-संगत, तर्कसंगत और क्रमबद्ध होनी चाहिए।</li> <li>टिप्पणकार को अपने विचार संतुलित एवं शिष्ट भाषा में देने चाहिए।</li> <li>टिप्पणी में व्यक्तिगत आक्षेप, उपदेश एवं पूर्वाग्रहों के लिए कोई स्थान नहीं होता।</li> <li>टिप्पणी सदैव अन्य पुरुष में लिखी जाती है।</li> <li>टिप्पणी में व्यर्थ का विस्तार नहीं होना चाहिए।</li> <li>टिप्पणी लिखते समय फाइल के टिप्पणी पत्रक पर पृष्ठ संख्या अवश्य लिखनी चाहिए।</li> </ul> <p>(कोई भी चार से पाँच बिंदु अपेक्षित)</p>	1+2	
6.	<p><b>खंड-‘ग’ (आरोह भाग-1 और वितान भाग-1 पुस्तकों पर आधारित)</b></p> <p>(i) (घ) गतिहीन या जड़ हो जाना</p> <p>(ii) (ख) निष्क्रिय</p> <p>(iii) (ख) 1- (ii), 2- (iii), 3- (i)</p> <p>(iv) (घ) अन्याय के विरुद्ध डट कर खड़े हों।</p> <p>(v) (ख) बुराई का खुलकर विरोध न करना</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	3
7.	<p><b>(क)</b></p> <ul style="list-style-type: none"> <li>शोषित वर्ग द्वारा व्यवस्था के विरुद्ध आवाज़ उठाना</li> <li>कवि दुष्यंत द्वारा जन-जागरण का संदेश देना</li> <li>कवि द्वारा दमनकारी व्यवस्था को नकारना और विकल्प तलाशना</li> </ul> <p><b>(ख)</b></p> <ul style="list-style-type: none"> <li>माता-पिता का बच्चों के प्रति असीम स्नेह</li> <li>बच्चों का माता-पिता के पद-चिह्नों पर चलना</li> </ul>	<p>3</p> <p>3</p>	5

8.	<ul style="list-style-type: none"> <li>पति-पत्नी का आपसी सहयोग एवं संतान का मार्गदर्शन</li> <li>भाइयों का भुजाओं के समान सहयोगी होना</li> <li>बहनों की स्नेही प्रवृत्ति</li> </ul>		6
	<p>(ग)</p> <ul style="list-style-type: none"> <li>सामाजिक मोह-माया एवं स्वार्थ में लिप्त जड़ व चेतन ईश्वर को ना भूलें ।</li> <li>वह स्वयं को शिव की आराधना में लीन कर दे।</li> <li>ऐसा करने से अहंकार पूर्णतः नष्ट हो जाएगा।</li> </ul>	3	
	<p>(क)</p> <ul style="list-style-type: none"> <li>कृष्ण-प्रेम के लिए समस्त संसार, पारिवारिक संबंधों एवं कुल की मर्यादा का परित्याग</li> <li>माया से विरक्ति और विरह के अश्रुओं से प्रेम की बेल को सींचना</li> </ul>	2	
	<p>(ख)</p> <ul style="list-style-type: none"> <li>चंपा नहीं चाहती कि उसका पति पैसा कमाने के लिए दूसरे शहर को पलायन कर जाए।</li> <li>कवि त्रिलोचन ने रोजी-रोटी कमाने के लिए दूसरे शहरों में जाने वाले युवकों और उनके परिजनों के दुख को व्यक्त किया है ।</li> </ul> <p>(ग)</p> <ul style="list-style-type: none"> <li>शहरी संस्कृति के प्रभाव में आकर लोगों की दिनचर्या में ठहराव आना और उनके जीवन का उत्साह नष्ट हो जाना</li> <li>कवयित्री चाहती है झारखंडी लोगों के जीवन में उत्साह लौटे और मन में सरसता और मधुरता लौट आए।</li> </ul>	2	4
9.	<p>(i) (ग) विदेशी सरकार द्वारा स्थापित अन्यायपूर्ण ढाँचे की</p> <p>(ii) (क) किसानों के दृष्टिकोण में व्यापकता लाना</p> <p>(iii) (क) कथन I और III सही हैं</p> <p>(iv) (ग) हिंदुस्तान के वास्तविक स्वरूप से देशवासियों को परिचित कराना</p> <p>(v) (घ) कथन (A) और कारण (R) दोनों सही हैं और कारण (R) कथन (A) की सही व्याख्या करता है।</p>	1 1 1 1 1	5
10.	<p>(क)</p> <ul style="list-style-type: none"> <li>पंडित अलोपीदीन द्वारा वंशीधर का प्रशस्ति-गायन</li> <li>पंडित अलोपीदीन द्वारा धन के प्रभाव से मुंशी वंशीधर को अदालत में दोषी सिद्ध करना</li> <li>अंत में वंशीधर की ईमानदारी से प्रभावित होकर अपनी संपत्ति का मैनेजर नियुक्त करना धन के ऊपर धर्म की जीत को दर्शाता है।</li> </ul>	3	

11.	(ख)	<ul style="list-style-type: none"> <li>▪ 'पाथेर पांचाली' फ़िल्म के निर्माण के समय सत्यजीत रे द्वारा कई समस्याओं का सामना करना</li> <li>▪ पात्रों का चयन, पृष्ठभूमि का बदलना, पात्रों की मृत्यु, आर्थिक अभाव</li> <li>▪ कला के प्रति अगाध प्रेम, समर्पण और उनके संघर्ष द्वारा 'पाथेर पांचाली' जैसी कालजयी फ़िल्म का निर्माण</li> </ul>	3	6
	(ग)	<ul style="list-style-type: none"> <li>▪ प्रस्तुत कथन मोहन के संदर्भ में कहा गया है।</li> <li>▪ धनराम द्वारा लोहे की मोटी छड़ को गोलाकार रूप देने में असफल रहने पर मोहन द्वारा उसे गोलाकार रूप में ढालना</li> <li>▪ आँखों में सर्जक की चमक, जिसमें न स्पर्धा और न ही किसी हार-जीत का भाव</li> </ul>	3	
	(क)	<ul style="list-style-type: none"> <li>▪ विदाई का समय अत्यंत करुणाजनक होता है। इस समय व्यक्ति सारी कड़वाहट भूल जाता है।</li> <li>▪ शिवशंभू की दो गायों के उदाहरण द्वारा पुष्टि (पाठ से संबंधित अन्य तथ्य भी स्वीकार्य)</li> </ul>	2	
	(ख)	<ul style="list-style-type: none"> <li>▪ कहानी में पेड़ के नीचे दबा कवि आम आदमी का प्रतीक है।</li> <li>▪ वह सरकारी तंत्र में फंसे आम आदमी की व्यथा व विवशता को दर्शाता है ।</li> <li>▪ आम आदमी की समस्या को कोई भी गंभीरता से नहीं लेता</li> <li>▪ सरकारी विभागों में उलझती हुई फाइल जब तक खुलती है तब तक आदमी की जीवन-लीला समाप्त हो जाती है।</li> </ul>	2	
12.	(ग)	<ul style="list-style-type: none"> <li>▪ समाज में अखबार की भूमिका महत्वपूर्ण</li> <li>▪ अखबार सामाजिक समस्या संबंधी लेखों द्वारा जनसाधारण की जागरूकता के वाहक (पाठ से उदाहरण द्वारा स्पष्टीकरण)</li> </ul>	2	4
	(क)	<ul style="list-style-type: none"> <li>▪ शास्त्रीय संगीत में निपुणता के साथ-साथ चित्रपट संगीत को लोकप्रियता दिलाना</li> <li>▪ लता का गानपन, स्वरों की निर्मलता</li> <li>▪ स्वरों की कोमलता, मुग्धता, नादमय उच्चार</li> <li>▪ करुण व श्रृंगार रस के गीतों का अद्भुत गायन</li> </ul>	5	

	<ul style="list-style-type: none"> <li>गीतों की निर्मलता एवं कोमलता के माध्यम से लता के अपने व्यक्तित्व की झलक मिलना</li> <li>आने वाली पीढ़ी के लिए संगीत को साधना मानकर निरंतर अभ्यास करना</li> <li>गायन के उत्कृष्ट रूप को आधार बनाना, शास्त्र-शुद्ध और नीरस गायन की अपेक्षा संगीत के कलात्मक आनंद और रसोत्कटता को महत्व देना इत्यादि। (विद्यार्थियों के अन्य तर्कसंगत विचार भी स्वीकार्य)</li> </ul>		
(ख)	<ul style="list-style-type: none"> <li>राजस्थान में जल की कमी की समस्या और कुई खोदकर उसके समाधान को प्रस्तुत करता है।</li> <li>पानी के विभिन्न रूपों तथा जमीन की अटल गहराइयों की जानकारी देता है।</li> <li>धरती के नीचे वर्षा जल के संरक्षण का वैज्ञानिक और भौगोलिक आधार</li> <li>कुई खोदने के कार्य में लोगों का सहयोग, लोगों में चेलवांजी के प्रति विशेष सम्मान का भाव</li> <li>कुई खोदने के लिए ग्राम पंचायत की अनुमति की आवश्यकता, कुइयों का सीमित होना</li> <li>गाँव में शाम को पानी भरते समय उल्लास का वातावरण (विद्यार्थियों के अन्य तर्कसंगत विचार भी स्वीकार्य)</li> </ul>	5	10
(ग)	<ul style="list-style-type: none"> <li>बेबी के जीवन में पुरुष नकारात्मक भूमिका के साथ-साथ सकारात्मक भूमिका और प्रेरणा-स्त्रोत के रूप में भी रहा।</li> <li>पति के अत्याचारों के कारण घर और मकान मालिक के पुत्र के दुर्व्यवहार के कारण किराये का कमरा छोड़ने को विवश होना</li> <li>पुरुष मित्र सुनील के सहयोग से तातुश के घर काम मिलना</li> <li>तातुश की प्रेरणा से पढ़ना-लिखना प्रारम्भ करना</li> <li>पत्रों के माध्यम से तातुश के मित्रों द्वारा लेखन-कार्य के लिए उत्साहवर्धन करना।</li> <li>समाज की स्त्रियों को जीवन में संघर्ष करने, अपनी रुचि, योग्यता और सामर्थ्य को पहचानकर अपनी पहचान बनाने की प्रेरणा देता है। (विद्यार्थियों के अन्य तर्कसंगत विचार भी स्वीकार्य)</li> </ul>	5	

	<b>Sample Paper – 2025-26</b> <b>Accountancy</b> <b>Class – XI</b>	
	<b>Time allowed: 3 Hours</b>	<b>Max. Marks: 80</b>
	<b>General Instructions</b> <ol style="list-style-type: none"> <li>1. Question Paper is divided into two parts. Part – A (56 Marks) and Part – B (24 Marks)</li> <li>2. Both parts are compulsory</li> <li>3. All parts of the question should be attempted at one place.</li> <li>4. Write down the question number clearly before attempting the question</li> <li>5. 25% of the marks allotted to the question would be deducted for not using correct format, narrations and working notes.</li> <li>6. Nothing should be written on the Question paper</li> <li>7. Scheme of choice <ol style="list-style-type: none"> <li>i. 1 Mark – 7 questions (2 from unit 1, 4 from unit 2 and 1 from unit 3)</li> <li>ii. 3 Mark – 2 questions (1 from unit 1 and 1 from unit 2)</li> <li>iii. 4 Mark – 1 question (1 from unit 2)</li> <li>iv. 6 Mark – 2 questions (1 from unit 2 and 1 from unit 3)</li> </ol> </li> </ol>	
<b>Q.No.</b>	<b>PART – A</b>	<b>Marks</b>
1	Assertion (A): Accounting standards enhance the reliability of financial statements Reason (R): Accounting standards are not mandatory in nature Which of the following is correct? a) Both A and R are correct and R is the correct explanation of A b) Both A and R are correct but R is not the correct explanation of A c) A is True but R is False d) A is False but R is True	1
2	The final burden of Goods and Services Tax is a) Borne by the 'Seller' of the product b) Borne by the 'Government' c) Shifted to the 'Final user' of the product d) Both a) and b)	1
3	Bank balance is treated as Favourable or Positive balance if it is a _____ a) Debit balance of Cash book b) Credit balance of Cash book c) Debit balance of Pass book d) Both b) and c)	1
4 A	Which of the following Qualitative Characteristics of accounting information is present when accounting information meets the requirement of the users? a) Understandability b) Relevance c) Reliability d) Compatibility	1
	<b>Or</b>	
4 B	Basic function of financial accounting is _____ a) To record all business transactions b) To provide assistance to management c) To interpret accounting information d) To communicate accounting information to various users	1



5 A	Nova Advertising earned ₹50,00,000 from the services provided during the year ending 31/3/25. Out of this, he received ₹45,00,000 during the year. He incurred expenses ₹25,00,000 out of which ₹2,00,000 is still outstanding at the end of the year. Additionally, they also received income of ₹1,00,000 related to the year ended 31/3/2024 and also paid ₹50,000 expenses for the year ended 31/3/24 in the current year (31/3/25). Profit on the Cash basis of accounting will be: a) ₹22,50,000 b) ₹25,00,000 c) ₹27,00,000 d) ₹20,00,000	1				
	Or					
5 B	Nova Advertising earned ₹50,00,000 from the services provided during the year ending 31/3/25. Out of this, he received ₹45,00,000 during the year. He incurred expenses ₹25,00,000 out of which ₹2,00,000 is still outstanding at the end of the year. Additionally, they also received income of ₹1,00,000 related to the year ended 31/3/2024 and also paid ₹50,000 expenses for the year ended 31/3/24 in the current year (31/3/25). Profit on the Accrual basis of accounting will be: a) ₹45,00,000 b) ₹25,00,000 c) ₹20,00,000 d) ₹22,00,000	1				
6	Provision is made: a) To provide for an unknown liability b) To provide for a known liability c) To face the financial difficulties d) To strengthen the financial position	1				
7	A purchaser of goods makes a _____ when he has been overcharged or when he returns back the goods. a) Credit note b) Debit voucher c) Invoice d) Debit note	1				
8	Journal is a book of a) Prime Entry b) Original Entry c) Both a) and b) d) Secondary Entry	1				
9	Find the correct statement : a) Credit an increase in assets b) Credit the increase in expenses c) Debit the increase in Revenue d) Credit an increase in capital	1				
10	Match the following: <table><tr><th>Column 1</th><th>Column 2</th></tr><tr><td>A. Liabilities Account B. Revenue Account C. Capital Account D. Asset Account</td><td>1. Accrued Interest A/c 2. Sales A/c 3. Drawings A/c 4. Unearned Income A/c</td></tr></table> Options: a) A4, B2, C3, D1 b) A4, B3, C1, D2	Column 1	Column 2	A. Liabilities Account B. Revenue Account C. Capital Account D. Asset Account	1. Accrued Interest A/c 2. Sales A/c 3. Drawings A/c 4. Unearned Income A/c	1
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	c) A2, B3, C4, D1 d) A2, B1, C3, D4																																																						
11	Petty cash Account is : a) An Expenses a/c b) A Liability A/c c) An Asset A/c d) A Revenue A/c	1																																																					
12 A	When an entry is made in Journal: a) Assets are listed first b) Accounts to be debited are listed first c) Accounts to be credited are listed first d) Accounts may be listed in any order	1																																																					
	Or																																																						
12 B	Following account is generally not balanced: a) Asset a/c b) Revenue a/c c) Expense a/c d) Both b) and c)	1																																																					
13 A	Depreciation is not charged on a) Machinery b) Furniture c) Building d) Stock	1																																																					
	Or																																																						
13 B	A machinery costing ₹40,000 has an estimated life of 5 years. At the end of its life, the estimated scrap value will be ₹10,000. The annual depreciation will be: a) ₹8,000 b) ₹10,000 c) ₹6,000 d) ₹5,000	1																																																					
14 A	From the following Ledger, identify the correct Journal Entry <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;">Dr.</td><td style="width: 10%;"></td><td style="width: 10%;">Ram</td><td style="width: 30%;"></td><td style="width: 10%;">Cr.</td></tr><tr><td>Particulars</td><td></td><td>Rs.</td><td>Particulars</td><td>Rs.</td></tr><tr><td></td><td></td><td></td><td>By Cash A/c</td><td>xxxx</td></tr><tr><td></td><td></td><td></td><td>By Bad Debts A/c</td><td>xxxx</td></tr><tr><td></td><td></td><td>xxxx</td><td></td><td>xxxx</td></tr></table> <p>A.</p> <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;">Cash A/c</td><td style="width: 10%;">...Dr.</td><td style="width: 10%;">xxxx</td><td style="width: 10%;"></td></tr><tr><td>Bad debts A/c</td><td>...Dr.</td><td>xxxx</td><td></td></tr><tr><td>To Ram</td><td></td><td></td><td>xxxx</td></tr></table> <p>B.</p> <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;">Cash A/c</td><td style="width: 10%;">...Dr.</td><td style="width: 10%;">xxxx</td><td style="width: 10%;"></td></tr><tr><td>To Ram</td><td></td><td></td><td>xxxx</td></tr></table> <p>C.</p> <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;">Cash A/c</td><td style="width: 10%;">...Dr.</td><td style="width: 10%;">xxxx</td><td style="width: 10%;"></td></tr><tr><td>To Ram</td><td></td><td></td><td>xxxx</td></tr></table>	Dr.		Ram		Cr.	Particulars		Rs.	Particulars	Rs.				By Cash A/c	xxxx				By Bad Debts A/c	xxxx			xxxx		xxxx	Cash A/c	...Dr.	xxxx		Bad debts A/c	...Dr.	xxxx		To Ram			xxxx	Cash A/c	...Dr.	xxxx		To Ram			xxxx	Cash A/c	...Dr.	xxxx		To Ram			xxxx	1
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To Bad debts A/c			Xxxx											
	Or													
14 B	If a transaction is properly analysed and recorded: a) Only two accounts will be used to record the transaction b) One accounts will be used to record the transaction c) One account balance will Increase and another will decrease d) Total amount debited will equal to total amount credited.	1												
15 A	Which of the following is not an error of commission: a) Overcasting of sales book b) Credit sales to Ramesh 5,000 credited to his account c) Wrong balancing of Machinery Account d) Cash Sales not recorded in the sales book.	1												
	Or													
15 B	If Wages paid on installation of new machinery is debited to wages account. It is: a) Error of commission b) Error of omission c) Compensatory commission d) Error of Principle	1												
	<b>From the following Case study answer the 16<sup>th</sup> Question (Both options are related to this case study)</b> Mr. Ritesh commenced trading business in paints with the initial investment of ₹20,00,000. Out of this, he paid ₹10,00,000 for purchase of paints, ₹90,000 for furniture, ₹60,000 for computer and printer and the remaining amount was deposited into bank. He sold paints costing ₹6,00,000 for ₹8,00,000 against an account payee cheque. Sales were made to Amit on credit costing ₹2,00,000 for ₹2,50,000. He further purchased paints for ₹2,00,000 through cheque and ₹3,00,000 on credit from Manish. He further sold goods costing ₹2,50,000 for ₹300,000 through cheque. Goods costing ₹55,000 destroyed by fire. Following payments were made: Office rent ₹20,000 Electricity charges ₹15,000 Wages and salary ₹30,000 Telephone charges ₹10,000 Mr Ritesh used paints of ₹30,000 for his residence													
16 A	From the above calculate the following: a) Total Purchases b) The value of creditors c) Amount of Expenses	3												
	Or													
16 B	From the above calculate the following: a) Total Sales b) The value of Debtors c) Amount of Drawings	3												
17 A	Pass necessary rectification entries in the books of Saral Enterprises 1. A credit purchase of ₹1,300 from Rakesh was passed in the books as ₹1,800	3												

	2. Credit side of Anil's a/c was overcast by ₹1,000 3. Goods of the value ₹2,500 returned by Naresh were entered in the Sales book and posted to the credit of his a/c																																					
	<b>Or</b>																																					
17 B	Pass necessary rectification entries in the book of Shraddha Enterprises <ol style="list-style-type: none"> <li>The total of one page of Sales book was carried forward to the next page as ₹690 instead of ₹960</li> <li>An item of ₹1,500 related to prepaid expenses was omitted to be brought forward from the previous year's books of accounts</li> <li>Old furniture sold for ₹5,400 was posted as ₹4,500 in Sales a/c</li> </ol>	3																																				
18	Determine the capital of Pranav as on 1/4/24 and 31/3/25 if his position as at 31/3/25 was as follows: He owns Machinery of ₹40,000, Building of ₹1,20,000, Furniture ₹15,000 and Cash in hand ₹6,000 Bank (Credit) ₹2,000, Creditors ₹45,000 and Bank loan ₹18,000 from SBI During the year 2024-25 he introduced additional capital ₹50,000 and withdrew cash ₹10,000 and goods of ₹10,000. His Net Profit was ₹30,000 during the year 2024-25	3																																				
19	Prepare the correct Trial Balance from the following trial balance in which there are certain mistakes.  <div style="text-align: center;"> <b>Books of Bharti</b>  <b>Trial Balance</b>  <b>As at 31/3/2025</b> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Account Head</th><th style="text-align: center;">Debit Balance</th><th style="text-align: center;">Credit Balance</th></tr> </thead> <tbody> <tr> <td>Adjusted Purchases</td><td style="text-align: right;">3,00,000</td><td></td></tr> <tr> <td>Closing Stock</td><td></td><td style="text-align: right;">80,000</td></tr> <tr> <td>Debtors</td><td></td><td style="text-align: right;">1,40,000</td></tr> <tr> <td>Creditors</td><td></td><td style="text-align: right;">60,000</td></tr> <tr> <td>Bank Overdraft</td><td style="text-align: right;">20,000</td><td></td></tr> <tr> <td>Fixed assets</td><td style="text-align: right;">1,00,000</td><td></td></tr> <tr> <td>Opening Stock</td><td style="text-align: right;">1,20,000</td><td></td></tr> <tr> <td>Expenses</td><td></td><td style="text-align: right;">40,000</td></tr> <tr> <td>Sales</td><td></td><td style="text-align: right;">4,00,000</td></tr> <tr> <td>Capital</td><td style="text-align: right;">1,80,000</td><td></td></tr> <tr> <td></td><td style="text-align: right;"><b><u>7,20,000</u></b></td><td style="text-align: right;"><b><u>7,20,000</u></b></td></tr> </tbody> </table>	Account Head	Debit Balance	Credit Balance	Adjusted Purchases	3,00,000		Closing Stock		80,000	Debtors		1,40,000	Creditors		60,000	Bank Overdraft	20,000		Fixed assets	1,00,000		Opening Stock	1,20,000		Expenses		40,000	Sales		4,00,000	Capital	1,80,000			<b><u>7,20,000</u></b>	<b><u>7,20,000</u></b>	3
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20	State with reasons whether the following is a 'Provision' or 'Reserve' <ol style="list-style-type: none"> <li>A sum retained to provide for loss that may arise out of doubtful debts</li> <li>A sum set aside to provide for repayment of Debentures</li> <li>Amount retained as Depreciation to provide for decrease in the value of Fixed Assets</li> </ol>	3																																				
21	Identify and explain the accounting principles/concepts/conventions followed or violated in the following situations: <ol style="list-style-type: none"> <li>Tarun, proprietor of M/s Tarun Enterprise, runs a bakery shop on the ground floor of his residential building. He purchased an Air conditioner for the first floor i.e. his residence and the payment for the same was made out of the business. He had shown it as a tangible asset in the books of accounts.</li> <li>Shyam purchased a building for ₹20,00,000. After five years, Depreciation charged on the building amounted to ₹3,00,000. However, due to boom in the real estate, market value of the building is at ₹28,00,000 and he recorded the same at this value.</li> </ol>	4																																				
22 A	Prepare Bank Reconciliation Statement of Dhairya as on 31 <sup>st</sup> Jan., 2025 (i) Debit balance as per Bank Pass Book as on the date is ₹ 41,000. (ii) Cheque dishonoured and debited by bank but not given effect to it in the ledger ₹ 1,000. (iii) Cheques amounting ₹15,600 were drawn on 27 <sup>th</sup> Jan., 2025. Out Of which cheques for	4																																				

	(iv) Cheques amounting ₹21,000 were deposited for collection. But out of these, cheques for ₹7,400 have been credited in the pass book on 5 <sup>th</sup> Feb., 2025.	
	<b>Or</b>	
22 B	<p>From the following information provided by Jayesh, Prepare Bank Reconciliation Statement as on 31st July, 2025:</p> <p>(i) Debit balance as per Bank Cash Book as on the date is ₹ 10,000.</p> <p>(ii) Cheque issue to Rajan for ₹ 2,000 was cancelled on 31st July, 2025 against a fresh cheque issued on the same date. The entry for the cancellation and issue of new cheque was made in the cash book, while no entry regarding the cheque was made in the pass book.</p> <p>(iii) Cheque of ₹ 350 paid into bank, but bank credited ₹ 530 by mistake.</p> <p>(iv) Bank paid insurance premium of Rs. 2,000, but it was recorded as 200 only in the cash book.</p>	4
23	Aryan Traders bought machinery for ₹2,00,000 on 1/4/21. On 30th september 2022 it acquired additional machinery for ₹20,000 and its installation charges are ₹5,000. The depreciation is charged @10% p.a. on the diminishing balance method. On 1/10/23, one fifth of the machinery which was purchased in 2021 became useless on account of damage to one of its vital parts. The damaged part is sold for ₹18,000. Prepare Machinery Account for 3 yrs.	6
24	<p>Enter the following transactions in appropriate Cash book also prepare Journal Proper of Sanraj and Sons.</p> <p>January 1 Bank Overdraft ₹12,000 Cash in hand ₹2,300</p> <p>January 5 Purchased goods for ₹34,000, payment made by cheque.</p> <p>January 6 Sold goods for ₹27,000, payment received by cheque</p> <p>January 9 Cheque received from Reddy ₹4,000 deposited into bank on the same day</p> <p>January 11 Reddy's cheque dishonoured.</p> <p>January 20 Money withdrawn from bank for office use ₹3,400</p> <p>January 25 Cheque received from Anil ₹2500 and endorsed to Sunil on 27th January</p> <p>January 31 Paid into bank the entire balance after retaining ₹700 at office</p>	6
25 A	<p>Journalise the following transactions</p> <ol style="list-style-type: none"> <li>1. Purchased goods from Ketan for ₹40,000 at a trade discount of 10% plus CGST and SGST@9% each.</li> <li>2. Goods of ₹5,000 returned to Harish. Such goods were purchased by paying IGST@18%.</li> <li>3. Sold goods to Kapil for ₹30,000, charged IGST @ 12% and received ₹12,000 in cash and balance to be received after one month.</li> <li>4. Purchased building of ₹20,00,000 and paid commission to a broker of ₹70,000 and ₹1,00,000 as registration charges. All the payments made by cheque.</li> <li>5. Received an order from Sunil to supply goods of ₹40,000. Received ₹12,000 as advance.</li> <li>6. Purchased machinery for ₹3,36,000 including 12% IGST by taking loan of ₹2,00,000 from bank and balance in cash.</li> </ol>	6
	<b>Or</b>	
25 B	<p>Prepare proper Subsidiary books (Apart from Cash Book) of M/s Anurag Traders from the following</p> <p>January 1 Purchased from Raunav Stationery:</p> <p style="padding-left: 40px;">10 Dozen Spiral books @ ₹10 per piece 20 Registers @ ₹25 per register Less: Trade discount @10%</p> <p>January 4 Sold to Kunal Stationery:</p> <p style="padding-left: 40px;">15 dozen Pens @ ₹60 per dozen 15 dozen pencils @ ₹50 per dozen Less: Trade discount @ 10%</p> <p>January 9 Goods returned to Raunav Stationery:</p> <p style="padding-left: 40px;">2 Dozen Spiral books @ ₹120 per dozen</p>	6

	January 12 Bought from Krishna Stationery: 10 Packets wax crayons@ ₹120 per packet 5 Dozen pencil colours @ ₹80 per dozen Less: Trade discount @ 10% January 13 Tanmay Stationery Purchased from us: 15 Packets printing paper @ ₹200 per packet 15 Packets drawing sheets @ ₹120 per packet Less: Trade discount @ 15% January 16 Goods purchased from Raunav Stationery for cash 2 packets printing paper @ ₹200 per packet 5 Dozen Pencil colours @ ₹80 per dozen																										
	<b>Part - B</b>																										
26	Which of the following is not treated as a Revenue Expenditure? a) Fire insurance premium on Plant and Machinery b) Taxes paid on import of a machinery c) Upgradation of office computer by installing a new RAM d) Both b) and c)	1																									
27	Calculate Sales form the following: I. Gross Profit is 25% on Sales II. Net Adjusted Purchases is ₹ 4,00,000 III. Direct expenses are ₹2,00,000 IV. Closing stock ₹1,50,000  Options a) ₹4,50,000 b) ₹6,00,000 c) ₹7,50,000 d) ₹8,00,000	1																									
28	Single entry system is defective because under this system: a) Trial Balance cannot be prepared b) Profit and Loss a/c cannot be prepared c) Balance sheet cannot be prepared d) All of the above	1																									
29	Net Profit = ₹50,000 Indirect expenses = ₹35,000 Direct expenses = ₹5,000 The Journal entry for Gross Profit will be: (Choose the correct option) <table><tr><th>S.No.</th><th>Particulars</th><th>L.F.</th><th>Debit ₹</th><th>Credit ₹</th></tr><tr><td>a</td><td>Profit &amp; Loss a/c Dr To Capital a/c</td><td></td><td>50,000</td><td>50,000</td></tr><tr><td>b</td><td>Gross Profit Dr To Profit &amp; Loss a/c</td><td></td><td>90,000</td><td>90,000</td></tr><tr><td>c</td><td>Trading a/c Dr To Profit &amp; Loss a/c</td><td></td><td>85,000</td><td>85,000</td></tr><tr><td>d</td><td>Profit &amp; Loss a/c Dr To Trading a/c</td><td></td><td>85,000</td><td>85,000</td></tr></table>	S.No.	Particulars	L.F.	Debit ₹	Credit ₹	a	Profit & Loss a/c Dr To Capital a/c		50,000	50,000	b	Gross Profit Dr To Profit & Loss a/c		90,000	90,000	c	Trading a/c Dr To Profit & Loss a/c		85,000	85,000	d	Profit & Loss a/c Dr To Trading a/c		85,000	85,000	1
S.No.	Particulars	L.F.	Debit ₹	Credit ₹																							
a	Profit & Loss a/c Dr To Capital a/c		50,000	50,000																							
b	Gross Profit Dr To Profit & Loss a/c		90,000	90,000																							
c	Trading a/c Dr To Profit & Loss a/c		85,000	85,000																							
d	Profit & Loss a/c Dr To Trading a/c		85,000	85,000																							
30 A	Assertion (A): Under Single Entry System, only one aspect of all the transactions is recorded Reason (R): A business firm is said to be following Single Entry System if it is not completely following the principles of Double Entry System Which of the following is correct?	1																									

	<div>b) Both A and R are correct but R is not the correct explanation of A</div> <div>c) A is True but R is False</div> <div>d) A is False but R is True</div>																																									
	Or																																									
30 B	<div>Statement 1: Single Entry system is less expensive as compared to Double Entry System</div> <div>Statement 2: Single Entry System does not require expert knowledge of the principles of Double Entry System</div> <div>Choose the correct option from the following</div> <div>Options:</div> <div><div>a) Only statement 1 is true</div><div>b) Only statement 2 is true</div><div>c) Both statement 1 and statement 2 are true</div><div>d) both statement 1 and statement 2 are false</div></div>	1																																								
31	<div>Avni is a cosmetics dealer. She provides the following information from which you are required to calculate Gross profit.</div> <div><div>✓ Purchase during the year ₹16,00,000</div><div>✓ Return outwards ₹40,000</div><div>✓ Return inwards ₹20,000</div><div>✓ Direct expenses ₹1,20,000</div><div>✓ Indirect expenses ₹1,00,000</div><div>✓ <math>\frac{2}{3}</math>rd of goods are sold for ₹12,20,000</div></div>	3																																								
32	<div>Pass necessary ‘Adjustment’ entries and ‘Closing’ entries in the books of Azad Enterprises on 31<sup>st</sup> March, 2025</div> <div><div>1. Salary ₹2,000 is still to be paid at the end of the year</div><div>2. Depreciation charged on machinery ₹10,000</div><div>3. Commission accrued ₹15,000.</div><div>4. Write off ₹2,000 as bad debts. (There is no existing provision for bad debts)</div></div>	4																																								
33	<div>Ambika Panwar started a bakery business ‘Panwar Bakers’ on 1<sup>st</sup> May, 2024. It was a small business, so she decided to keep records as per Single Entry System. She invested ₹78,000 as initial capital on 1<sup>st</sup> May, 2024. On 31<sup>st</sup> March, 2025 she could provide the following data:</div> <div><div>➤ Amount due to suppliers ₹17,500</div><div>➤ Stock of raw materials ₹2,000 and of finished products ₹2,500</div><div>➤ Fixed assets ₹34,000</div><div>➤ Amount due from customers ₹42,000</div><div>➤ Drawings ₹2,500 per month</div><div>➤ Additional capital ₹7,000</div><div>➤ Cash in hand ₹1,500 and at bank ₹21,000</div><div>➤ Outstanding electricity bill ₹500</div></div> <div>Calculate the profit made during the year ended 31/3/25 using ‘Statement of Affairs’ Method.</div>	6																																								
34 A	<div>From the following balances taken from the books of Anshika Traders, prepare <b>Trading and Profit &amp; Loss a/c</b> for the year ended 31/3/2025</div> <div>Trial Balance as at 31/3/2025</div> <table><tr><th>Debit balances</th><th>₹</th><th>Credit balances</th><th>₹</th></tr><tr><td>Drawings</td><td>18,000</td><td>Capital</td><td>80,000</td></tr><tr><td>Purchases</td><td>82,600</td><td>Sales</td><td>1,55,000</td></tr><tr><td>Stock (1/4/24)</td><td>42,000</td><td>Return outwards</td><td>1,600</td></tr><tr><td>Carriage inwards</td><td>1,200</td><td>8% Bank Loan</td><td>25,000</td></tr><tr><td>Wages</td><td>4,000</td><td>Creditors</td><td>18,900</td></tr><tr><td>Power</td><td>6,000</td><td></td><td></td></tr><tr><td>Machinery</td><td>50,000</td><td></td><td></td></tr><tr><td>Furniture</td><td>12,000</td><td></td><td></td></tr><tr><td>Rent</td><td>24,000</td><td></td><td></td></tr></table>	Debit balances	₹	Credit balances	₹	Drawings	18,000	Capital	80,000	Purchases	82,600	Sales	1,55,000	Stock (1/4/24)	42,000	Return outwards	1,600	Carriage inwards	1,200	8% Bank Loan	25,000	Wages	4,000	Creditors	18,900	Power	6,000			Machinery	50,000			Furniture	12,000			Rent	24,000			
Debit balances	₹	Credit balances	₹																																							
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	<table><tr><td>Salaries</td><td>15,000</td><td></td><td></td></tr><tr><td>Insurance</td><td>3,600</td><td></td><td></td></tr><tr><td>Debtors</td><td>20,600</td><td></td><td></td></tr><tr><td>Cash in hand</td><td>1,500</td><td></td><td></td></tr><tr><td></td><td><u>2,80,500</u></td><td></td><td><u>2,80,500</u></td></tr></table>	Salaries	15,000			Insurance	3,600			Debtors	20,600			Cash in hand	1,500				<u>2,80,500</u>		<u>2,80,500</u>																																													
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	<u>2,80,500</u>		<u>2,80,500</u>																																																															
	Adjustments: 1. Stock at the end ₹64,800 2. Outstanding wages ₹2,400 3. Further Bad debts ₹600 and provision for doubtful debts is to be created @ 5% on debtors 4. Bank loan was taken on 1 <sup>st</sup> October 2024 5. Depreciate machinery to 90% 6. Provide for manager's commission @ 10% of Net profits after charging such commission	6																																																																
	Or																																																																	
34 B	<p>From the following balances taken from the books of Mehul Stores, prepare <b>Profit &amp; Loss a/c and Balance Sheet</b> for the year ended 31/3/2025</p> <p style="text-align: center;"><b>Trial Balance as at 31/3/2025</b></p> <table><tr><th>Debit balances</th><th>₹</th><th>Credit balances</th><th>₹</th></tr><tr><td>Opening stock</td><td>15,000</td><td>Sales</td><td>1,80,000</td></tr><tr><td>Purchases</td><td>1,09,000</td><td>Interest on Anant's loan</td><td>300</td></tr><tr><td>Wages</td><td>8,000</td><td>Apprentice premium</td><td>4,500</td></tr><tr><td>Fuel, power and light</td><td>12,000</td><td>Outstanding rent</td><td>600</td></tr><tr><td>Salaries</td><td>11,000</td><td>Bills payable</td><td>1,600</td></tr><tr><td>Income tax</td><td>5,500</td><td>Creditors</td><td>13,000</td></tr><tr><td>10% Loan to Anant</td><td>5,000</td><td>Capital</td><td>1,00,000</td></tr><tr><td>Rent</td><td>4,000</td><td></td><td></td></tr><tr><td>Furniture</td><td>4,000</td><td></td><td></td></tr><tr><td>Furniture (Purchased on 1/10/23)</td><td>1,000</td><td></td><td></td></tr><tr><td>Bills receivable</td><td>6,000</td><td></td><td></td></tr><tr><td>Plant</td><td>72,000</td><td></td><td></td></tr><tr><td>Debtors</td><td>28,000</td><td></td><td></td></tr><tr><td>Cash in hand</td><td>19,500</td><td></td><td></td></tr><tr><td></td><td><u>3,00,000</u></td><td></td><td><u>3,00,000</u></td></tr></table> <p>Adjustments: I. Gross Profit ₹66,000 II. Closing stock ₹30,000 III. Create a provision for discount on debtors @2% IV. Apprentice premium is received for 3 years V. Depreciate furniture by 10% p.a. VI. Salaries for the month of March 2025 is still payable</p> <p>=====</p>	Debit balances	₹	Credit balances	₹	Opening stock	15,000	Sales	1,80,000	Purchases	1,09,000	Interest on Anant's loan	300	Wages	8,000	Apprentice premium	4,500	Fuel, power and light	12,000	Outstanding rent	600	Salaries	11,000	Bills payable	1,600	Income tax	5,500	Creditors	13,000	10% Loan to Anant	5,000	Capital	1,00,000	Rent	4,000			Furniture	4,000			Furniture (Purchased on 1/10/23)	1,000			Bills receivable	6,000			Plant	72,000			Debtors	28,000			Cash in hand	19,500				<u>3,00,000</u>		<u>3,00,000</u>	6
Debit balances	₹	Credit balances	₹																																																															
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	Sample Paper – 2025-26 Accountancy Class – XI Solution & Marking Scheme	Value points	Mar ks												
Q.No.	PART – A														
1	c) A is True but R is False	1	1												
2	c) Shifted to the 'Final user' of the product	1	1												
3	a) Debit balance of Cash book	1	1												
4	b) Relevance	1	1												
	Or														
4 B	a) To record all business transactions	1	1												
5 A	a) ₹22,50,000	1	1												
	Or														
5 B	b) ₹25,00,000	1	1												
6	b) To provide for a known liability	1	1												
7	d) Debit note	1	1												
8	c)Both a) and b)	1	1												
9	d)Credit an increase in capital	1	1												
10	a) A4, B2, C3, D1	1	1												
11	c)An Asset A/c	1	1												
12 A	b) Accounts to be debited are listed first	1	1												
	Or														
12 B	d) Both b) and c)	1	1												
13 A	d) Stock	1	1												
	Or														
13 B	c) ₹6,000	1	1												
14 A	A. <table border="1"> <tr> <td>Cash A/c</td><td>...Dr.</td><td>xxxx</td><td></td></tr> <tr> <td>Bad debts A/c</td><td>...Dr.</td><td>xxxx</td><td></td></tr> <tr> <td>To Ram</td><td></td><td></td><td>xxxx</td></tr> </table>	Cash A/c	...Dr.	xxxx		Bad debts A/c	...Dr.	xxxx		To Ram			xxxx	1	1
Cash A/c	...Dr.	xxxx													
Bad debts A/c	...Dr.	xxxx													
To Ram			xxxx												
	Or														
14 B	d) Total amount debited will equal to total amount credited.	1	1												
15 A	d) Cash Sales not recorded in the sales book	1	1												
	OR														
15 B	d) Error of Principle	1	1												

16 A	a) Total Purchases = ₹15,00,000 b) The value of Creditors = ₹3,00,000 c) Amount of Expenses = ₹75,000	1 1 1	3																				
	Or																						
16 B	a) Total Sales = ₹13,50,000 b) The value of Debtors = ₹2,50,000 c) Drawings = ₹30,000	1 1 1	3																				
17 A	<div>Books of Saral Enterprises Rectifying Journal</div> <table><tr><th>Date</th><th>Particulars</th><th>LF</th><th>Debit amount ₹</th><th>Credit amount ₹</th></tr><tr><td>1</td><td>Rakesh Dr     To Purchase a/c (A credit purchase of ₹1,300 from Rakesh was passed in the books as ₹1,800 now rectified)</td><td></td><td>500</td><td>500</td></tr><tr><td>2</td><td>Anil Dr     To Suspense a/c (Credit side of Anil's a/c overcast now rectified)</td><td></td><td>1,000</td><td>1,000</td></tr><tr><td>3</td><td>Sales return a/c Dr Sales a/c Dr     To Suspense a/c (Goods of the value ₹2,500 returned by Naresh were entered in the Sales book and posted to the credit of his a/c now rectified)</td><td></td><td>2,500 2,500</td><td>5,000</td></tr></table>	Date	Particulars	LF	Debit amount ₹	Credit amount ₹	1	Rakesh Dr To Purchase a/c (A credit purchase of ₹1,300 from Rakesh was passed in the books as ₹1,800 now rectified)		500	500	2	Anil Dr To Suspense a/c (Credit side of Anil's a/c overcast now rectified)		1,000	1,000	3	Sales return a/c Dr Sales a/c Dr To Suspense a/c (Goods of the value ₹2,500 returned by Naresh were entered in the Sales book and posted to the credit of his a/c now rectified)		2,500 2,500	5,000	1  1  1	3
Date	Particulars	LF	Debit amount ₹	Credit amount ₹																			
1	Rakesh Dr To Purchase a/c (A credit purchase of ₹1,300 from Rakesh was passed in the books as ₹1,800 now rectified)		500	500																			
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	Or																						
17 B	<div>Books of Shraddha Enterprises Rectifying Journal</div> <table><tr><th>Date</th><th>Particulars</th><th>LF</th><th>Debit amount ₹</th><th>Credit amount ₹</th></tr><tr><td>1</td><td>Suspense a/c Dr     To Sales a/c (The total of one page of Sales book was carried forward to the next page as ₹690 instead of ₹960 now rectified)</td><td></td><td>270</td><td>270</td></tr><tr><td>2</td><td>Prepaid insurance a/c Dr     To Suspense a/c (An item of ₹1,500 related to prepaid expenses was omitted to be brought forward from the previous year's books of accounts now rectified)</td><td></td><td>1,500</td><td>1,500</td></tr><tr><td>3</td><td>Sales a/c Dr Suspense a/c Dr     To Furniture a/c (Old furniture sold for ₹5,400 was posted as ₹4,500 in Sales a/c now rectified)</td><td></td><td>4,500 900</td><td>5,400</td></tr></table>	Date	Particulars	LF	Debit amount ₹	Credit amount ₹	1	Suspense a/c Dr To Sales a/c (The total of one page of Sales book was carried forward to the next page as ₹690 instead of ₹960 now rectified)		270	270	2	Prepaid insurance a/c Dr To Suspense a/c (An item of ₹1,500 related to prepaid expenses was omitted to be brought forward from the previous year's books of accounts now rectified)		1,500	1,500	3	Sales a/c Dr Suspense a/c Dr To Furniture a/c (Old furniture sold for ₹5,400 was posted as ₹4,500 in Sales a/c now rectified)		4,500 900	5,400	1  1  1	3
Date	Particulars	LF	Debit amount ₹	Credit amount ₹																			
1	Suspense a/c Dr To Sales a/c (The total of one page of Sales book was carried forward to the next page as ₹690 instead of ₹960 now rectified)		270	270																			
2	Prepaid insurance a/c Dr To Suspense a/c (An item of ₹1,500 related to prepaid expenses was omitted to be brought forward from the previous year's books of accounts now rectified)		1,500	1,500																			
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18	<p>Assets = Machinery + Building + Furniture + Cash in hand = ₹40,000 + ₹1,20,000 + ₹15,000 + ₹6,000 = ₹1,81,000</p> <p>Liabilities = Bank o/d + Bank Loan + Creditors = ₹2,000 + ₹18,000 + ₹45,000 = ₹65,000</p> <p>Capital at the end of the year = Assets – Liabilities = ₹1,81,000 - ₹65,000 = ₹1,16,000</p> <p>Capital in the beginning = Capital at the end + Drawings – Additional capital – Profit = ₹1,16,000 + ₹20,000 - ₹50,000 - ₹30,000 = ₹56,000</p>	1  ½  ½  1	3																																				
19	<p>Prepare the correct Trial Balance from the following trial balance in which there are certain mistakes.</p> <p style="text-align: center;"><b>Books of Bharti</b> <b>Trial Balance</b> <b>As at 31/3/2025</b></p> <table><tr><th>Account Head</th><th>Debit Balance</th><th>Credit Balance</th></tr><tr><td>Adjusted Purchases</td><td>3,00,000</td><td></td></tr><tr><td>Closing Stock</td><td>80,000</td><td></td></tr><tr><td>Debtors</td><td>1,40,000</td><td></td></tr><tr><td>Creditors</td><td></td><td>60,000</td></tr><tr><td>Bank Overdraft</td><td></td><td>20,000</td></tr><tr><td>Fixed assets</td><td>1,00,000</td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td>Expenses</td><td>40,000</td><td></td></tr><tr><td>Sales</td><td></td><td>4,00,000</td></tr><tr><td>Capital</td><td></td><td>1,80,000</td></tr><tr><td></td><td><u>6,60,000</u></td><td><u>6,60,000</u></td></tr></table> <p><b>Note:</b> Opening stock will not appear in the Trial Balance as the purchases are given as “Adjusted Purchases”*</p>	Account Head	Debit Balance	Credit Balance	Adjusted Purchases	3,00,000		Closing Stock	80,000		Debtors	1,40,000		Creditors		60,000	Bank Overdraft		20,000	Fixed assets	1,00,000					Expenses	40,000		Sales		4,00,000	Capital		1,80,000		<u>6,60,000</u>	<u>6,60,000</u>	1 mark for every 3 correct items	3
Account Head	Debit Balance	Credit Balance																																					
Adjusted Purchases	3,00,000																																						
Closing Stock	80,000																																						
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Capital		1,80,000																																					
	<u>6,60,000</u>	<u>6,60,000</u>																																					
20	<div>1. Provision – As it is charged in Profit &amp; Loss a/c to provide for decline/decrease in the value of Debtors</div> <div>2. Reserve – As it is the amount set aside out of profits of the business to provide funds for the repayment of Debentures</div> <div>3. Provision – As it is charged to Profits to provide for decrease in the value of Properties</div>	1  1  1	3																																				
21	<div>a) Accounting entity</div> <div>b) Historical cost</div> <div>1 mark for identification and 1 mark for explanation each part</div>	2 2	4																																				
22 A	<p style="text-align: center;">Books of Dhairya</p> <p style="text-align: center;"><b>Bank Reconciliation Statement as on Jan. 31, 2025</b></p> <table><tr><th>Particulars</th><th>Plus items (₹)</th><th>Minus items (₹)</th><th>Marks</th></tr><tr><td>Debit balance as per Pass book</td><td></td><td>41,000</td><td>½</td></tr><tr><td>Cheque dishonoured by bank</td><td>1,000</td><td></td><td>1</td></tr><tr><td>Cheque issued but not cleared</td><td>-</td><td></td><td>1</td></tr><tr><td>Cheque deposited but not cleared</td><td>7,400</td><td></td><td>1</td></tr><tr><td>Credit Balance as per Cash book</td><td>32,600</td><td></td><td>½</td></tr><tr><td></td><td><u>41,000</u></td><td><u>41,000</u></td><td></td></tr></table>	Particulars	Plus items (₹)	Minus items (₹)	Marks	Debit balance as per Pass book		41,000	½	Cheque dishonoured by bank	1,000		1	Cheque issued but not cleared	-		1	Cheque deposited but not cleared	7,400		1	Credit Balance as per Cash book	32,600		½		<u>41,000</u>	<u>41,000</u>			4								
Particulars	Plus items (₹)	Minus items (₹)	Marks																																				
Debit balance as per Pass book		41,000	½																																				
Cheque dishonoured by bank	1,000		1																																				
Cheque issued but not cleared	-		1																																				
Cheque deposited but not cleared	7,400		1																																				
Credit Balance as per Cash book	32,600		½																																				
	<u>41,000</u>	<u>41,000</u>																																					



31	To Cash (½)	C		5,000	31	By Bank (½)	C	5,000	
31	To Balance c/d			17,400	31	By balance c/d (½)		700	
			<u>5,700</u>	<u>53,400</u>				<u>5,700</u>	<u>53,400</u>
1 Feb	To Balance b/d		700		1 Feb	By Balance b/d			17,400

#### Journal Proper

Date	Particulars	LF	Debit ₹	Credit ₹
Jan 25	Cheque in hand A/c Dr. To Anil (cheque received)		2,500	2,500
27	Sunil Dr. To Cheque in hand A/c (Cheque endorsed)		2,500	2,500

(½)  
  
(½)

6

25 A

#### Journal Entries

S.No.	Particulars	LF	Dr. ₹	Cr. ₹
1.	Purchases A/c Dr. Input CGST A/c Dr. Input SGST A/c Dr. To Ketan (Goods purchased)		36,000 3,240 3,240	42,480
2.	Harish's Dr. To Purchase Return A/c To Input IGST A/c (Goods returned )		4,720	4,000 720
3.	Cash A/c Dr Kapil Dr To Sales A/c To Output IGST (Goods sold)		12,000 21,600	30,000 3,600
4.	Building A/c Dr. To Bank A/c (Building Purchased)		21,70,000	21,70,000
5.	Cash A/c Dr To Advance from Sunil (Advance received)		12,000	12,000
6.	Machinery A/c Dr Input IGST A/c Dr To Loan from bank To Cash (Machinery purchased and paid by Cash and Loan)		3,00,000 36,000	2,00,000 1,36,000

1  
  
1  
  
1  
  
1  
  
1  
  
1

6

$$\text{IGST} = ₹3,36,000 - ₹3,00,000 = ₹36,000$$

**Or**

**In the books of M/s Anurag Trader  
Purchase Book**

1

## Sales Book

1

	<b>Purchase Return Book</b>						
	<b>Date</b>	<b>Particulars</b>	<b>Debit note no</b>	<b>LF</b>	<b>Details ₹</b>	<b>Amount ₹</b>	
	9 Jan	Raunav Stationery: 2 dozen spiral books @ ₹120 per dozen 4 Registers @ ₹25 per register			240 100		1
		Less: Trade discount			340 34	306	
		Purchase Return A/c Cr				306	
	Jan 16 – Transaction is on Cash Basis, therefore it will be recorded in Cash Book						1 6
	<b>PART – B</b>						
26	d) Both b) and c)						1 1
27	d) ₹8,00,000						1 1
28	d) All of the above						1 1
29	The correct option is:						1 1
	<b>S.No.</b>	<b>Particulars</b>	<b>L.F.</b>	<b>Debit ₹</b>	<b>Credit ₹</b>		
	c	Trading a/c Dr To Profit & Loss a/c		85,000	85,000		
30 A	d) A is False but R is True						1 1
	<b>Or</b>						
30 B	c. Both statement 1 and statement 2 are true						1 1
31	<b>Books of Avni</b>						
	Cost of goods produced = Purchase – Return outwards + direct expenses Cost of goods produced = ₹16,00,000 - ₹40,000 + ₹1,20,000 = ₹16,80,000						1
	Cost of goods sold = $\frac{2}{3}$ x ₹16,80,000 = ₹11,20,000						1
	Sales = ₹12,20,000						
	Gross profit = Sales – Cost of goods sold = ₹12,20,000 - ₹11,20,000 = ₹1,00,000						1 3

32

Books of Azad Enterprises				
Date	Particulars	LF	Debit amount ₹	Credit amount ₹
31/3/25	Salary a/c Dr To O/s Salary a/c (Salary outstanding at the end of the year)		2,000	2,000
31/3/25	Profit & Loss a/c Dr To Salary a/c (Salary charged to profits)		2,000	2,000
31/3/25	Depreciation a/c Dr To Machinery a/c (Depreciation charged on machinery)		10,000	10,000
31/3/25	Profit & Loss a/c Dr To Depreciation a/c (Depreciation charged to profits)		10,000	10,000
31/3/25	Accrued commission a/c Dr To Commission received a/c (Accrued commission)		15,000	15,000
31/3/25	Commission received a/c Dr To Profit & Loss a/c (Commission transferred to P/L a/c)		15,000	15,000
31/3/25	Bad debts a/c Dr To Debtor (Bad debts written off)		2,000	2,000
31/3/25	Profit & Loss a/c Dr To Bad debts a/c (Bad debts charged to profits)		2,000	2,000

33

Books of Panwar Bakers Statement of Affairs As at 31/3/25			
Liabilities	Amount ₹	Assets	Amount ₹
Creditors (½)	17,500	Cash in hand	1,500
Outstanding electricity bill	500	Cash at bank (1)	21,000
Capital (Balancing fig.) (1)	85000	Debtors	42,000
		Stock of raw materials	2,000
		Stock of finished products	2,500
		Fixed assets	34,000
	<u>1,03,000</u>		<u>1,03,000</u>

Statement of Profit and Loss For the year ended 31/3/25		
Particulars	Amount ₹	Marks
Capital as at 31/3/25	85,000	½
Less: Additional capital	(7,000)	½
Add: Drawings (2,500 x 11)	27,500	1
Less: Capital as at 1/5/24	(78,000)	½
= Net Profit	27,500	1

6



34 A

**Books of Anshika Traders**  
**Trading and Profit & Loss a/c**  
**For the year ended 31/3/2025**

**Dr.****Cr.**

Particulars	₹	Particulars	₹
To Opening stock	42,000	By Sales	1,55,000
To Purchase 82,600 (1)		By Closing Stock } (½)	64,800
(-) Returns (1,600)	81,000		
To Carriage inwards	1,200		
To Power	6,000		
To Wages 4,000			
(+) O/s wages 2,400 (½)	6,400		
To Gross Profit c/d (½)	83,200		
	<b>2,19,800</b>		<b>2,19,800</b>
To Rent	24,000	By Gross Profit b/d	83,200
To Salaries } (½)	15,000		
To Insurance } (½)	3,600		
To Bad debts (½)	600		
To Provision for doubtful debts (½)	1,000		
To Depreciation on Machinery (½)	5,000		
To o/s interest on Bank loan(½)	1,000		
To Manager Commission (½)	3,000		
To Net Profit (Transferred to capital a/c) (½)	33,000		
	<b>83,200</b>		<b>83,200</b>

(2½)

(3½)

6

**Working note:**

1. Outstanding interest = ₹25,000 x  $\frac{8}{100}$  x  $\frac{6}{12}$  = ₹1000
2. Net profit before commission = ₹33,000
3. Manager commission = ₹33,000 x  $\frac{10}{110}$  = ₹3,000

Or

34 B

**Books of Mehul Stores**  
**Profit & Loss a/c**  
**For the year ended 31/3/2025**

**Dr.****Cr.**

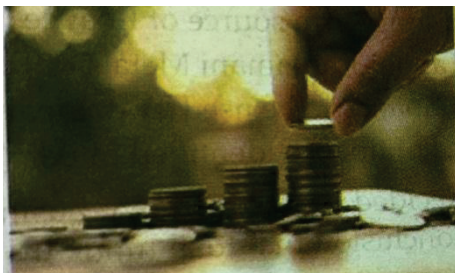
Particulars	₹	Particulars	₹
To Rent (½)	4,000	By Gross Profit b/d	66,000
To Provision for discount on debtors (½)	560	By Interest on Anant's loan 300	
To Depreciation on Furniture (½)	450	(+) Accrued Interest 200 (½)	500
To Salaries 11,000		By Apprentice Premium (½) 4,500	
(+) O/s Salaries 1,000 (½)	12,000	(-) Advance received (3,000)	1,500
To Net Profit (Transferred to capital a/c) (½)	50,990		
	<b>68,000</b>		<b>68,000</b>

(3½)

<div> <div>Balance Sheet</div> <div>As at 31/3/2025</div> </div>				(2½)	6
Liabilities	₹	Assets	₹		
Capital 1,00,000		Plant	72,000		
(-) Drawings (5,500)		Furniture 5,000			
(+) Net Profit 50,990 (½)	1,45,490	(-) Depreciation (450)	4,550		
Sundry creditors	13,000	Anant's loan	5,000		
Bills payable	1,600	Accrued interest on Anant's loan (1)	200		
Advance apprentice premium (½)	3,000	Debtors 28,000			
Outstanding salaries	1,000	(-) Prov. For discount (560)	27,440		
Rent outstanding (½)	600	Bill receivable	6,000		
		Stock	30,000		
		Cash in hand	19,500		
	<u>1,64,690</u>		<u>1,64,690</u>		
<div> <div>Working note:</div> <div> <div>1. Depreciation on furniture (<math>\text{₹}4,000 \times \frac{10}{100} + \text{₹}1,000 \times \frac{10}{100} \times \frac{6}{12} = \text{₹}400 + \text{₹} 50 = \text{₹}450</math></div> <div>2. Salaries outstanding = <math>\text{₹}11,000 \times \frac{1}{11} = \text{₹}1,000</math></div> <div>3. Accrued interest on Anant's Loan = <math>\text{₹}5,000 \times \frac{10}{100} - \text{₹}300 = \text{₹}500 - \text{₹}300 = \text{₹}200</math></div> </div> </div>					

	<p style="text-align: center;"><b>CLASS XI</b>  <b>BUSINESS STUDIES (054)</b>  <b>SAMPLE QUESTION PAPER (2025-26)</b></p> <p><b>MM – 80</b> <span style="float: right;"><b>TIME: 3 HOURS</b></span></p>	
	<p><b>General instructions :</b></p> <ol style="list-style-type: none"> <li><b>1. This question paper contains 34 questions.</b></li> <li><b>2. Marks are indicated against each question.</b></li> <li><b>3. Answers should be brief and to the point.</b></li> <li><b>4. Answers to the questions carrying 3 marks may be from 50 to 75 words.</b></li> <li><b>5. Answers to the questions carrying 4 marks may be about 150 words.</b></li> <li><b>6. Answers to the questions carrying 6 marks may be about 200 words.</b></li> <li><b>7. Attempt all parts of the question together.</b></li> </ol>	
1.	<p>Assertion (A): Business starts with production and end with consumption.  Reason (R): Making the finished products reach the consumer involves a series of steps.</p> <p>a) Both A &amp; R are true, But R is not the correct explanation of A.  b) Both A &amp; R are false.  c) A is true, but R is false.  d) Both A &amp; R are true and R is the correct explanation of A.</p>	1
2.	<p>Group of persons entered into an agreement with a builder for office construction before the company's incorporation. Later, the company denied liability under this agreement.</p> <p>Choose the correct type of contract involved:  (a) Statutory contract  (b) Government contract  (c) Preliminary contract  (d) Provisional contract</p>	1
3.	<p>Recall the form of business where the entire profit and risk remain with one individual, and personal property may be used to repay liability.</p> <p>a) Sole Proprietorship  b) Cooperative society  c) Joint stock company  d) Partnership</p>	1

4.	<p>Navratan Ltd. is a company engaged in the production and distribution of heavy electric goods. Pattern of shareholding in the company is as follows:</p> <ul style="list-style-type: none"> <li>• Government of India – 15%</li> <li>• Government of Bihar – 26%</li> <li>• Government of Assam – 10%</li> <li>• General Public – 49%</li> </ul> <p>Navratan Ltd. can be classified as ____.</p> <ol style="list-style-type: none"> <li>Small Company</li> <li>Government Company</li> <li>Private Company</li> <li>Multinational Company</li> </ol>	1
5.	<p>Assertion (A): Like an individual, business enterprise should also be a loyal citizen of the state.</p> <p>Reason (R): The business is also a part of system. It makes use of resources of society.</p> <ol style="list-style-type: none"> <li>Both A &amp; R are true, But R is not the correct explanation of A.</li> <li>Both A &amp; R are false.</li> <li>A is true, but R is false.</li> <li>Both A &amp; R are true and R is the correct explanation of A.</li> </ol>	1
6.	<p>Social Responsibility of business refers to its obligation to take those decisions and perform those actions which are desirable in terms of ____ of our society.</p> <ol style="list-style-type: none"> <li>Profit and Gain</li> <li>Objectives and values</li> <li>Losses and harms</li> <li>Risks and threats</li> </ol>	1
7.	<p>For how many years do patents allows exclusive rights to the inventor.</p> <ol style="list-style-type: none"> <li>10 years</li> <li>15 years</li> <li>20 years</li> <li>25 years</li> </ol>	1
8.	<p>Out of the following identify the statement that is not true in case of debentures.</p> <ol style="list-style-type: none"> <li>It is an instrument to raise long-term debt capital.</li> <li>Payment of interest on debentures is compulsory.</li> <li>Debenture holders carry voting rights.</li> <li>Issue of debentures creates a charge on the assets of the company.</li> </ol>	1
9.	<p>In a survey conducted by Government of India, it was found that many farmers of the country are unable to secure loan for their agricultural needs. Keeping this in mind, the government decided to form a public enterprise under a Special Act of the Parliament, which will be free from government interference</p>	1

	and will have financial and operational autonomy. Suggest a suitable type of public enterprise to the government. a) Departmental undertaking b) Government company c) Statutory corporation d) Public private partnership							
10.	Choose the correct pair from following. <table border="1"><tr><td>A. Equity Shares</td><td>i. Charge against assets of the company</td></tr><tr><td>B. Preference Shares</td><td>ii Fixed rate of dividend</td></tr><tr><td>C. Retained Earnings</td><td>iii. Irredeemably</td></tr></table> a) A-ii b) C-iii c) A-i d) B-ii	A. Equity Shares	i. Charge against assets of the company	B. Preference Shares	ii Fixed rate of dividend	C. Retained Earnings	iii. Irredeemably	1
A. Equity Shares	i. Charge against assets of the company							
B. Preference Shares	ii Fixed rate of dividend							
C. Retained Earnings	iii. Irredeemably							
11.	Seeing the business opportunities in Food industry, Sagar Bagada after completing his graduation in Agriculture engineering, decided to his own enterprise. His dream turned into reality when enterprise, "Swaad Food Industries" set up its food and beverages processing plant in 'Mitrapura", one of the rural areas of Rajasthan, under Start-up India Scheme launched on 16th January, 2016. The enterprise opted for labour intensive technique, due to easy availability of labour at lower cost. Within no time, he came in the list of successful entrepreneurs.  "The enterprise opted for labour intensive technique, due to easy availability of labour at lower cost." Identify the need for entrepreneurship satisfied in the given statement. a) Organisation of production b) Generation of employment c) Economic efficiency d) Generation of business opportunities for others	1						
12.	Name the kind of return on investment given to the investors shown in the given picture. 	1						

	a) Commercial paper b) Dividend c) Retained earnings d) Trade credit	
13.	Wholesalers provide ____ and ____ utility by making products available at right place and required time. a) Time & Form b) Time & Place c) Place & Form d) Finance & Place	1
14	Identify which of the following is a service of retailers to consumers. a) Help in marketing function b) Risk sharing c) Wide selection d) Specialized knowledge	1
15	It is a self-regulating mechanism, which not only checks tax frauds and reduce the tax evasion, but also brings in more and more businesses into the formal economy. a) SGST b) Value-added tax c) Goods and services Tax d) IGST	1
16	For foreign trade, its mandatory to get registered with ____ to obtain IEC number. a) The Directorate General Foreign Trade b) State government c) Foreign Exchange banks d) RBI	1
17	____ is NOT the other name of Cart Ticket. a) Cart chit b) Vehicle pass c) Gate pass d) Airway bill	1
18	The refund of excise duty is known as _____. a) Exemption b) Duty drawback c) Indent d) Tax holiday	1
19	Statement I: The amount of working capital required varies from one business concern to another depending on various factors.  Statement II: Larger funds may be required for building higher inventories for the festive season or to meet current debts or expand the business or to shift to a new location.	1

	<p>a) Both the statements are true.  b) Both the statements are false.  c) Statement I is true, Statement II is false.  d) Statement II is true, Statement I is false</p>	
20	<p>_____ is the maximum turnover limit for a micro enterprise as per MSMED Act.</p> <p>a) <input type="checkbox"/> 10 crores  b) <input type="checkbox"/> 1 crore  c) <input type="checkbox"/> 5 crores  d) <input type="checkbox"/> 2 crores</p>	1
21.	<p>(A) Describe the features of Public deposits.  OR  (B) Discuss any three features of Preference shares</p>	3
22.	<p>Radha stays in Kashipur, a city of Udham Singh Nagar district, in the Indian state of Harakhand. She sees a job advertisement in the newspaper and decides to apply for them through post. Her father advises her to send the application through registered post instead of an ordinary mail.</p> <p>(a) Mention one point that makes registered post and ordinary post different from each other.  (b) Explain briefly any two other postal services available in our country.</p>	3
23.	<p>(A) A, B &amp; C were partners in a financing firm. B &amp; C had gone for a meeting in America for analysing business prospects in that country. In the meanwhile, A invested a huge amount of money in buying shares of a new company by borrowing money from Mr. X. This turned out to be a bad deal as the share prices soon fell. When B &amp; C came back they said they were not liable to pay to Mr. X as they did not take the money.  Were B &amp; C right in doing so, Justify the reason by stating appropriate feature of partnership.</p> <p>OR</p> <p>(B) Laxmi &amp; Vishnu after completing a bachelor degree course in mass communication and media planning plan to promote two different advertising companies in Nagpur and Kanpur, respectively. As promoters they have been advised to take steps to prepare certain legal documents, which have to be submitted under the law, to the Registrar of Companies for getting the company registered. Explain any two such documents that Laxmi &amp; Vishnu has to prepare as promoters.</p>	3
24.	<p>"In year 2001, Sony Corporation of Tokyo, Japan a renowned technological giant with Ericsson Pvt. Ltd of India brought a technological reform in the electronic home appliances industry by forming a new entity Sony Ericsson". This new entity exhibit the one of the type of Business enterprise. Identify it, Also state any two advantages of the new enterprise to the both the companies.</p>	3

25.	<p>Different situations in different business are being elaborated below:</p> <ul style="list-style-type: none"> <li>a) A matchstick factory in Nepal which got destruct by recent earthquake.</li> <li>b) A company was charged with evasion of tax and asked to Pay fine in crores, which leads heavy losses.</li> <li>c) A Senior Manager in Telecom Company share confidential information about company to competitors.</li> <li>d) A Typewriter becoming redundant.</li> </ul> <p>Identify and explain the causes of business risks highlighted in above case.</p>	4
26.	<p>(A) Explain the scope of e-business.</p> <p style="text-align: center;">OR</p> <p>(B) Explain any four benefits of e-business.</p>	4
27.	<p>Parineeta has set up a small business unit in Ghaziabad to manufacture various types of home decorations items. She deals in various kinds of vases, chimes, figurines, and other things that can beautify houses. She now wishes to export her products to different countries and develop export-worthiness.</p> <p>(a) Name the agency that she can approach in this regard. (b) Also list any three functions other than identified in part (a) of this agency.</p>	4
28.	<p>"It is in the interest of business to fulfill the social responsibilities towards different interested group". Defend or refute the statement.</p>	4
29.	<p>(A) "A manufacturer supplying goods in large quantities to a wholesaler. The wholesaler is seen storing the goods in a warehouse, placing repeated orders, and sending regular feedback to the manufacturer about customer preferences and product demand. Arrows point from wholesaler to both manufacturer and retailers". State any four services that the wholesaler provides to the manufacturer.</p> <p style="text-align: center;">OR</p> <p>(B) Rectify the following statements if found wrong-</p> <ul style="list-style-type: none"> <li>a) A wholesaler buys goods from the retailer.</li> <li>b) The amount of capital required is more in case of retail trade as compared to the wholesale trade.</li> <li>c) A retailer performs various functions like warehousing for storage of goods, grading and packaging, etc.</li> <li>d) A wholesaler has direct link with the end consumers.</li> </ul>	4
30.	<p>The Government of India dreams to make India a manufacturing hub and encourages the foreign company manufacture goods here under its 'Make in India' initiative. In February, 2017, 'The Apple India Private Ltd. California-based iPhone maker 'Apple Inc.' (Incorporated), reached an agreement with the Karnataka govt to set up a manufacturing plant in Bengaluru. Apple's decision on manufacturing has further enhanced reputation of Bengaluru as</p>	4



	the most preferred destination for foreign investment. This decision would help 'Apple' to improve its growth prospects in India but also it would create employment opportunities for Indians. Manufacturing 'i-Phone' in India would make the maximum Indians enjoy international technology at low prices and higher standards of living. By quoting the lines, identify the benefits of international business to the nation mentioned in the above case.	
31.	<p>(A) Paraphrase:</p> <ul style="list-style-type: none"> <li>a) Bank Draft</li> <li>b) Bank overdraft</li> <li>c) Cash credit</li> </ul> <p style="text-align: center;">OR</p> <p>(B) Paraphrase:</p> <ul style="list-style-type: none"> <li>a) Saving Account</li> <li>b) Recurring Deposit Account</li> <li>c) Fixed Deposit Account</li> </ul>	6
32.	<p>Ridhi Organics Pvt. Ltd. has been operating successfully for the past eight years in the organic skincare market. Instead of distributing all profits as dividends, the management decides to keep a significant portion of the profit to fund the company's future expansion. The directors argue that this approach will reduce dependence on external borrowing and strengthen the company's financial position. However, some shareholders express concern about reduced dividends and demand clarity on the benefits of this policy.</p> <p>a) Mention any three advantages of using as a source of business finance discussed above.</p> <p>b) Explain any three features associated with the identified source.</p>	6
33.	<p>Mr. Abhishek is a sole proprietor. He has been doing the wholesale business of tea for the last three years. The brand name of his tea is 'Tadka Chai'. This is a popular brand of its region. Now, Mr. Abhishek has been worried about two issues. First, his business unit is situated in an unorganized sector and therefore, he is unable to buy goods on credit from any trader easily. Similarly, banks and other lending institutions hesitate to extend a long-term loan to him. Such a treatment by the people produces the inferiority complex in him. The second issue worrying him is that he has unlimited liability. If unfortunately he suffers heavy loss in business, his business property and personal property both will be finished. He wants to get rid of these worries. So, he contacts a business specialist, who suggests a new form of business organisation which will remove all his problems. With the idea of encouraging corporatization of business like 'Tadka Chai'.</p> <p>Name the type of one of the business organization must have been advised to Mr. Abhishek by the business specialist, Also state its features ( any five)</p>	6
34.	<p>(A) Differentiate between domestic and international trade ( any six)</p> <p style="text-align: center;">OR</p> <p>(B) Differentiate between departmental store &amp; chain store. (any six)</p>	6

CLASS -XI  
BUSINESS STUDIES (054)  
Sample Paper (2025-26)

## Marking Scheme/Hints to solutions

[Note: Any other relevant answer, not given here under but given by the candidates, be suitably awarded.]

Q.No	Value points/ Key points	Marks allotted to each key point	Total marks
1.	a) Both A & R are true, But R is not the correct explanation of A.	1	(1)
2.	c) Preliminary contract	1	(1)
3.	a) Sole proprietorship	1	(1)
4.	b) Government company	1	(1)
5.	d) Both A & R are true R is correct explanation of A	1	(1)
6.	b) objectives & values	1	(1)
7.	c) 20 years	1	(1)
8.	c) debenture holders carries voting rights	1	(1)
9.	c) statutory corporation	1	(1)
10.	d) B-ii	1	(1)
11.	b) economic efficiency	1	(1)
12.	b) dividend	1	(1)
13.	b) Time & Place	1	(1)
14.	c) wide selection	1	(1)
15.	c) goods & service tax	1	(1)
16.	a) DGFT	1	(1)
17.	d) airway bill	1	(1)
18.	b) duty drawback	1	(1)
19.	a) Both the statements are true.	1	(1)
20.	c) 5 crores	1	(1)
21.	<p>Three features of public deposits are as follows:</p> <ul style="list-style-type: none"> <li>I. Public deposits are raised by organisations directly from the public.</li> <li>II. Rates of interest offered on public deposits are usually higher than that offered on bank deposits.</li> <li>III. Public deposits can take care of both medium and short-term financial requirements of a business.</li> <li>IV. the cost of deposits to the company is less than the cost of borrowings from banks.</li> <li>V. Companies generally invite public deposits for a period up to three years.</li> <li>VI. The acceptance of public deposits is regulated by the Reserve</li> </ul>	<p>1mark for each point</p> <p>1 mark for each point</p>	(3)

	<p>Bank of India. ( Any three points)</p> <p>OR</p> <p>The features of preference shares are:</p> <ol style="list-style-type: none"> <li>I. The capital raised by issue of preference shares is called preference share capital.</li> <li>II. Compared to the equity shareholders, the preference shareholders have a preferential claim over dividend and repayment of capital.</li> <li>III. Preference shares resemble debentures as they bear fixed rate of return. Also as the dividend is payable only at the discretion of the directors and only out of profit after tax, to that extent, these resemble equity shares.</li> <li>IV. Preference shareholders generally do not enjoy any voting rights.</li> </ol> <p>( Any three points)</p>		
22.	<p>a) Unlike an ordinary mail, if the sender wants a proof or acknowledgement of delivery to confirm that it has been received by the addressee or his representative, 'Registered Post with Acknowledgement Due' is written on any postal article. The Acknowledgement Card is delivered back to the original sender by ordinary post.</p> <p>b) The two other postal services available in our country are described below:</p> <p>(1) Speed Post: The Indian government has launched a new scheme of postal service called Speed post for providing a time-bound and express delivery of letters and parcels, weighing up to 35 kg, between specified stations in India as compared to ordinary posts.</p> <p>(ii) Courier: A courier company is one which delivers messages, packages and mail and is known for their speed, security, tracking service and specialization.</p>	1 mark for difference+ 1 mark for each postal service	(3)
23.	<p>No, B &amp; C were not right</p> <p>Mutual agency: The definition of partnership highlights the fact that it is a business carried on by all or any one of the partners acting for all. In other words, every partner is both an agent and a principal. He is an agent of other partners as he represents them and thereby binds them through his acts. He is a principal as he too can be bound by the acts of other partners.</p> <p>OR</p>	<p>1 mark +2 marks for feature</p> <p>1½ marks for each</p>	(3)

	<p>Documents to be prepared</p> <ul style="list-style-type: none"> <li>a) MOA</li> <li>b) Articles of Association</li> <li>c) Consent of Proposed Directors</li> <li>d) Agreement</li> <li>e) Statutory Declaration</li> <li>f) Receipt of Payment of fee ( ANY TWO WITH EXPLANATION)</li> </ul>	document with explanation	
24.	<p>The new entity formed is <b>Joint Venture</b></p> <p>b) The <b>advantages</b> of the enterprise are:</p> <ul style="list-style-type: none"> <li>i. Increased resource and capacity</li> <li>ii. Access to new markets and distribution networks</li> <li>iii. Access to technology</li> <li>iv. Innovation</li> <li>v. Low cost of production</li> <li>vi. Established brand name</li> </ul> <p>( Any Two with suitable explanation)</p>	1 mark for each explanation	(3)
25.	<ul style="list-style-type: none"> <li>a) <b>Natural causes:</b> Human beings have little control over natural calamities, like flood, earthquake, lightning, heavy rains, famine, etc., property and income in business.</li> <li>b) <b>Economic causes:</b> These include uncertainties relating to demand for goods, competition, price, collection of dues from customers, change of technology or method of production, etc.</li> <li>c) <b>Human causes:</b> Human causes include such unexpected events, like dishonesty, carelessness or negligence of employees, stoppage of work due to power failure, strikes, riots, management inefficiency, etc.</li> <li>d) <b>Other causes:</b> These are unforeseen events, like political disturbances, mechanical failures, such as the bursting of boiler, fluctuations in exchange rates, etc., which lead to the possibility of business risks.</li> </ul>	½ mark for each identification + ½ mark for explanation mark	(4)

26.	<p>a) B2B commerce b) B2C commerce c) C2C commerce d) Intra-B commerce</p> <p>( with suitable explanation)</p> <p>OR</p> <p>a) Ease of formation and lower investment requirements: b) Convenience c) Speed d) Global reach/access e) Movement towards a paperless society</p> <p>( with suitable explanation)</p>	<p>1 mark for each point</p> <p>1 mark for each point</p>	(4)
27.	<p>a) NSIC b) functions of NSIC</p> <p>(i) Supply indigenous and imported machines on easy hire-purchase terms.</p> <p>(ii) Procure, supply and distribute indigenous and imported raw materials.</p> <p>(iii) Mentoring and advisory services.</p> <p>( Any other relevant point)</p>	<p>1 mark for identification + 1 mark for each function.</p>	(4)
28.	<p>Arguments for Social Responsibility</p> <p>1) Justification for existence &amp; growth 2) Long term interest of the firm 3) Avoidance of government regulations 4) Availability of resources with business</p> <p>(Any other relevant point)</p>	<p>1 mark for each point</p>	(4)
29.	<p>Four services that wholesaler provides to the manufacturers:</p> <p>1) Facilitating large scale production 2) Bearing risk 3) Financial assistance 4) Expert advice</p> <p>(Any other relevant point)</p> <p>OR</p> <p>a) A retailer purchases goods from the wholesaler. b) The amount of capital required is less in case of retail trade as compared to the wholesale trade. c) A retailer has direct link with the end consumers. d) A wholesaler performs various functions like, warehousing for storage of goods, grading and packaging etc.</p>	<p>1 mark for each point</p> <p>1 mark for each point</p>	(4)

30.	<p>Benefits of International Business to nation -</p> <p>(1) Earning foreign exchange - "Apple's decision on ..... investment."</p> <p>(2) Improving Economic Growth - "This decision would not only ..... prospect in India."</p> <p>(3) Employment generation - "but also it would..... .....opportunities for Indians."</p> <p>(4) Higher standard of living - "Manufacturing i-Phone higher standards of living. "</p>	<p>½ mark for identification + ½ mark for quoting lines</p>	(4)
31.	<p>a) Bank Overdraft - An overdraft occurs when money is withdrawn from a bank account and the available balance goes below zero. In this situation, the account is said to be "overdrawn". Thus, an overdraft is a financial accommodation under which a current account holder is permitted to overdraw his account beyond the available balance up to an agreed limit.</p> <p>b) Cash Credit - A cash credit is a short-term cash loan to a company. It is a financial accommodation under which an advance is granted on a separate account called Cash Credit account up to a specified limit. The bank provides this type of funding, only on security of goods or personal security of one more persons other than the borrower. Once a security for repayment has been given, the business receives the loan can continuously draw from the bank up to a certain specified amount.</p> <p>c) Bank Draft-It is a financial instrument for transfer of amount from one place to another without the rise of default. Here, a person required to pay a certain amount to another person deposits the said amount with his bank and the bank issues a bank draft for an equal amount in the name of payee. The payee presents the draft in his bank and the amount is paid to him by his bank.</p> <p style="text-align: center;">OR</p> <p>a) Savings Bank Account-This account is meant for individuals, especially for service class and retired persons. Salary, pension, etc. is deposited directly by the employer in the savings bank account of the employee. They can withdraw money as per their ease by means of a cheque or a withdrawal slip. Customers can deposit posit mo money as per their ease. This account is meant for individuals who want to save some amount of money out of their incomes. Nowadays banks are giving interest in this account on the basis of daily credit balance by</p>	<p>2 marks each</p> <p>2 marks each</p>	(6)





33.	<p>One Person Company</p> <p><b>Characteristics</b></p> <p>1. Only a natural person who is an Indian citizen and resident in India (a) Shall be eligible to incorporate a One Person Company; (b) Shall be a nominee for the sole member of a One Person Company. Explanation – For the purposes of this rule, the term “resident in India” means a person who has stayed in India for a period of not less than one hundred and eighty two days during the immediately preceding one calendar year.</p> <p>2. No person shall be eligible to incorporate more than a One Person Company or become nominee in more than one such company.</p> <p>3. Where a natural person, being member in One Person Company in accordance with this rule becomes a member in another such Company by virtue of his being a nominee in that One Person Company, such person shall meet the eligibility criteria specified in sub rule (2) within a period of one hundred and eighty days.</p> <p>4. Such Company cannot be incorporated or converted into a company under section 8 of the Act.</p> <p>5. Such Company cannot carry out Non-Banking Financial Investment activities including investment in securities of anybody corporates.</p> <p>6. No such company can convert voluntarily into any kind of company unless two years have expired from the date of incorporation of One Person Company, except threshold limit (paid up share capital) is increased beyond fifty lakh rupees or its average annual turnover during the relevant period exceeds two crore rupees.</p> <p>7. No minor shall become member or nominee of the One Person Company</p> <p style="text-align: right;">( ANY FIVE )</p>	1+5 marks for features	(6)
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34.

Basis	Domestic business	International business
1. Nationality of buyers and sellers	People or organisations from one nation participate in domestic business transactions.	People or organisations of different countries participate in international business transactions.
2. Nationality of other stakeholders	Various other stakeholders such as suppliers, employees, middlemen, shareholders and partners are usually citizens of the same country.	Various other stakeholders such as suppliers, employees, middlemen, shareholders and partners are from different nations.
3. Mobility of factors of production	The degree of mobility of factors of production like labour and capital is relatively more within a country.	The degree of mobility of factors of production like labour and capital across nations is relatively less.
4. Customer heterogeneity across markets	Domestic markets are relatively more homogeneous in nature.	International markets lack homogeneity due to differences in language, preferences, customs, etc., across markets.
5. Differences in business systems and practices	Business systems and practices are relatively more homogeneous within a country.	Business systems and practices vary considerably across countries.
6. Political system and risks	Domestic business is subject to political system and risks of one single country.	Different countries have different forms of political systems and different degrees of risks which often become a barrier to international business.

OR

Difference between Departmental Stores and Multiple Shops

Basics	Departmental Stores	Multiple Stores
1. Location	Centrally located place in the city	They are located at a number of places for approaching a large number of customers.
2. Range of Products	They have a variety of products of different types	Only specified range of the company's products are available
3. Services offered	They provide maximum services to their customers	They provide limited services like guarantees, repairs, etc.
4. Pricing	They do not have uniform pricing	They sell goods at fixed prices and maintain uniform pricing policies for all stores.

1mark for each difference

(6)

	5. Class of Customers	They cater to needs of relatively high income group of customers who care more for services than prices.	They cater to different types of customers including lower income groups			
	6. Credit Facility	They may provide credit facility	They do not provide credit facility			
	7. Flexibility	They have more flexibility in respect of goods marketed	They have less flexibility; branch managers have to follow instructions of head office			

CLASS-XI  
ECONOMICS (030)  
Sample Paper (2025-26)

*Time allowed: 3hours*

*Maximum Marks : 80*

*General Instructions:*

1. *This question paper contains two sections:*

*Section A – Statistics (40)*

*Section B -- Micro Economics (40)*

2. *Marks for questions are indicated against each question.*
3. *Question Nos.1-10 and 18-27 are MCQ carrying 1 mark each.*
4. *Question Nos. 11-12 and 28-29 are short answer questions carrying 3 marks each and are to be answered in 60 -80 words each.*
5. *Question Nos. 13-15 and 30-32 are also short answer questions carrying 4 marks each and are to be answered in 80-100 words each.*
6. *Question Nos. 16-17 and 33-34 are long answer questions carrying 6 marks each and are to be answered in 100-150 words.*
7. *Word limit is to be followed only for theory questions.*

**Section -A (Statistics)**

1. Identify the incorrect statement from the following:
  - a. Scarcity of resources exists in all the economies.
  - b. Economic activities are not undertaken for monetary gains.
  - c. “How the producer chooses what to produce for the market, given the prices & costs,” is the study of production.
  - d. NSSO was established by the Government of India to conduct nation-wide surveys on socio-economic issues. (1)
2. If the range of a series is 100 & the number of classes is 10, the size of each class would be \_\_\_\_\_. (1)
  - a. 90
  - b. 110
  - c. 1000
  - d. 10

3. The arithmetic mean of 10 observations is 16. If 10 is added to each observation, the arithmetic mean will be \_\_\_\_\_ (1)
- a. 26
  - b. 160
  - c. 100
  - d. 60

4. Attribute of a variable refers to its \_\_\_\_\_ character . (1)
- a. numerical
  - b. qualitative
  - c. quantitative
  - d. temporal

5. Read the following statements carefully: (1)

Statement 1 – The use of statistical measures help in solving economic problems.

Statement 2– Statistical data is always qualitative in nature.

Choose the correct alternative:

- a. Statement 1 is true and statement 2 is false.
- b. Statement 1 is false and statement 2 is true.
- c. Both the statements 1& 2 are true.
- d. Both the statements 1&2 are false.

6. Identify the correct statement/s: (1)

- (i) In the calculation of CPI for industrial workers, food has the largest weight.
- (ii) The cost of living index is the same as Consumer price index.
- (iii) WPI is used to eliminate the effect of prices on national income.

Choose the correct option:

- a. (i) only
- b. (ii) & (iii)
- c. (i) & (ii)
- d. (i) ,(ii) & (iii)

7. Match the statements given in columns I & II. (1)

Column I	Column II
(i) Possible to collect supplementary information	(a) Telephonic interview
(ii) Homogeneous data	(b) Census Method
(iii) Heterogeneous data	(c) Direct Personal Interview
(iv) Time Saving	(d) Sample method

- a. (i)a, (ii)d, (iii)b, (iv)c
- b. (i)a, (ii)b, (iii)d, (iv)c
- c. (i)c, (ii)d, (iii)b, (iv)a
- d. (i)c, (ii)b, (iii)d, (iv)a

8. Read the following statements: Assertion (A) and Reason (R). (1)

Assertion (A): Statistical methods help in measuring the success and failure of economic plans and accordingly guide to apply Corrective Measures.

Reason (R): Statistical methods can be used to establish mathematical relation between various economic variables.

Choose the correct option:

- a. Both Assertion (A) and Reason(R) are True and Reason (R) is the correct explanation of Assertion (A).
- b. Both Assertion (A) and Reason (R) are True and Reason (R) is not the correct explanation of Assertion (A)
- c. Assertion (A) is True but Reason (R) is False.
- d. Assertion (A) is False but Reason (R) is True.

9 . \_\_\_\_\_ is the most suitable diagram for a student, who wishes to represent his monthly expenditures incurred on food rent, Travel, fees & miscellaneous items. (1)

- i. Multiple bar diagram
- ii. Component bar diagram
- iii. Pie chart

Choose the correct option:

- a. ii
- b. i, ii

- c. ii, iii
- d. i,ii,iii

10. Consumer Price index numbers are constructed for which of the following consumer categories? (1)

- a. Urban non manual workers, Industrial workers & Agricultural labourers.
- b. Urban non manual workers, Urban manual workers & Agricultural labourers.
- c. Industrial workers, Urban non manual workers & Rural workers.
- d. Agricultural labourers, Construction workers & defence personnel.

11. In section A of class XI, the mean marks of 50 students in statistics were 35. If the combined mean of sections A & B are 38 & find the mean marks of the 25 students of section B. (3)

12. "Despite Census survey being a complete enumeration method, Sample survey is widely used by economists." Justify the statement.

OR

Giving suitable examples, differentiate between continuous and discrete variable. (3)

13. Construct a bivariate frequency distribution for the following data showing the marks of 12 students in English & Mathematics. (4)

Marks in English	14	16	12	14	16	12	18	18	14	12	16	18
Marks in Mathematics	20	24	24	20	24	26	22	20	22	22	20	22

OR

In an excursion from a college, there were 80 people, each of whom paid Rs.155 on an average. There were 60 students, each of whom paid Rs.160. Members of the teaching staff were charged at a higher rate. The number of peons (all males) was 6 and they were not charged any money. The number of women were 20% of the total while there were 5 lady staff members. Tabulate the given information.

14. Locate the missing frequencies in the following data about the wages of 550 employees, given that the value of median wages is Rs.52.75 thousands.

(4)

Wages (Rs. in thousands)	20-30	30-40	40-50	50-60	60-70	70-80
No. of workers	60	60	?	200	?	40

15. (i) Differentiate between Price Index and Quantity Index Numbers.

(ii) From the given data, calculate the price index number & interpret its result.

Commodities	A	B	C	D	E
Price (2024)	100	70	30	40	180
Price (2023)	80	56	25	20	60

16. From the following data on monthly incomes of 50 families, graphically locate the mode and verify its value.

(4,2)

Monthly Income (Rs.in thousands)	10-20	20-30	30-40	40-50	50-60	60-70
F	5	6	16	18	4	1

17. Calculate the coefficient of Correlation between X & Y variables by Product Moment method and interpret the result.

(6)

OR

A. Represent each of the following through scatter diagram :

- (i) No linear correlation between A & B variables.
- (ii) Perfect Negative Correlation between X & Y variables.
- (iii) High degree of Positive Correlation between S & T variables.

B. Differentiate between Spearman's & Pearsonian coefficient of correlation.

(3,3)

X	20	30	40	50	60	70	80
Y	600	200	700	100	300	500	400



SECTION – B  
(MICRO ECONOMICS)

18. Production possibility curve is concave to the origin because of \_\_\_\_\_.  
(1)

- a. MRS increasing with more production of a commodity
- b. MRT decreasing with more production of a commodity
- c. MRT increasing with more production of a commodity
- d. MRS decreasing with more production of a commodity

19. Read the following statements carefully: (1)

Statement 1: An economy always produces on PPC.

Statement 2: Destruction of resources due to war shifts the PPC to left.

- a. Statement 1 is true and 2 is false
- b. Statement 2 is true and 1 is false
- c. Both the statements are true
- d. Both the statements are false

20. Choose the correct pair of statements given in columns A & B (1)

Column A	Column B
A) Employment should be increased in the economy	i) Positive statement
B) There is poverty in the country	ii) Normative statement
C) Distribution of Income in economy	iii) For Whom to produce
D) To use labour intensive technology or capital intensive technology	iv) What to produce

- a. A-i
- b. B-ii
- c. C-iii
- d. D-iv

21. Mr. Anuj has three options to choose from the employment options

(i) Rs. 80000

(ii) Rs. 70000

(iii) Rs. 60000.

Opportunity cost of choosing option (i) assuming same working conditions will be-----.

(1)

a. Rs. 80000

b. Rs. 60000

c. Rs. 70000

d. Rs. 10000

22. A simultaneous leftward shift in demand and supply will lead to

(1)

a. decrease in quantity and price may increase or decrease or remain unchanged

b. increase in quantity and price may increase or decrease or remain unchanged

c. decrease in price and quantity may increase or decrease or remain unchanged

d. increase in price and quantity may increase or decrease or remain unchanged

23. Read the following statements carefully:

(1)

Statement 1: Imposition of price ceiling lead to excess supply

Statement 2: Imposition of price floor leads to excess demand

Choose the correct option:

a. Statement 1 is true and 2 is false

b. Statement 2 is true and 1 is false

c. Both the statements are true.

d. Both the statements are false

24. A perfectly competitive market is characterised by following features

(1)

i. all the firms are price takers

ii. marginal revenue = market price

iii. only sellers have perfect knowledge

iv. the firms earn normal profits in long run

Options:

- a. i, ii, iv
- b. i
- c. i, ii
- d. i, ii, iii

25. Read the following statements: Assertion (A) and Reason (R) : (1)

Assertion (A): Floor price for wheat is fixed above the market equilibrium price

Reason(R) Price ceiling is generally imposed on necessary items like wheat.

Choose the correct option:

- a. Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of the Assertion (A)
- b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A)
- c. Assertion (A) is true but Reason (R) is false.
- d. Assertion (A) is false but Reason (R) is true.

26. When price remains same with rise in output, AR curve is: (1)

- a. Vertical straight line parallel to Y-axis
- b. Horizontal straight line parallel to X-axis
- c. Downward sloping
- d. Positively sloped

27. There is a sudden change in climatic conditions resulting in hot weather.

Assuming no change in the price of the Ice cream, it will lead to: (1)

- a. Upward movement along the same market demand curve of Ice-cream
- b. Downward movement along the same market demand curve of Ice-cream.
- c. Rightward shift in the market demand curve of Ice-cream.
- d. Leftward shift in the market demand curve of Ice-cream.

28. A consumer buys 10 units of a good at a price of Rs 9 per unit. At price of Rs 10 per unit, she buys 9 units. What is the price elasticity of demand? Use expenditure approach. Comment on the likely shape of the demand curve on the basis of this measure of elasticity. (3)

OR

When the price of a good gets halved, its demand rises from 100 units to 180 units. Calculate its price elasticity of demand.

29. What is the price elasticity of supply, when: (3)
- Supply curve passes through the origin;
  - Supply curve is a vertical straight line;
  - Supply curve is a horizontal straight line.
30. Kashmir recorded a temperature of 37.4°C in July, the third highest since 1946 and the highest since 1953. It was also the hottest June since 1978. Srinagar touched 34.6°C, Kupwara 35.9°C and Kokernag 34°C. For most of the June, day temperatures were 4 to 7° above the normal. As a result, production of apples is adversely affected in the region. If the apple market was originally in equilibrium In light of the above situation explain the impact on apple market in the country. (4)

OR

Demand for electrical appliances like induction cookers, heaters etc. have increased due to increase in the price of LPG. However, in the short run supply of these appliances remains constant, what will be the effect on equilibrium price of these electrical appliances in the given scenario? Explain.

31. Assuming that there are two big computer giants that is ACER & DELL in the market. Analysis the impact on the demand for ACER PCs : (4)
- If Dell reduces its prices.
  - If the prices of CPU and keyboards come down sharply.
32. At a particular level of output, a producer's  $MC < MR$ . What should a producer do to maximise his profit? (4)
33. a. A consumer consumes only two goods. Why is the consumer said to be in equilibrium when he buys only that combination of the two goods which lies at that point on the indifference curve where the budget line is tangent to the indifference curve? Explain using diagram. (3)
- b. Given the utility schedule of good X, whose price is Rs. 3 per unit. Assuming that 1 util = Rs. 1, state how many units should a consumer buy to maximise his satisfaction. Give reasons.

(3)

QUANTITY	1	2	3	4	5
TOTAL UTILITY (Utils)	8	15	20	23	25

- 34 .a. Identify giving reason the three phases of the Law of Variable Proportions from the following: (3)

Units of variable input	1	2	3	4	5
Total product	11	22	30	35	30

- b. Giving any two reasons, Explain the changes that take place in total product and marginal product under increasing returns to a factor. (3)

OR

Using diagram, explain relationship among Average fixed cost (AFC), Average variable cost (AVC) and Average cost. (6)

# ECONOMICS 2025-26

## MARKING SCHEME/ HINTS TO SOLUTIONS

NOTE: ANY OTHER RELEVANT ANSWER NOT GIVEN HEREIN BUT GIVEN BY  
CANDIDATE BE SUITABLY AWARDED.

### Section-A (Statistics)

Q.NO	Value Points	Marks	Total Marks
1.	b. Economic activities are not undertaken for monetary gains.	1	1
2.	d. 10	1	1
3.	a. 26	1	1
4.	a. qualitative	1	1
5.	a. Statement 1 is true and statement 2 is false.	1	1
6.	d. I, ii & iii	1	1
7.	c. (i)c, (ii)d, (iii)b, (iv)a	1	1
8.	b. Both Assertion (A) and Reason (R) are True and Reason (R) is not the correct explanation of Assertion (A)	1	1
9.	c. ii, iii	1	1
10.	a. Urban non manual workers, Industrial workers & Agricultural labourers.	1	1
11.	Combined Mean = $\frac{(N \times A.\text{mean})_A + (N \times A.\text{mean})_B}{N_A + N_B}$  $38 = \frac{50 \times 35 + 25x}{75}$ = 44 marks	1  1 1	3
12	Although census method is appropriate since it provides complete enumeration and is also more suitable for a heterogeneous population, it cannot be conducted where area of investigation is vast and it is time consuming and costly.  <div style="text-align: center;">OR</div> Discrete variables <ul style="list-style-type: none"> <li>Finite jumps between two values</li> <li>Example: no. of cars per household</li> </ul> Continuous variables <ul style="list-style-type: none"> <li>Can be broken down into Infinite gradations</li> <li>Example: Income, Expenditure of a household</li> </ul>	1.5   1.5	3

13.

Marks in English (X) →

Marks in Maths (Y) ↓

	12	14	16	18	Total
20		11(2)	1(1)	1(1)	4
22	1(1)	1(1)		11(2)	4
24	1(1)		11(2)		3
26	1(1)				1
Total	3	3	3	3	12

OR

Table No. - 1

Classification of persons going for Excursion

(persons in no.)

Category of Persons	Male	Female	Total	Contribution in (Rs)
Students	49	11	60	9600
Teaching staff	9	5	14	2800
Peons	6	-	6	-
Total	64	16	80	12400

Footnote: Excursion by College A

Source: College Records

2-cells

1format

1(other parts)

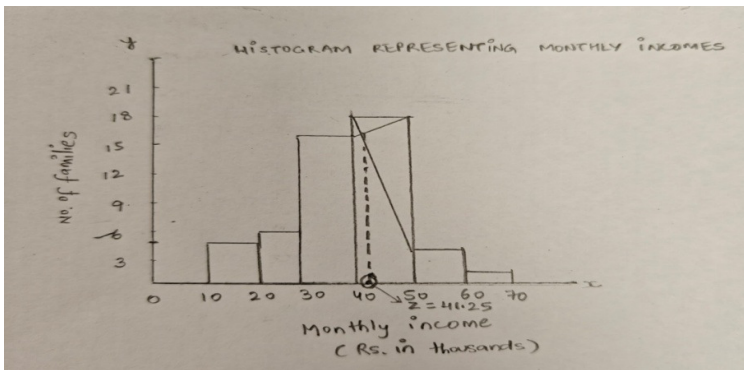
4

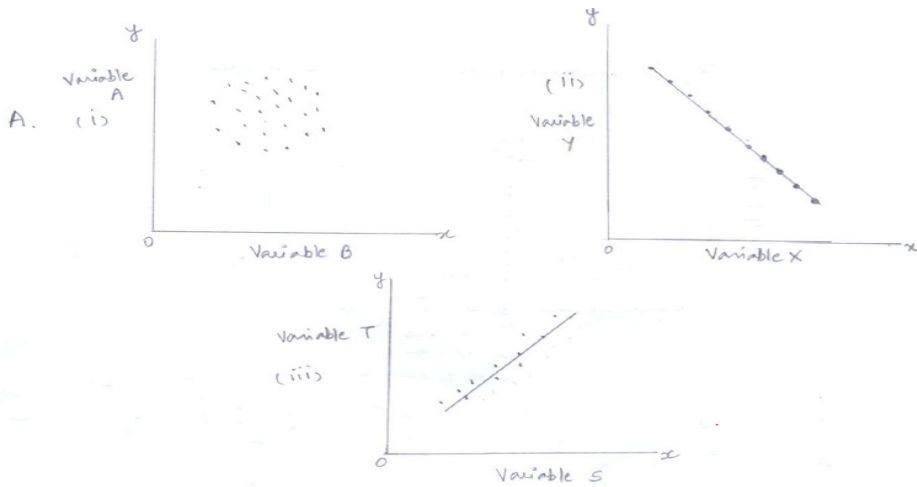
14.

Wages(Rs. In thousands)	No. of workers(f)	C.f
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	<table><tr><td>20-30</td><td>60</td><td>60</td></tr><tr><td>30-40</td><td>60</td><td>120</td></tr><tr><td>40-50</td><td>X</td><td>120+X</td></tr><tr><td>50-60</td><td>200</td><td>320+X</td></tr><tr><td>60-70</td><td>Y</td><td>320+X+Y</td></tr><tr><td>70-80</td><td>40</td><td>550</td></tr></table>	20-30	60	60	30-40	60	120	40-50	X	120+X	50-60	200	320+X	60-70	Y	320+X+Y	70-80	40	550		1.5	4			
	20-30	60	60																						
	30-40	60	120																						
	40-50	X	120+X																						
	50-60	200	320+X																						
	60-70	Y	320+X+Y																						
	70-80	40	550																						
	Median = N/2 th value Median = l + {(n/2-c.f)/f X i}																								
	$52.75 = 50 + \frac{\{ 225 - (120 + X) \}}{200} \times 10$																								
	$52.75 - 50 = \frac{225 - 120 - X}{20}$																								
$2.75 \times 20 = 105 - X$																									
$X = 105 - 55$ $= 50$ $360 + 50 + Y = 550$ $Y = 550 - 410 = 140$																									
15.i)	<table><tr><th>PRICE INDEX</th><th>QUANTITY INDEX</th></tr><tr><td>1.It measures the percentage changes in prices between the current year and the base year.</td><td>It measures percentage changes in the physical quantity of goods produced, consumed or sold between the current year and the base year.</td></tr><tr><td>Example-WPI,CPI</td><td>Examples-Index of Industrial production</td></tr></table>	PRICE INDEX	QUANTITY INDEX	1.It measures the percentage changes in prices between the current year and the base year.	It measures percentage changes in the physical quantity of goods produced, consumed or sold between the current year and the base year.	Example-WPI,CPI	Examples-Index of Industrial production		1,1																
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ii)	<table><tr><th>COMMODITIES</th><th>P1</th><th>P0</th></tr><tr><td>A</td><td>100</td><td>80</td></tr><tr><td>B</td><td>70</td><td>56</td></tr><tr><td>C</td><td>30</td><td>25</td></tr><tr><td>D</td><td>40</td><td>20</td></tr><tr><td>E</td><td>180</td><td>60</td></tr><tr><td></td><td><math>\sum P1=420</math></td><td><math>\sum P0=241</math></td></tr></table> $\sum PO1=\sum P1/\sum P0 \times 100$ $=420/241 \times 100$ $=174.27$	COMMODITIES	P1	P0	A	100	80	B	70	56	C	30	25	D	40	20	E	180	60		$\sum P1=420$	$\sum P0=241$		0.5	4
COMMODITIES	P1	P0																							
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			0.5																						



	<p>It reveals that there is a 74.27% increase in the year 2024 compared to the prices in the year 2023.</p>	0.5																																																																
16 (i)	<div></div> <p>Modal class- (40-50)</p> <p>Mode= <math>l_1 + \{ (f_1 - f_0) / (2f_1 - f_0 - f_2) \} \times i</math></p> <p>= <math>40 + \{ (18 - 16) / (2 \cdot 18 - 16 - 4) \} \times 10</math></p> <p>= <math>40 + (2 \times 10) / 16</math></p> <p>= <math>40 + 1.25</math></p> <p>= ₹ 41.25</p>	4	6																																																															
17	<p>Since the coefficient of correlation is not affected by the change in scale and origin of variables. So, in order to make calculations simpler, we can divide series X by 10 and series Y by 100. By doing so we get the following table:</p> <table><tr><td>X</td><td>Y</td><td>x=X—</td><td>x<sup>2</sup></td><td>y=Y-Y</td><td>y<sup>2</sup></td><td>xy</td></tr><tr><td>2</td><td>6</td><td>-3</td><td>9</td><td>2</td><td>4</td><td>-6</td></tr><tr><td>3</td><td>2</td><td>-2</td><td>4</td><td>-2</td><td>4</td><td>4</td></tr><tr><td>4</td><td>7</td><td>-1</td><td>1</td><td>3</td><td>9</td><td>-3</td></tr><tr><td>5</td><td>1</td><td>0</td><td>0</td><td>-3</td><td>9</td><td>0</td></tr><tr><td>6</td><td>3</td><td>1</td><td>1</td><td>-1</td><td>1</td><td>-1</td></tr><tr><td>7</td><td>5</td><td>2</td><td>4</td><td>1</td><td>1</td><td>2</td></tr><tr><td>8</td><td>4</td><td>3</td><td>9</td><td>0</td><td>0</td><td>0</td></tr><tr><td>ΣX=35</td><td>ΣY=28</td><td></td><td>Σx<sup>2</sup>=28</td><td></td><td>Σy<sup>2</sup>=28</td><td>Σxy=-4</td></tr></table> <p>Mean of X=ΣX/N=35/7</p> <p>=5</p>	X	Y	x=X—	x <sup>2</sup>	y=Y-Y	y <sup>2</sup>	xy	2	6	-3	9	2	4	-6	3	2	-2	4	-2	4	4	4	7	-1	1	3	9	-3	5	1	0	0	-3	9	0	6	3	1	1	-1	1	-1	7	5	2	4	1	1	2	8	4	3	9	0	0	0	ΣX=35	ΣY=28		Σx <sup>2</sup> =28		Σy <sup>2</sup> =28	Σxy=-4	2	
X	Y	x=X—	x <sup>2</sup>	y=Y-Y	y <sup>2</sup>	xy																																																												
2	6	-3	9	2	4	-6																																																												
3	2	-2	4	-2	4	4																																																												
4	7	-1	1	3	9	-3																																																												
5	1	0	0	-3	9	0																																																												
6	3	1	1	-1	1	-1																																																												
7	5	2	4	1	1	2																																																												
8	4	3	9	0	0	0																																																												
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		1																																																																

	<p>Mean of <math>Y = \sum Y / N = 28 / 7</math>  <math>= 4</math></p> <p><math>r = \sum xy / \sqrt{\sum x^2 \cdot \sum y^2}</math>  <math>= -4 / 28.28</math>  <math>= -4 / 28</math>  <math>= -0.143</math></p> <p>There is low degree of negative correlation.</p> <p>OR</p>	1									
a.		1 1 1	6								
b.	<table border="1"> <thead> <tr> <th>SPEARMAN'S COEFFICIENT OF CORRELATION</th><th>PERSIAN COEFFICIENT OF CORRELATION</th></tr> </thead> <tbody> <tr> <td>It measures correlation for quanlitative data.</td><td>It measures correlation for quantitative data.</td></tr> <tr> <td>It calculates the rank differences</td><td>It calculates deviations from actual or assumed mean.</td></tr> <tr> <td>It gives less importance to extreme values.</td><td>It gives more importance to extreme values.</td></tr> </tbody> </table>	SPEARMAN'S COEFFICIENT OF CORRELATION	PERSIAN COEFFICIENT OF CORRELATION	It measures correlation for quanlitative data.	It measures correlation for quantitative data.	It calculates the rank differences	It calculates deviations from actual or assumed mean.	It gives less importance to extreme values.	It gives more importance to extreme values.	1 1 1	
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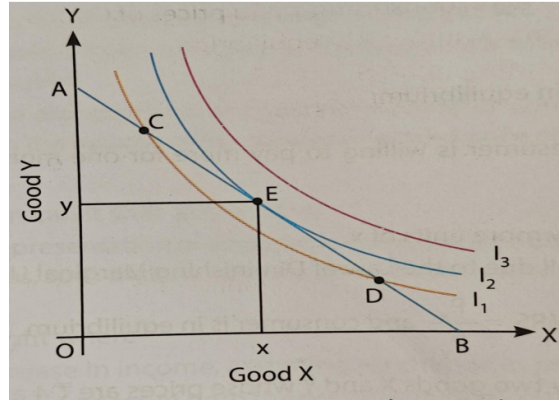
## Section-B (Micro Economics)

Q	VALUE POINTS	MAR	TO
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NO.		KS	TAL MA RKS									
18	c. MRT increasing with more production of a good	1	1									
19	b. statement 2 is true and 1 is false	1	1									
20	c. C-iii	1	1									
21	c. Rs. 7000	1	1									
22	a. Decrease in quantity and price may increase or decrease or remain unchanged	1	1									
23	d. Both statements are false	1	1									
24	a. i, ii, iv	1	1									
25	b. Both assertion (A) and Reason ( R) are true but ( R) is not the correct explanation of the Assertion (A)	1	1									
26	b. Horizontal straight line parallel to x-axis	1	1									
27	c. Rightward shift in the market demand curve of ice cream	1	1									
28	<table border="1"><thead><tr><th>Price</th><th>Demand (Units)</th><th>Total Expenditure (Rs)</th></tr></thead><tbody><tr><td>9</td><td>10</td><td>90</td></tr><tr><td>10</td><td>9</td><td>90</td></tr></tbody></table> <p>A rise in price of the good from 9 per unit to 10 per unit does not result in any change in total expenditure on it. It remains unchanged at Rs</p>	Price	Demand (Units)	Total Expenditure (Rs)	9	10	90	10	9	90	1	
Price	Demand (Units)	Total Expenditure (Rs)										
9	10	90										
10	9	90										

	<p>90. Therefore, demand for the good is unitary elastic, <math>ed = -1</math>.</p> <p>The demand curve of the good will be a rectangular hyperbola demand curve where <math>ed = -1</math> at all points on the demand curve.</p> <p>OR</p> <p>Percentage change in demand = <math>\frac{\text{change in demand}}{\text{original demand}} \times 100</math>  <math>= \frac{80}{100} \times 100 = 80\%</math>.</p> <p>Percentage change in price = 50% (since the price gets halved)</p> <p><math>ed = \frac{\text{percentage change in demand}}{\text{percentage change in price}}</math>  <math>= \frac{80}{50} = 1.6</math></p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	3
29	<p>The price elasticity of supply in the following cases will be:</p> <p>(a) Unitary elastic Supply</p> <p>(b) Perfectly Inelastic Supply</p> <p>(c) Perfectly Elastic Supply</p>	<p>1</p> <p>1</p> <p>1</p>	3
30	<p>As a result of decrease in production of Apple, the market supply will shift towards left</p> <p>This implies excess demand at the equilibrium price leading to competition among buyers and bidding up of the prices. As a result, there will be contraction in demand and expansion in supply</p> <p>leading to a new equilibrium at higher price and lower quantity.</p> <p>Or</p> <p>Increased demand will shift the demand curve rightward.</p>	<p>1</p> <p>2</p> <p>1</p> <p>1</p>	4

	<p>This will create competition among buyers, which will result in bidding up of the prices leading to contraction in demand and expansion and supply.</p> <p>The new equilibrium will then be attained at higher price and quantity.</p>	<p>2</p> <p>1</p>	
31	<p>Dell PCs are substitutes of Acer PCs. When Dell reduce its prices, Dell PCs become cheaper than Acer PCs. Therefore, consumers buy more of Dell PCs. As a result, demand for Acer PCs decreases at the same price.</p> <p>(2) CPU and keyboards are complementary goods. If the price of CPU and keyboards reduce sharply, demand for them will rise which, in turn, will increase the demand for Acer PCs at the same price.</p>	<p>2</p> <p>2</p>	4
32	<p>Producer equilibrium refers to that price and output combination which brings maximum profit to the producer and profit decline as more is produced.</p> <p>Conditions</p> <p>1 MC =MR</p> <p>2 MC is greater than MR after</p> <p>MC = MR output level.</p> <p>Since marginal revenue is more than the marginal cost, the producer can increase his profits by producing more. Therefore, the producer should increase his production to attain maximum profit, and continue till MC = MR and MC &gt; MR after MC = MR output level.</p>	<p>1</p> <p>1</p> <p>2</p>	4
33	<p>a. Let the two goods be X and Y as shown in the diagram. The tangency is at point E where: Slope of indifference curve= Slope of budget line Or <math>MRS_{xy} = P_x/P_y</math>.</p>	<p>1</p>	



The equilibrium purchase is Ox of X and Oy of Y on the indifference curve I C 2

The consumer cannot get satisfaction level higher than IC2 because his income does not permit him to move above the budget line AB. The consumer will not like to purchase any other bundle on the budget line AB, for example the bundle at C and D, because they all lie on the lower indifference curve, and give him lower satisfaction. Therefore, the equilibrium choice is only at the tangency point E.

b.

Quantity	1	2	3	4	5
PRICE	3	3	3	3	3
MU	8	7	5	3	2

The consumer will buy 4 units to attain equilibrium, ie, to maximise his satisfaction since at this consumption level,  $MU = Price = Rs\ 3$ .

At consumption level of less than 4 units,  $MU > Price$ . Therefore, there is scope of increasing gain by purchasing more.

If he buys more than 4 units,  $MU < Price$ . Therefore, buying more than 4 units will be disadvantageous to the consumer. Thus, the consumer will maximise his satisfaction by buying 4 units of the commodity X.

34

a.

Variable input	TP	MP	PHASES
1	11	11	I
2	22	12	I
3	30	8	II
4	35	5	II
5	30	-5	III

1.5

Phase 1: TP increases at an increasing rate. MP increases. (Up to 2 units of the variable input)

Phase II: TP increases at a decreasing rate. MP falls but remains positive. (from 3 to 4 units of the variable input)

Phase III: TP falls. MP falls and becomes negative. (at 5th unit of the variable input).

1.5

b .Under increasing returns to a factor, total product increases at increasing rate as more and more units of a variable input are employed. As a result, marginal product also increases.

1

Reasons

1) Better utilisation of the fixed factor

2) Increased efficiency of variable factor

3) Indivisibility of fixed factor.

(Any Two Reasons)

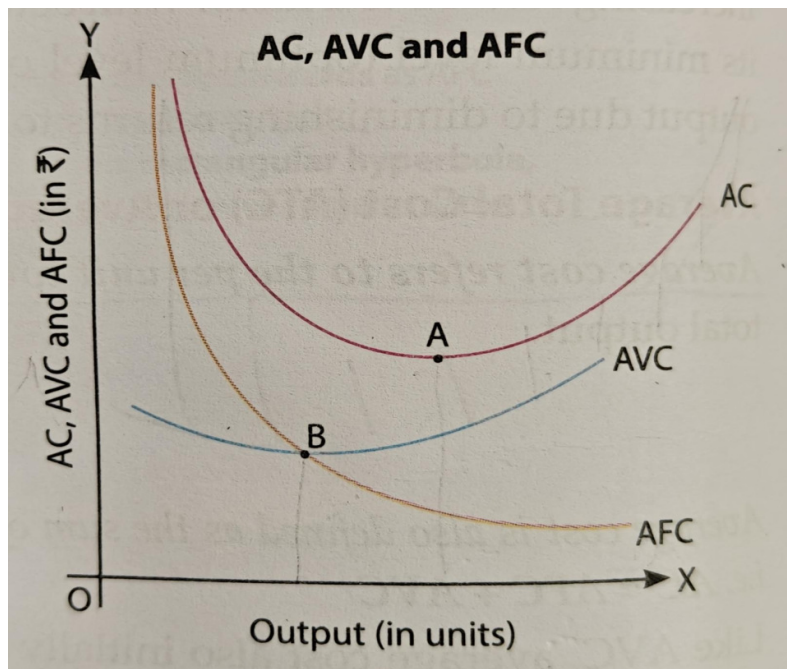
2

6

OR

Important Observations: AC, AVC and AFC

1. AC curve will always lie above the AVC curve because AC, at all levels of output includes both AVC and AFC.
2. AVC reaches its minimum point (point 'B') at a level of output lower than that of AC (point 'A') because when AVC is at its minimum point, AC is still falling because of falling AFC.
3. As the output increases, the gap between AC and AVC curves decreases, but, they never intersect each other. It happens because the vertical distance between them is AFC, which can never be zero.(3)





**CLASS XI SAMPLE PAPER (2025-26)**  
**SUBJECT- PHYSICS**

**TIME: 3 HOURS**

**M.M: 70**

**General Instructions:**

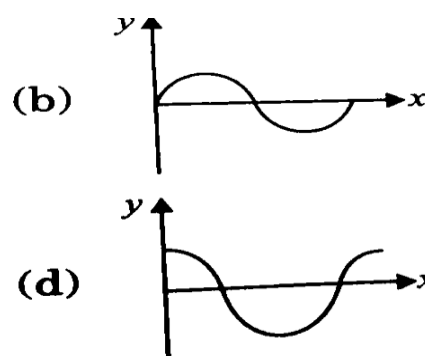
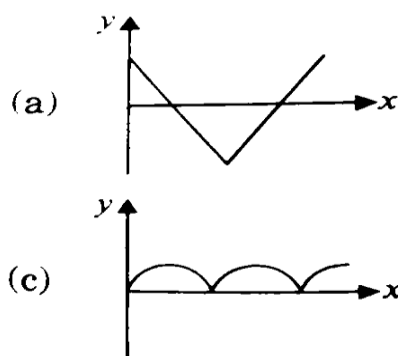
- (1) There are 33 questions in all. All questions are compulsory.
- (2) This question paper has five sections: Section A, Section B, Section C, Section D and Section E.
- (3) All the sections are compulsory.
- (4) Section A contains sixteen questions, twelve MCQ and four Assertion Reasoning based of 1 mark each, Section B contains five questions of two marks each, Section C contains seven questions of three marks each, Section D contains two case study based questions of four marks each and Section E contains three long answer questions of five marks each.
- (5) There is no overall choice. However, an internal choice has been provided in one question in Section B, one question in Section C, one question in each CBQ in Section D and all three questions in Section E. You have to attempt only one of the choices in such questions.
- (6) Use of calculators is not allowed.

**SECTION A**

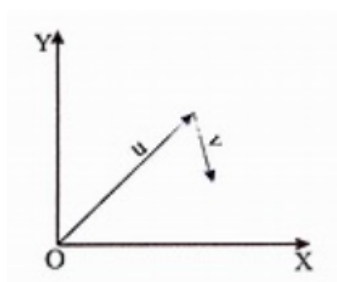
1. If mass is measured in units of  $\alpha$  kilogram, length in  $\beta$  metre and time in  $\gamma$  seconds then calorie would be

- (A)  $4.2 \alpha \beta^2 \gamma^{-2}$  (B)  $4.2 \alpha^{-1} \beta^2 \gamma^2$   
(C)  $4.2 \alpha^{-1} \beta^{-2} \gamma^2$  (D)  $4.2 \alpha^{-2} \beta^{-1} \gamma^{-2}$

2. A particle starts moving at  $t = 0$  in x-y plane such that its position (x,y) is given as  $x = at$ ,  $y = b \sin \omega t$  where  $a = 2$  m/s,  $b = 5$  m,  $c = 2$  s<sup>-1</sup>. Which of the following figures currently represent the motion of the particle?

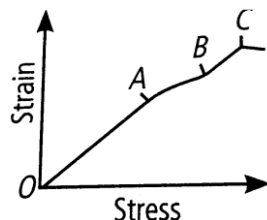


3. Figure shows two vectors  $\vec{u}$  and  $\vec{v}$  in x-y plane. If  $\vec{u} = a \hat{i} + b \hat{j}$  and  $\vec{v} = p \hat{i} + q \hat{j}$ , then:



- (A) a and p are positive while b and q are negative  
 (B) a, p and b are positive while q is negative  
 (C) a, q and b are positive while p is negative  
 (D) a, b, p and q all positive

4. The stress- strain graph of a material is shown in the figure. The region in which the material is elastic is:

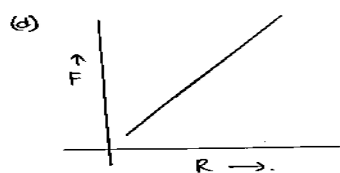
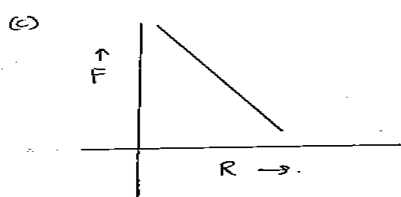
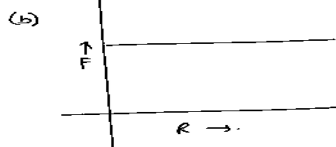
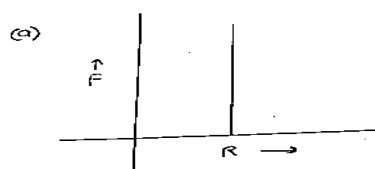


- (A) OA                      (B) OB                      (C) OC                      (D) AC

5. A car of mass  $m$  moves with a constant speed  $v$  over (1) horizontal flat surface (2) convex bridge (3) concave bridge. Let  $R_1$ ,  $R_2$  and  $R_3$  be the forces exerted by surfaces in cases (1), (2) and (3) respectively on the car as it passes the middle point of the bridge. Which of the following relations is correct?

- (A)  $R_1 = mg$ ;  $R_2 < mg$ ;  $R_3 = mg$   
 (B)  $R_1 = mg$ ;  $R_2 > mg$ ;  $R_3 < mg$   
 (C)  $R_1 = mg$ ;  $R_2 < mg$ ;  $R_3 > mg$   
 (D)  $R_1 = mg$ ;  $R_2 = mg$ ;  $R_3 = mg$

6. A block of Mass  $m$  is lying on a horizontal rough surface. Which of the following graph correctly represents the variation of force of limiting friction ( $F$ ) with normal reaction ( $R$ )?



7. A binary system of stars of equal mass is moving along a circle of radius  $r$  under the action of mutual attraction. The speed of each star is:

- (A)  $\sqrt{Gm/4r}$                       (B)  $\sqrt{Gm/2r}$                       (C)  $\sqrt{Gm/r}$                       (D)  $\sqrt{Gmr}$

8. The radius of a spherical metal ball at room temperature  $T$  is  $R$ , and the coefficient of linear expansion of the material is  $\alpha$ . The sphere is heated a little through a temperature  $\Delta T$  so that its new temperature is  $(T + \Delta T)$ . The increase in the volume of the sphere is approximately:

- (A)  $2\pi R\alpha\Delta T$                       (B)  $\pi R^2\alpha\Delta T$                       (C)  $4\pi R^3\alpha\Delta T/3$                       (D)  $4\pi R^3\alpha\Delta T$

9. Average velocity of a particle executing SHM of amplitude A with angular frequency  $\omega$  in one complete oscillation is:

- (A) Zero (B)  $A\omega/2$  (C)  $A\omega$  (D)  $A\omega^2/2$

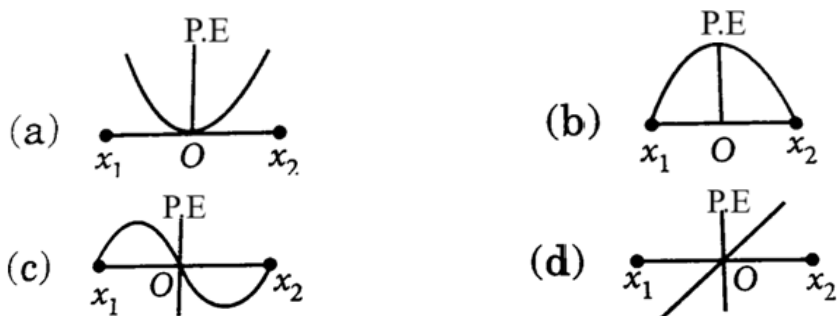
10. The ratio of specific heats ( $C_p / C_v$ ) of monoatomic and rigid diatomic gases are respectively:

- (A)  $9/7, 5/3$  (B)  $9/5, 7/3$  (C)  $5/3, 7/5$  (D)  $3/5, 7/9$

11. Consider two containers A and B containing identical gases at the same temperature, pressure and volume. The gas in container A is compressed to one- third of its original volume isothermally while the gas in container B is compressed one- third of its original value adiabatically. The ratio of final pressure of gas in B to that of gas in A is:

- (A)  $(3)^\gamma - 1$  (B)  $(1/3)^\gamma - 1$  (C)  $(1/1-\gamma)^2$  (D)  $(1/\gamma - 1)^2$

12. A particle of mass m oscillates in simple harmonic motion between points  $x_1$  and  $x_2$ , the equilibrium position being O. Which of the following graph correctly shows variation of potential energy with x.



For Questions 13 to 16, two statements are given –one labelled Assertion (A) and other labelled Reason (R). Select the correct answer to these questions from the options as given below.

- (a) If both Assertion and Reason are true and Reason is correct explanation of Assertion.  
 (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.  
 (c) If Assertion is true but Reason is false.  
 (d) If both Assertion and Reason are false.

13. **Assertion (A):** A restoring force acting on a body, executing simple harmonic motion is proportional to the displacement of the body from the mean position.

**Reason (R):** Restoring force is always directed towards the centre of motion during simple harmonic motion.

14. **Assertion (A):** Metals have larger values of Young's modulus than alloys.

**Reason (R):** A wire made of material with large value of Young's modulus requires a small force to produce small changes in its length.

15. **Assertion (A):** An astronaut experiences weightlessness in a space satellite.

**Reason (R):** Both the astronaut and the satellite are in free fall towards the Earth.

16. **Assertion (A):** The direction of resultant acceleration of an object in uniform circular

motion is away from the centre.

**Reason (R):** The speed of an object in uniform circular motion is not constant.

### SECTION B

17. A body of mass 1 kg is moving in x-y plane under the action of two forces  $5\hat{i}$  and  $5\hat{j}$ . Calculate the work done by these forces in moving the body from initial position (0,0) to final position (2m, 2m).

18. A metal bar of length 1 m and mass 2 kg is supported at the mid-point with the help of a knife edge. A 20 kg load is suspended at 20 cm from one end of the bar. Where should be the mass of 50 g be placed from the other end, so that the bar remains in equilibrium?

19. (a) Define coefficient of thermal conductivity. Write its unit.

(b) Write the basic requirement of a cooking utensil in respect of (i) specific heat and (ii) thermal conductivity of the material of the utensil.

**OR**

(a) Absolute zero temperature is not the temperature of zero energy. Explain.

(b) What happens to the change in internal energy of a gas during (i) isothermal change and (ii) adiabatic change.

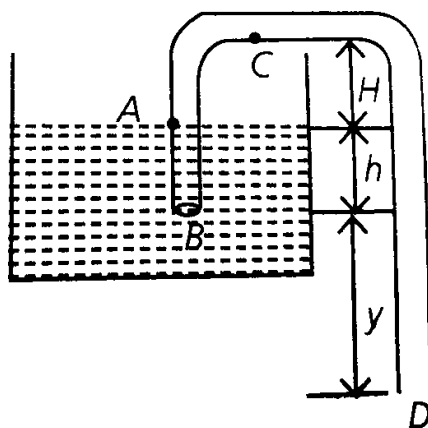
20. When white light travels through glass the refractive index ( $n$ ) is found to vary with wavelength ( $\lambda$ ) as  $n = P + (Q / \lambda^2)$ , where P and Q are constant. Using the principle of homogeneity of dimensions, determine the dimensional formula of 'P' and 'Q'.

21. (a) Write the factors on which mean free path of a ideal gas molecules depends.

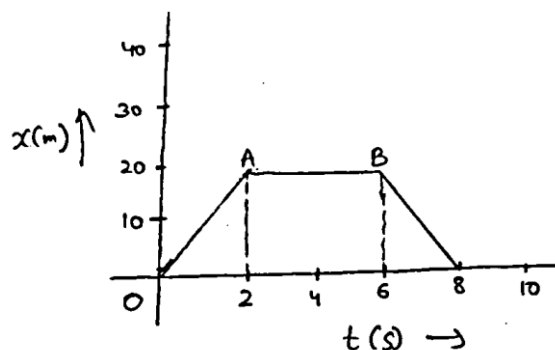
(b) Calculate the mean free path of a gas molecule, if number of molecules per  $\text{cm}^3$  is  $3 \times 10^{19}$  and diameter of each molecule is  $2 \text{ \AA}$ .

### SECTION C

22. A siphon tube is used to remove liquid from a container as shown in figure. In order to operate the siphon tube it must initially be filled with the liquid. Find the pressure difference between points D and C. (Given  $H = 10 \text{ cm}$ ,  $h = 20 \text{ cm}$  and  $y = 30 \text{ cm}$ )



23. Figure shows the position- time graph of a particle of mass 4 kg. (a) What is the impulse at  $t = 2$  s and  $t = 6$  s. (b) What is the velocity of particle at point B. Give reason for your answer.

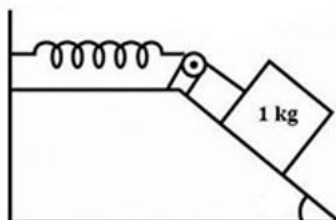


24. Galileo's law of odd numbers is "The distances traversed during equal intervals of time, by a body falling from rest, stand to one another in the same ratio as the odd numbers beginning with unity (namely 1:3:5.....)". Prove it for first three intervals of time.

OR

An object is moving along a straight line with acceleration 'a' starting with velocity 'u'. Find the expression for distance travelled by it in  $n^{\text{th}}$  second by calculus method.

25. A 1 kg block situated on a rough plane inclined at  $30^\circ$  is connected to a spring of spring constant 50 N/m as shown in the figure. The block is released from rest with the spring in unstretched position. The block moves 10 cm down the incline before coming to rest. Find the coefficient of friction between the block and the incline. Assume that the spring has a negligible mass and the pulley is frictionless. (Given  $g = 10 \text{ m/s}^2$ )



26. (a) Show that moment of a couple does not depend on the point about which you take the moments.

(b) A particle is moving along positive X-axis. At some instant its position is  $x$  and its velocity is  $\vec{v}$ . Prove that the angular momentum of the particle about the origin at that instant is zero.

27. (a) State first law of thermodynamics.

(b) Suppose 300 J of work is done on a system and 10 calorie of heat is extracted from the system. What are the values of  $dW$ ,  $dQ$  and  $dU$  with proper signs?

28. A cylindrical piece of cork of base area  $A$  and height  $h$  floats in a liquid of density  $\rho_1$ . The cork is depressed slightly and then released. Show that the cork oscillates up and down simple harmonically with a period

$$T = 2\pi \sqrt{\frac{h\rho}{\rho_1 g}}$$

where  $\rho$  is the density of cork. (Ignore damping due to viscosity of liquid)

## SECTION-D

### Case Study Based Questions

**29. Read the following paragraph and answer the questions that follow.**

The interference of two identical waves moving in opposite directions produces standing waves. Standing waves are characterized by fixed locations of zero displacement called nodes and fixed locations of maximum displacements called antinodes. The most significant feature of stationary waves is that the boundary conditions constrain the possible wavelengths or frequencies of vibration of the system. The system cannot oscillate with any arbitrary frequency, but is characterized by a set of natural frequencies or normal modes of oscillation. The transverse displacement of a string clamped at its both ends under the tension 'T' is given by:

$$y(x,t) = 0.08 \sin(2\pi/3)x \cos(60\pi t)$$

where x and y are in metre and t in second. The length of the string is 1.5 m and its mass is  $15 \times 10^{-2}$  kg.

**(i)** The wavelength of the wave is:

- (A) 1 m                      (B) 2 m                      (C) 3 m                      (D) 4 m

**(ii)** The time period of the wave is:

- (A) 0.034 s                      (B) 0.34 s                      (C) 3.4 s                      (D) 34 m

**(iii)** The tension produced in the string is:

- (A) 410 N                      (B) 640 N                      (C) 720 N                      (D) 810 N

**OR**

The speed of the wave is:

- (A) 30 m/s                      (B) 90 m/s                      (C) 120 m/s                      (D) 150 m/s

**(iv)** Which of the following equations represent progressive harmonic wave?

- (A)  $y = 20 \sqrt{x - vt}$   
(B)  $y = \cos x \sin t + \cos 2x \sin 2t$   
(C)  $y = 4 \cos(6x) \sin(20t)$   
(D)  $y = 3 \sin(5x - 0.5t) + 4 \cos(5x - 0.5t)$

**30. Read the following paragraph and answer the questions that follow.**

On an unbanked road, frictional force alone can provide the centripetal force needed to keep a vehicle moving on a circular turn without slipping. If the speed is too large or if the turn is too sharp or both, the friction force is not sufficient to provide the necessary centripetal force and the cyclist slips. To avoid this, the curved road is given an inclination sloping upwards towards the outer circumference. This reduces wearing out of the tyres because the horizontal component of normal reaction provides the necessary centripetal force. The system of raising the outer edge of a curved road above its inner edge is called banking of the curved road. The angle through which the outer edge of the curved road is raised above the inner edge is called angle of banking. The maximum speed that a vehicle can move with is determined by angle of banking, acceleration due to gravity and radius of curve path. If the surface is rough then this speed also depends on coefficient of friction.

(i) The  $F_{\text{net}}$  acting on a body moving on a banked road to maintain circular path is:

- (A)  $N \sin \theta + F \cos \theta$
- (B)  $N \cos \theta + F \sin \theta$
- (C)  $N \sin \theta$
- (D)  $F \cos \theta$

(ii) If  $\theta_1$  is the optimum angle of banking of cyclist and  $\theta_2$  is the angle of banking of road for a particular speed 'v' and radius 'r' then

- (A)  $\theta_1 = \theta_2$
- (B)  $\theta_1 > \theta_2$
- (C)  $\theta_2 > \theta_1$
- (D)  $\theta_2 > 2\theta_1$

(iii) The maximum speed with which a vehicle can move safely while negotiating a curved track of radius R on a road banked by angle  $\theta$  is given by

( $\mu_s$  = coefficient of friction between road and tyre of the vehicle)

- (A)  $v_{\text{max}} = R g [(\mu_s + \tan \theta) / (1 + \mu_s \tan \theta)]^{1/2}$
- (B)  $v_{\text{max}} = R g [(\mu_s + \tan \theta) / (1 - \mu_s \tan \theta)]^{1/2}$
- (C)  $v_{\text{max}} = R g [(\mu_s - \tan \theta) / (1 + \mu_s \tan \theta)]^{1/2}$
- (D)  $v_{\text{max}} = R g [(1 - \mu_s \tan \theta) / (\mu_s + \tan \theta)]^{1/2}$

(iv) At what angle must a racing track of radius of curvature 40 m be banked so as to be suitable for a maximum speed of 17 km/h? (Take  $g = 10 \text{ m/s}^2$ )

- (A)  $30^\circ$
- (B)  $45^\circ$
- (C)  $90^\circ$
- (D)  $60^\circ$

OR

(a) A cyclist while negotiating a circular path with the speed of 30 m/s found that she has to bend at an angle of  $30^\circ$  with vertical to avoid skidding. What is the radius of circular path?

- (A)  $90\sqrt{3} \text{ m}$
- (B)  $900\sqrt{3} \text{ m}$
- (C)  $90/\sqrt{3} \text{ m}$
- (D)  $900/\sqrt{3} \text{ m}$

## SECTION E

31. (a) A sphere of mass  $m_1$  moving with velocity  $u \hat{i}$  collides another stationary sphere of mass  $m_2$  placed at the origin. The collision is perfectly inelastic. Calculate the final velocity  $\vec{v}$  of the spheres after collision and the loss of kinetic energy during collision.

(b) A ball of mass 500 g is moving along a parabolic path in XY plane under gravity. At some instant its velocity is  $\vec{v} = (10 \hat{i} + 20 \hat{j}) \text{ m/s}$ . Calculate the power delivered to the ball at that instant. (Given that  $g = 10 \text{ m/s}^2$ )

OR

(a) A rocket of mass  $m$  is fired vertically with a speed  $v$  from the surface of Earth (radius  $R$ ). Show that the maximum height  $h$  attained by the rocket from the Earth surface before returning to the Earth is  $h = [R v^2 / (2gR - v^2)]$ , where  $g$  = acceleration due to gravity.

(b) Two bodies of masses 9 kg and 16 kg are placed at two points A and B, distance 5 m apart. Find the magnitude of the gravitational force experienced by a mass of 1 kg placed at a point P such that  $AP = 3 \text{ m}$  and  $BP = 4 \text{ m}$ . (Given  $G = 6.66 \times 10^{-11} \text{ N m}^2 \text{ kg}^{-2}$ )

32. (a) If the maximum height obtained by a projectile under gravity is  $H$ , show that the maximum range achieved would be  $2H$ .

(b) For an object thrown under gravity with initial velocity  $u$  at  $t = 0$  and at an angle  $\theta$  with x-axis, derive equation for the path described by the object.

(c) A ball is projected from origin at initial velocity  $(30 \hat{i} + 40 \hat{j}) \text{ m/s}$  in xy plane at  $t = 0$ . Find the angle that it makes with x axis at time  $t = 3 \text{ seconds}$ . (Given  $g = 10 \text{ m/s}^2$ )

OR

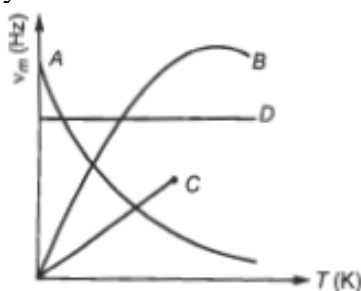
(a) A boy started rotating a stone of mass  $m$  with constant speed  $u$  in horizontal plane with help of a string of length  $l$ . Derive an expression for the centripetal acceleration acting on the stone.

(b) A cyclist is riding with a speed 36 km/h. As he approaches a circular turn on the road of radius 80 m, he applies brakes and reduces his speed at constant rate of 0.5 m/s every second. What is the magnitude and direction of net acceleration of the cyclist in circular turn?

33. (a) Draw experimental curve between wavelength  $\lambda$  and intensity of radiation  $E_\lambda$  emitted by a black body maintained at different constant temperatures.

(b) Which one of the following is the  $\nu_m - T$  graph for a perfectly black body?

Here  $\nu_m$  is the frequency of radiation with maximum intensity and  $T$  is the absolute temperature. Give reason for your choice.



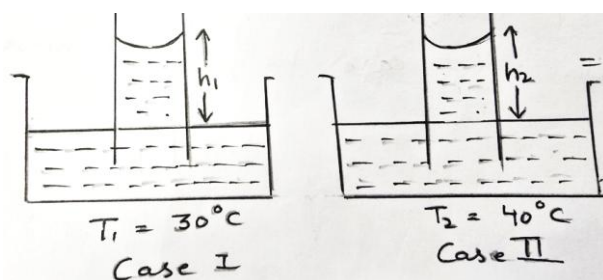
(c) The temperature of a hot black body is raised by 5%. Calculate the percentage increase in the rate of heat energy emitted per unit area.

OR

(a) A drop of mercury of radius 'R' and surface tension 'T' is split into 'n' similar drops of radius 'r'. Show that the change in surface energy is given by  $4\pi R^2 (1 - n^{1/3}) T$

(b) Calculate the amount of work done in blowing a soap bubble of surface tension 0.07 N/m from diameter 4 mm to a diameter 6 mm.

(c) Two identical capillary tubes are dipped in the same liquid maintained at different temperatures as shown in the figure.



In which case the height attained by the liquid is more?





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SAMPLE QUESTION PAPER (PHYSICS)  
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SECTION-B

17

First Method

$$\vec{F} = 5\hat{i} + 5\hat{j}$$

$$\vec{S} = 2\hat{i} + 2\hat{j}$$

$$W = \vec{F} \cdot \vec{S} = (5\hat{i} + 5\hat{j}) \cdot (2\hat{i} + 2\hat{j})$$

$$= 10 + 10 = 20 \text{ J}$$

$\frac{1}{2}$

1

$\frac{1}{2}$

02

Second Method

$$\vec{F} = 5\hat{i} + 5\hat{j}$$

$$|\vec{F}| = \sqrt{5^2 + 5^2} = 5\sqrt{2} \text{ N}$$

$$\vec{S} = 2\hat{i} + 2\hat{j}$$

$$|\vec{S}| = \sqrt{2^2 + 2^2} = 2\sqrt{2} \text{ m}$$

$$W = |\vec{F}| |\vec{S}| \cos 0$$

$$= 5\sqrt{2} \times 2\sqrt{2} = 20 \text{ J}$$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

02

18

Using principle of Moments

$$\text{Load} \times \text{Load arm} = \text{Effort} \times \text{Effort arm}$$

$$20 \times 30 = 50 \times (50 - x)$$

$$600 = 50(50 - x)$$

$$x = 38 \text{ cm}$$

1

$\frac{1}{2}$

$\frac{1}{2}$

02

19a)

Coefficient of thermal conductivity is defined as time rate of flow of heat in a material at given temperature difference.

$$\text{S.I unit } \text{J s}^{-1} \text{m}^{-1} \text{K}^{-1} \text{ or } \text{W m}^{-1} \text{K}^{-1}$$

$\frac{1}{2}$

$\frac{1}{2}$

b) i) Low specific heat

$\frac{1}{2}$

ii) high thermal conductivity.

$\frac{1}{2}$

02

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(OR)

(19) a) At absolute zero, the energy of translatory motion ceases but other forms of energy such as intermolecular, potential energy of molecular motion do not become zero. Therefore absolute temperature is not the temperature of zero energy.

b) For Isothermal Expansion -  
Internal energy is constant.  
For Adiabatic Expansion →  
Internal energy decreases.

(20) As refractive Index 'n' is dimensionless  
From Principle of homogeneity  
'P' is dimensionless  
'Q' has dimension  $[L^2]$

(21) a) Factors on which mean free path of gas molecules depend

- Number of molecules per unit volume of the gas 'n'
- Diameter of molecule 'd'

b) Given  $d = 2\text{\AA} = 2 \times 10^{-10} \text{ m}$   
 $n = 3 \times 10^{19} \text{ per cm}^3 = 3 \times 10^{25} \text{ m}^{-3}$

$$\lambda = \frac{1}{\sqrt{2} \pi n d^2}$$

$$= \frac{1}{1.414 \times 3.14 \times 3 \times 10^{25} \times (2 \times 10^{-10})^2}$$

$$\lambda = 1.9 \times 10^{-7} \text{ m}$$

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SAMPLE QUESTION PAPER (PHYSICS) (4)  
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(22.)

Applying Bernoulli's principle at points A and D with point D as reference for gravitational P.E.

Considering speed of liquid at A is negligible

$$P_A + 0 + \rho g(h+y) = P_D + \frac{1}{2} \rho v_D^2$$

$$v = \sqrt{2g(h+y)}$$

$$P_C + \frac{1}{2} \rho v_C^2 = P_D + \frac{1}{2} \rho v_D^2 - \rho g(H+h+y)$$

$$v_C = v_D$$

$$P_D - P_C = \rho g(H+h+y)$$

$$= 10^3 \times 10 \times (10+20+30) \times 10^{-2}$$

$$= 10^2 \times 60$$

$$= 6 \times 10^3 \text{ Pascal}$$

 $\frac{1}{2}$  $\frac{1}{2}$  $\frac{1}{2}$ 

1

 $\frac{1}{2}$ 

3

(23) (a)

At  $t = 2 \text{ sec.}$

$$\text{Impulse} = mv - mu$$

$$= 4(0 - \frac{20}{2})$$

$$= -40 \text{ Ns}$$

At  $t = 6 \text{ sec.}$

$$\text{Impulse} = mv - mu$$

$$= 4(-\frac{20}{2} - 0)$$

$$= -40 \text{ Ns}$$

 $\frac{1}{2}$  $\frac{1}{2}$  $\frac{1}{2}$  $\frac{1}{2}$  $\frac{1}{2}$ 

(b) Velocity at B = 0

$\therefore$  A while moving  $t = 2 \text{ sec}$  to  $t = 6 \text{ sec}$ , the position of particle remains same i.e. at rest

 $\frac{1}{2}$ 

3

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(5)

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(24)

Example 2.5 Page no. 20 of NCERT Physics (Part I)

$$y = -\frac{1}{2}gt^2$$

time interval of 2 each

Table (2.2) Page no. 20 of NCERT First 4 calculations  $\frac{1}{2} \times 4$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2} \times 4$

3

OR

By first equation of motion

$$v = u + at \quad \text{--- (1)}$$

$$v = \frac{dx}{dt}$$

$$dx = v dt$$

integrating both sides.

$$\int_{S_{n-1}}^{S_n} dx = \int_{n-1}^n v dt$$

$S_{n-1}$

Substituting from (1)

$$\int_{S_{n-1}}^{S_n} dx = \int_{n-1}^n (u + at) dt$$

$$\int_{S_{n-1}}^{S_n} dx = \int_{n-1}^n u dt + a \int_{n-1}^n t dt$$

$$[x]_{S_{n-1}}^{S_n} = u [t]_{n-1}^n + \frac{1}{2} a [t^2]_{n-1}^n$$

$$S_n - S_{n-1} = u [n - (n-1)] + \frac{1}{2} a [n^2 - (n-1)^2]$$

$$S_{nth} = u + \frac{a}{2} [n^2 - (n^2 + 1 - 2n)]$$

$$S_{nth} = u + \frac{a}{2} (2n - 1)$$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

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3

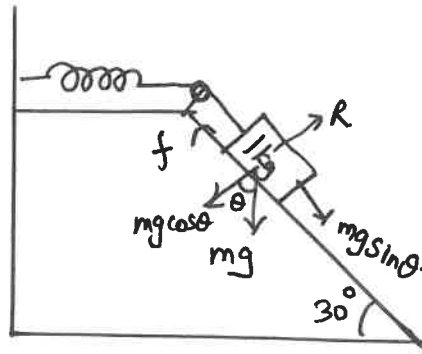
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$$R = mg \cos \theta$$

$$R = \mu R = \mu mg \cos \theta$$

$$\text{Net force} = (mg \sin \theta - \mu mg \cos \theta)$$

$$= mg (\sin \theta - \mu \cos \theta)$$

$$\text{distance moved } x = 10 \text{ cm} = 0.1 \text{ m}$$

$$mg (\sin \theta - \mu \cos \theta) x = \frac{1}{2} k x^2$$

$$1 \times 10 (\sin 30 - \mu \cos 30) \times 0.1 = \frac{1}{2} \times 50 \times (0.1)^2$$

$$5 - 10\mu \frac{\sqrt{3}}{2} = 2.5$$

$$\frac{5}{10\mu \frac{\sqrt{3}}{2}} = 2.5$$

$$\mu = \frac{2.5}{5\sqrt{3}} = \frac{1}{2\sqrt{3}}$$

1

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

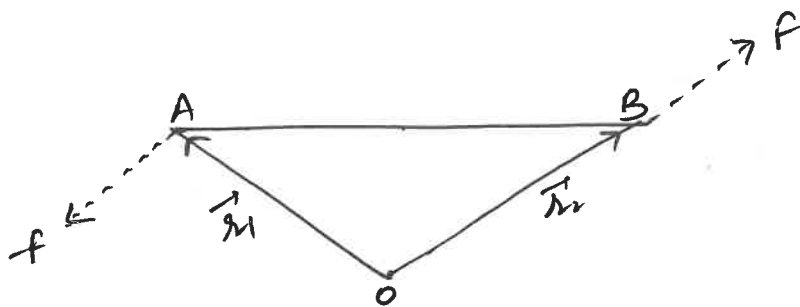
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(26)  
(a)



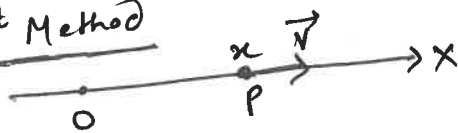
Moment of couple = Sum of the moments of the two forces making the couple.

$$\begin{aligned} &= \vec{r}_1 \times (-\vec{F}) + \vec{r}_2 \times \vec{F} \\ &= \vec{r}_2 \times \vec{F} - \vec{r}_1 \times \vec{F} \\ &= (\vec{r}_2 - \vec{r}_1) \times \vec{F} \end{aligned}$$

But  $\vec{r}_1 + \vec{AB} = \vec{r}_2$   
 $\therefore \vec{AB} = \vec{r}_2 - \vec{r}_1$

The moment of couple, therefore, is  $\vec{AB} \times \vec{F}$ . Clearly this is independent of the origin, the point about which we took the moments of the forces.

1st Method



$$\begin{aligned} \vec{L} &= \vec{r} \times m\vec{v} \\ &= x\hat{i} \times mv\hat{i} \quad (\hat{i} \times \hat{i} = 0) \\ &= 0 \end{aligned}$$

2nd Method

Since  $\vec{r}$  and  $\vec{v}$  are in the same direction

$$\therefore \theta = 0$$

$$\therefore \vec{L} = \vec{r} \times m\vec{v} = 0$$

(27)

(a)

The first law of thermodynamics is the general law of conservation of energy applied to any system in which energy transfer from or to the surroundings (through heat and work)

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is taken in to account. It states that

$$\Delta Q = \Delta U + \Delta W$$

Where  $\Delta Q$  is the heat supplied to the system,  $\Delta W$  is the work done by the system and  $\Delta U$  is the change in internal energy of the system.

b)  $dW = -300J$   
Using 1st law of thermodynamics  $dQ = dU + dW$

$$dQ = -70 \text{ cal} = -70 \times 4.2J = -294J$$

$$\begin{aligned} \therefore dU &= dQ - dW \\ &= -70 \times 4.2 - (-300) \\ &= -294 + 300 \\ &= 6J \end{aligned}$$

$$T = 2\pi \sqrt{\frac{m}{K}}$$

The restoring force = Buoyant force  
= weight of liquid displaced

$$F = -A \rho_l g x$$

$$F = -Kx \Rightarrow K = A \rho_l g$$

$$\text{mass of cork} = m = A h \rho$$

$$\therefore T = 2\pi \sqrt{\frac{A h \rho}{A \rho_l g}}$$

$$T = 2\pi \sqrt{\frac{h \rho}{\rho_l g}}$$

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SECTION-D

- (29) (i) C  
(ii) a  
(iii) d  
or  
(iii) b  
(iv) C

- (30) (i) a  
(ii) a  
(iii) b  
or  
(iii) a  
(iv) b

1

1

1

1

1

1

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4

4

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(10)

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SECTION - E

31(a) Using Law of Conservation of momentum.

$$m_1 u_1 + m_2 u_2 = (m_1 + m_2) v$$

$$m_1 u + 0 = (m_1 + m_2) v$$

$$v = \frac{m_1 u}{m_1 + m_2}$$

$$K_i = \frac{1}{2} m_1 u^2$$

$$K_f = \frac{1}{2} (m_1 + m_2) v^2$$

Loss in K.E

$$\Delta K = K_i - K_f$$

$$= \frac{1}{2} m_1 u^2 - \frac{1}{2} (m_1 + m_2) v^2$$

$$= \frac{1}{2} m_1 u^2 - \frac{1}{2} (m_1 + m_2) \frac{m_1^2 u^2}{(m_1 + m_2)^2}$$

$$= \frac{1}{2} \frac{m_1 m_2 u^2}{(m_1 + m_2)}$$

b) Mass  $m = 500 \text{ g} = 0.5 \text{ Kg}$

$$\vec{v} = 10 \hat{i} + 20 \hat{j}$$

$$\vec{a} = 0 \hat{i} - 9.8 \hat{j}$$

$$\begin{aligned} \vec{F} &= m \vec{a} = -0.5 \times 9.8 \hat{j} \\ &= -4.9 \hat{j} \text{ N} \end{aligned}$$

$$P = \vec{F} \cdot \vec{v}$$

$$= (-4.9 \hat{j}) \cdot (10 \hat{i} + 20 \hat{j})$$

$$P = -98 \text{ W}$$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

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(03)

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(OR)

31 a) Using Law of Conservation of Energy.

$$T.E_{\text{surface}} = T.E_{\text{Height}}$$

$$(K.E + P.E)_{\text{surface}} = (K.E + P.E)_{\text{Height}}$$

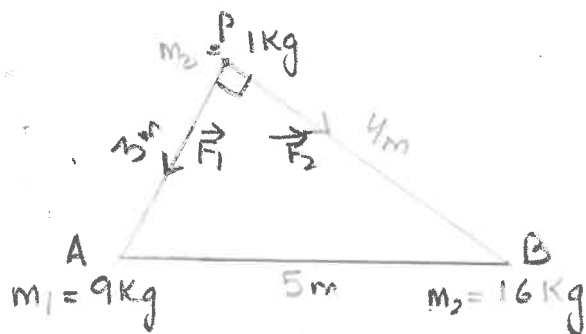
$$\frac{1}{2}mv^2 - \frac{GMm}{R} = 0 - \frac{GMm}{R+h}$$

$$v^2 = 2GM \left[ \frac{1}{R} - \frac{1}{R+h} \right]$$

$$v^2 = 2gR^2 \left[ \frac{h}{R(R+h)} \right] \quad \because GM = gR^2$$

$$h = \frac{v^2 R}{2gR - v^2}$$

b).



$$F_1 = \frac{Gm_1m_2}{(AP)^2}$$

$$F_1 = G_1, \text{ along PA}$$

$$F_2 = \frac{Gm_2m_3}{(BP)^2}$$

$$F_2 = G_2, \text{ along PB}$$

$$\text{Net force } F = \sqrt{F_1^2 + F_2^2}$$

$$F = G\sqrt{2}$$

$$F = 9.43 \times 10^{-11} \text{ N}$$

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(a)  $H = \frac{u^2 \sin^2 \theta}{2g}$

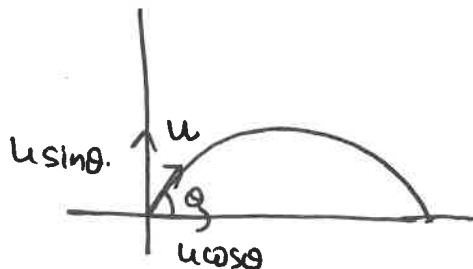
$\theta = 90^\circ \Rightarrow H_{\max} = \frac{u^2}{2g}$

$R = \frac{u^2 \sin 2\theta}{g}$

$R_{\max} = \frac{u^2}{g}$

$\Rightarrow R_{\max} = 2H$

(b)



$u_x = u \cos \theta$  ,  $u_y = u \sin \theta$  ,  $a_x = 0$  ,  $a_y = -g$

$x = u \cos \theta t$

$t = \frac{x}{u \cos \theta}$  ——— ①

$y = u \sin \theta t - \frac{1}{2} g t^2$

from ①

$y = u \sin \theta \frac{x}{u \cos \theta} - \frac{1}{2} g \left( \frac{x}{u \cos \theta} \right)^2$

$y = x \tan \theta - \frac{1}{2} g \frac{x^2}{u^2 \cos^2 \theta}$

$y = x \tan \theta - \frac{1}{2} \frac{g}{u^2} x^2 \sec^2 \theta$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

CLASS - XI -  
SAMPLE QUESTION PAPER (PHYSICS)  
MARKING SCHEME

(13)

VALUE ToT.  
POINTS MARK  
ALLOTE

Q.No.

(c)  $\vec{u} = 30\hat{i} + 40\hat{j}$  m/s

$a_x = 0$  ,  $a_y = -g$  ,  $u_x = 30\text{m/s}$  ,  $u_y = 40\text{m/s}$

$v_y = u_y - g t$

$= 40 - 10 \times 3$

$= 10\text{m/s}$

$v_x = u_x = 30\text{m/s}$

$\tan \theta = \frac{v_y}{v_x} = \frac{10}{30} = \frac{1}{3}$

$\theta = \tan^{-1}\left(\frac{1}{3}\right)$

OR

Diagram (a) on Page 41 NCERT Physics (Part 1)

32 (a)

$|\vec{a}| = \lim_{\Delta t \rightarrow 0} \left| \frac{\Delta \vec{v}}{\Delta t} \right|$

$\left| \frac{\Delta v}{v} \right| = \left| \frac{\Delta x}{l} \right|$

$|\Delta x| = v \Delta t$

$\frac{|\Delta x|}{\Delta t} = v$

$\lim_{\Delta t \rightarrow 0} \frac{|\Delta x|}{\Delta t} = v$

$\Rightarrow a_c = \frac{v^2}{l}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

1+2+3  
= 5

$\frac{1}{2}$

$\frac{1}{2}$

$\therefore$

$\frac{1}{2}$

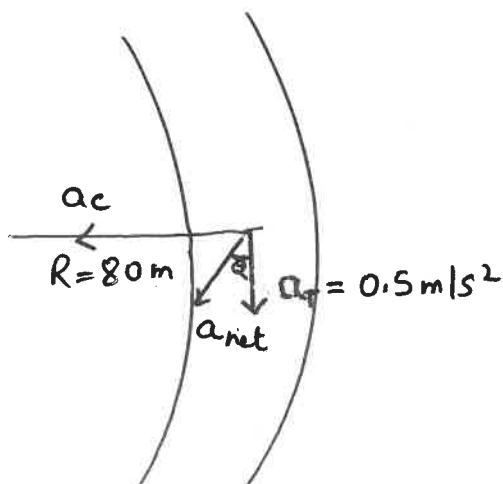
$\frac{1}{2}$

CLASS - XI  
SAMPLE QUESTION PAPER (PHYSICS)  
MARKING SCHEME

(14)

VALUE  
POINTS  
TARI  
ALLOTE

(b)



$$a_{\text{net}} = \sqrt{a_t^2 + a_c^2}$$

$$a_c = \frac{v^2}{R}$$

$$v = 36 \text{ km/h} = 36 \times \frac{5}{18} = 10 \text{ m/s}$$

$$a_c = \frac{100}{80} = 1.25, \quad a_t = 0.5 \text{ m/s}^2$$

$$\begin{aligned} a_{\text{net}} &= \sqrt{(1.25)^2 + (0.5)^2} \\ &= \sqrt{1.8125} \\ &= 1.34 \text{ m/s}^2 \end{aligned}$$

$$\tan \theta = \frac{a_c}{a_t} = \frac{1.25}{0.5}$$

$$\tan \theta = 2.5$$

$$\theta = \tan^{-1}(2.5)$$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

CLASS - XI  
SAMPLE QUESTION PAPER (PHYSICS) (15)  
MARKING SCHEME

VALUE  
POINTS  
MARK  
ALLOTE

Q. No.

(33)

(a)

Refer to Fig. 10.18 on Page no. 218 of ncert-2.

1

(b)

Using wein's displacement law

$$\lambda_m \propto \frac{1}{T} \text{ or } \lambda_m = \frac{b}{T}$$

$$\text{Using } \lambda_m = \frac{c}{\nu_m}$$

$$\therefore \nu_m = \frac{c}{\lambda_m} = \frac{c}{b/T}$$

$$\nu_m = \left(\frac{c}{b}\right) T$$

$\frac{c}{b}$  is constant

$$\therefore \boxed{\nu_m \propto T}$$

$\frac{1}{2}$

$\frac{1}{2}$

Ans  $\rightarrow$  (c)

(c)

Using Stefan's Law  $H = A\sigma T^4$

$$\therefore T' = T + 5\% \text{ of } T$$

$$= T + \frac{5}{100} T$$

$$T' = \frac{21}{20} T$$

$$T' = 1.05 T$$

$$\text{Now } H' = A\sigma (T')^4$$

$$H' = A\sigma (1.05 T)^4$$

$$= A\sigma (1.05)^4 T^4$$

$\frac{1}{2}$

$\frac{1}{2}$

1

CLASS - XI  
SAMPLE QUESTION PAPER (PHYSICS)  
MARKING SCHEME

16

VALUE ToT.  
POINTS MARK  
ALLOTE

Q.No.

$$\frac{H'}{H} = \frac{A \sigma (1.05)^4 T^4}{A \sigma T^4}$$
$$= (1.05)^4$$

$$\therefore \% \text{ increase} = \frac{H' - H}{H} \times 100$$

$$= (1.05^4 - 1) \times 100$$

$$= (1.21550625 - 1) \times 100$$

$$= 21.55$$

$$\approx 22\%$$

1/2

1/2

5



CLASS - XI  
SAMPLE QUESTION PAPER (PHYSICS)  
MARKING SCHEME

(17)

VALUE  
POINTS  
MARK  
ALLOTE

Q.No.

(OR)

(33)

(a)

$$V_{\text{final}} = V_{\text{initial}}$$

$$n \times \frac{4}{3} \pi r^3 = \frac{4}{3} \pi R^3$$

$$r = n^{-1/3} \cdot R$$

$$\text{Change in surface energy} = \text{Change in surface area} \times \text{Tension}$$

$$= [n \cdot 4\pi r^2 - 4\pi R^2] \cdot T$$

$$= T \cdot 4\pi R^2 [1 - n^{1/3}] \cdot J$$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{2}$

(b)

$$\text{Work done} = \text{Increase in surface area} \times \text{Tension}$$

$$= 2 [4\pi (3 \times 10^3)^2 - 4\pi (2 \times 10^3)^2] \times 0.07$$

$$= 8.79 \times 10^{-6} \text{ J}$$

$\frac{1}{2}$

$\frac{1}{2}$

1

(c)

In case (I),  $h_1 > h_2$

On increasing temperature, surface tension decreases

As height of liquid column decreases.

$$h = \frac{2\alpha \cos \theta}{\rho g}$$

$\frac{1}{2}$

$\frac{1}{2}$

05

**CLASS XI  
SAMPLE PAPER  
CHEMISTRY THEORY (043)**

**M M:70**

**Time: 3 hours**

**General Instructions:**

**Read the following instructions carefully.**

- (a) **There are 33 questions in this question paper with internal choice.**
  - (b) **SECTION A consists of 16 multiple -choice questions carrying 1 mark each.**
  - (c) **SECTION B consists of 5 short answer questions carrying 2 marks each.**
  - (d) **SECTION C consists of 7 short answer questions carrying 3 marks each.**
  - (e) **SECTION D consists of 2 case - based questions carrying 4 marks each.**
  - (f) **SECTION E consists of 3 long answer questions carrying 5 marks each.**
  - (g) **All questions are compulsory.**
  - (h) **Use of log tables and calculators is not allowed.**
- 

**SECTION A**

***The following questions are multiple -choice questions with one correct answer.  
Each question carries 1 mark. There is no internal choice in this section.***

1. One mole of  $P_4$  molecules contain:
  - A. 4 molecules of P
  - B. 4 atoms of P
  - C.  $\frac{1}{4} \times 6.022 \times 10^{23}$  phosphorus atoms
  - D.  $24.088 \times 10^{23}$  phosphorus atoms
2. The wavelength of light emitted when an electron in a hydrogen atom falls from  $n = 3$  to  $n = 2$  is in \_\_\_\_\_ region:
  - A. Ultraviolet
  - B. Visible
  - C. Infrared
  - D. X-ray.

3. Identify the second organic compound synthesized from an inorganic compound after urea

- A. Ethanol
- B. Methane
- C. Methanol
- D. Acetic acid

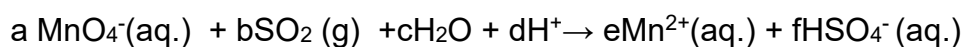
4. Recognize the intermediate formed in the mechanism involving Markovnikov's rule

- A. free radical
- B. carbocation
- C. carbanion
- D. carbene

5. When carbon forms CO and CO<sub>2</sub> the masses of oxygen combining with a fixed carbon mass are in a simple whole number ratio. The observation is in accordance with:

- A. Law of conservation of mass
- B. Law of definite proportion
- C. Law of multiple proportion
- D. Avogadro's Law

6. Analyse the following redox reaction to identify the coefficients (a,b,c,d,e,f) to balance it in acidic medium :



- A. 2,5,2,1,2,5
- B. 1,3,5,3,5,2
- C. 2,2,5,1,2,3
- D. 1,5,2,1,2,3

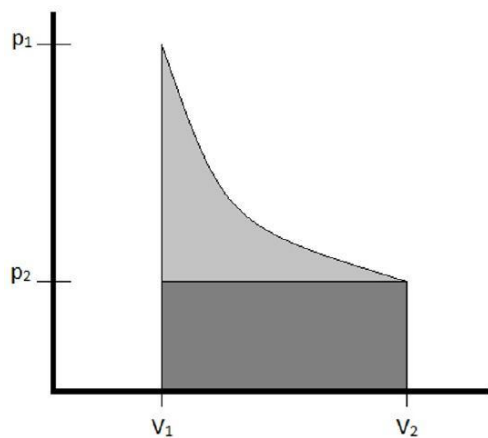
7. Identify the compound in which nitrogen cannot be estimated by Kjeldahl's method

- A. Azo compounds
- B. Aniline
- C. Hydrazine
- D. Benzamide

8. Choose the compound that cannot be prepared by Wurtz reaction:

- A.Ethane
- B.Butane
- C.Methane
- D.Hexane

9. Area under the P-V isotherm represents the total work done. Which of the following is true for the reversible ( $W_{\text{rev}}$ ) and irreversible ( $W_{\text{irrev}}$ ) work done when an ideal gas is expanded reversibly or irreversibly from the volume  $V_1$  to  $V_2$  ,.



- A.  $W_{\text{rev}} = W_{\text{irrev}}$
- B.  $W_{\text{rev}} < W_{\text{irrev}}$
- C.  $W_{\text{rev}} > W_{\text{irrev}}$
- D.  $W_{\text{rev}} = W_{\text{irrev}} + P_{\text{ext}} \Delta V$

10. A 0.01 M solution of weak acid HA has an acid dissociation constant  $K_a = 2 \times 10^{-6}$ . What is the approximate percentage ionization of HA in this solution?

- A. 1.4 %
- B. 10%
- C. 14%
- D. 5%

11.  $\text{Fe}_2\text{O}_3$  may be represented as  $\text{Fe}_2(\text{III})\text{O}_3$ . This notation is termed as :

- A. Redox notation
- B. Oxidant notation
- C. Stock notation
- D. Reductant notation

12. A gas decolourises Bayer's reagent and reacts with sodium to give hydrogen gas . Use the given information to identify the gas .

- A. Ethane
- B. Ethyne
- C. Ethene
- D. Benzene

**Question number 13 to 16 are assertion reason types.**

**Given below are two statements labelled as Assertion (A) and Reason (R) select the most appropriate answer from the options given below:**

- (A) Both A and R are true and R is the correct explanation of A**
- (B) Both A and R are true but R is not the correct explanation of A.**
- (C) A is true but R is false.**
- (D) A is false but R is true.**

13. **Assertion (A):** Heisenberg's Uncertainty Principle is significant only for subatomic particles like electrons.

**Reason (R):** For macroscopic objects, the product of uncertainty in position and momentum is negligibly small.

14. **Assertion (A):** The first ionization enthalpy of nitrogen is higher than that of oxygen.

**Reason(R):** Nitrogen has a half filled p-subshell configuration which is extra stable.

15. **Assertion (A) :** pH of water increases with increase in temperature.

**Reason(R) :**  $K_w$  of water increases with increase in temperature.

16. **Assertion(A):** In heterolytic fission, one atom gets both the electrons of the bond.

**Reason. (R ):** Heterolytic fission produces free radicals.

## **SECTION B**

***This section contains 5 questions with internal choice in one question.***

***The following questions are of a very short answer type and carry 2 marks each.***

17. 10 g of Urea was dissolved in water to obtain 210 g of an aqueous solution. Calculate the molality of the solution? (Mol. Wt. of urea = 60)
18. Why is a molecule of ammonia (NH<sub>3</sub>) pyramidal in shape instead of trigonal?
19. Define a redox couple. Write the redox couple involved in Daniel cell .

OR

Name a reagent that can act as self indicator in redox titrations to produce a visible colour change at the end point. How are the equivalence point and end point different for a titration.

20. (a) The heat evolved in combustion of methane is given by the equation  
$$\text{CH}_4(\text{g}) + 2\text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{l}) \quad \Delta_r H = -890.3 \text{ kJ mol}^{-1} \quad (1)$$
  
Calculate the amount of methane in grams that would be required to produce 445.15 kJ of heat of combustion.
- (b) Calculate the enthalpy of formation of HCl  
$$\text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) \rightarrow 2\text{HCl}(\text{g}) \quad \Delta_r H = -184.0 \text{ kJ mol}^{-1} \quad (1)$$
21. Consider the following reactions with respect to the conditions given against them and predict the direction in which the equilibrium will shift
- (a)  $\text{CaCO}_3(\text{s}) + \text{Heat} \rightleftharpoons \text{CaO}(\text{s}) + \text{CO}_2(\text{g})$  ( Temperature is increased)
- (b)  $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{NO}(\text{g})$   $\Delta_r H = +180.7 \text{ kJ}$  ( Pressure is increased and temperature is decreased)

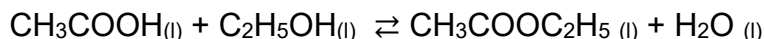
## **SECTION C**

***This section contains 7 questions with internal choice in one question. The following questions are short answer types and carry 3 marks each.***

22. Calculate the de-Broglie wavelength of a proton moving with a kinetic energy of 500 eV.  
(Mass of proton =  $1.67 \times 10^{-27} \text{ kg}$ ,  $1 \text{ eV} = 1.6 \times 10^{-19} \text{ J}$ ,  $h = 6.626 \times 10^{-34} \text{ Js}$ )
23. 150 ml. of 0.100 M Pb(NO<sub>3</sub>)<sub>2</sub> on reaction with 200 ml of 0.150 M NaCl forms insoluble lead (II) chloride. The reaction involved is
- $$\text{Pb}(\text{NO}_3)_2(\text{aq.}) + 2 \text{NaCl}(\text{aq.}) \rightarrow \text{PbCl}_2(\text{s}) + 2 \text{NaNO}_3(\text{aq.})$$
- (i) Which reactant is the limiting reagent in this reaction ?

(ii) Calculate the mass (in grams) of  $\text{PbCl}_2$  precipitate formed. (atomic mass of Pb = 207 g/mol)

24. The following reaction was carried out at 310K by taking 1 mol of each of the reactants.



Reaction reached equilibrium when 3/4th of reactants were consumed. Calculate Gibbs energy change for the reaction. (Given  $\log_{10} 9 = 0.954$ ,  $R = 8.314 \text{ J K}^{-1}\text{mol}^{-1}$ )

25. A saturated solution of a sparingly soluble salt  $\text{A}_x\text{B}_y$  has a solubility product

$$K_{sp} = 4.0 \times 10^{-12} \text{ at } 25^\circ\text{C}.$$

- (a) Write the equation for the dissolution of salt and give the expression for  $K_{sp}$  in terms of molar solubility S.
- (b) Derive an expression for the molar solubility S in pure water in terms of  $K_{sp}$ , x and y.
- (c) Explain how you would predict whether a precipitate will form if another soluble salt containing either A or B ions is added to the solution. Name the principle involved.

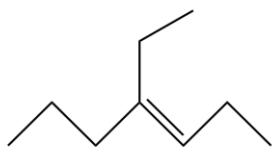
OR

Explain how a mixture of  $\text{NaHCO}_3$  and  $\text{Na}_2\text{CO}_3$  resists pH changes when:

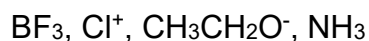
- (a) A small amount of HCl is added.
  - (b) A small amount of NaOH is added.
- Give its one application in the biological system.

26.(a) Formulate the metamer of N-Ethyl ethanamine ( $\text{C}_2\text{H}_5\text{NHC}_2\text{H}_5$ ).

(b) Write the IUPAC name of the following organic compound



(c) Identify the electrophiles among the following molecules/ions:



27.

- (a) State the conditions under which you expect the following reaction to occur spontaneously.



- (b) Classify the following variables as Intensive and Extensive properties  
Pressure, Temperature, Entropy, Volume

28. Describe stepwise mechanism of the reaction between benzene and isopropyl chloride in the presence of  $\text{AlCl}_3$ .

### **SECTION D**

***The following questions are case -based questions. Each question has an internal choice and carries 4 (2+1+1)) marks each. Read the passage carefully and answer the questions that follow.***

29. Quantum numbers are a set of four numbers that describe the position and properties of an electron in an atom. They give information about the energy level, shape, orientation, and spin of the orbital in which the electron is present.

An electron is represented by the following set of quantum numbers:

$$n = 3, l = 2, m = 0, s = +\frac{1}{2}$$

- (a) Can another electron have the same set of quantum numbers? Justify
- (b) Identify the subshell in which the electron is present and the orbital it occupies.
- (c) How many orbitals are possible in this subshell?

OR

- (c) Which rule helps to place one electron in each orbital before pairing begins?

30. An organic compound (X) decolourises bromine water and undergoes ozonolysis to produce 2 moles of compound (Y) with molecular formula  $C_2H_4O$ .

Compound (X) exists in 2 geometrical isomeric forms which have comparable boiling points but melting point of one of the isomers is higher than the other.

- (a) Write IUPAC name and structural formula for compound (X) .
- (b) Name the isomer with higher melting point .
- (c) Draw structure of an isomer of (X) that does not show geometrical isomerism .

OR

- (c). Name the product formed when compound (X) reacts with  $KMnO_4$  in acidic medium.

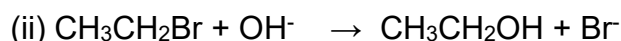
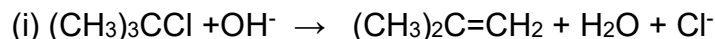


### SECTION E

***The following questions are long answer type and carry 5 marks each. All questions have an internal choice.***

31. (A) (a) Draw the resonating structures of benzaldehyde ( $\text{C}_6\text{H}_5\text{CHO}$ ).

(b) Classify the following reactions according to the reaction type:



(c) State the principle of distillation. Give an example of mixture that can be purified using this method.

OR

31. (B) (a) In the qualitative analysis of an organic compound, name the test used to detect the presence of nitrogen, sulphur and halogen.

(b) Describe how nitrogen is detected using this test.

(c) Write the chemical reactions involved in the Sodium nitroprusside test for Sulphur. Mention the colour of the final product obtained in the test.

32.A. (a). Explain how the molecular orbital theory accounts for the stability of  $\text{Li}_2$  molecule and instability of  $\text{Be}_2$  molecule.

(b) Intramolecular hydrogen bonding reduces the boiling point of a substance." Justify with an example.

OR

B (a) Explain how MOT can be used to predict which among  $\text{F}_2^-$ ,  $\text{F}_2$  or  $\text{F}_2^+$  has a stronger bond.

(b) A compound X has  $-\text{OH}$  and  $-\text{NO}_2$  groups on adjacent carbon atoms. Another compound Y has  $-\text{OH}$  and  $-\text{NO}_2$  on opposite sides of the benzene ring. Which one will show higher solubility in water and why?

33. (A) Predict the best choice in the following :

(i) Smallest ionic size :  $\text{Mg}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Ba}^{2+}$

(ii) Highest ionization enthalpy : Li, Mg, Be, B

(iii) Lowest electron gain enthalpy : O, S, F, Cl

(B) An element X has atomic number 117

(i) Name the block of periodic table to which 'X' belongs.

(ii) Write the IUPAC name of the element 'X'.

OR

(A) An element belongs to group 1 and period 2. Predict its:

(i) Nature of oxide (acidic or basic)

(ii) Ionization enthalpy compared to other elements in the same group

(B) First member of each group of representative elements (i.e., s-and p-block elements) shows anomalous behaviour when compared with the other elements of the group. Justify the statement by giving two examples with reasons.

Marking Scheme  
Sample Question Paper  
Chemistry XI  
2025-26

Q. No	Sub part	Value Points	Step wise marks	Total Marks
1		D	1	1
2		B	1	1
3		D	1	1
4		B	1	1
5		C	1	1
6		A	1	1
7		A	1	1
8		C	1	1
9		C	1	1
10		A	1	1

11		C	1	1
12		B	1	1
13		C	1	1
14		A	1	1
15		D	1	1
16		C	1	1
17		Molecular mass of urea = 60g No. of moles of urea = 10/60 Mass of solvent = 210 - 10 = 200 g Molality of the solution = $\frac{10 \times 1000}{60 \times 200}$ = 0.833 mol/ kg	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
18		Due to the presence of one lone pair of electrons on the nitrogen atom lp-bp repulsion is more than bp-bp repulsion	1 1	2

19		<p>A redox couple is defined as having together the oxidised and reduced forms of a substance taking part in an oxidation or reduced half reaction.</p> <p>The redox couples involved in Daniel cell are <math>\text{Zn}^{2+} / \text{Zn}</math> and <math>\text{Cu}^{2+} / \text{Cu}</math>.</p> <p style="text-align: center;">OR</p> <p>Potassium permanganate can act as a self indicator in redox titrations.</p> <p>The equivalence point is the theoretical point in a titration where the moles of acid and base are equal, while the endpoint is the point where the indicator changes color, signaling the completion of the titration/</p> <p>Equivalent point is the point where the reductant and the oxidant are equal in terms of their mole stoichiometry, while the end point is a point where the indicator ensures a minimal overshoot in colour beyond the equivalence point.</p>	<p>1</p> <p><math>\frac{1}{2} + \frac{1}{2}</math></p> <p>1</p>	2
20.	<p>(a)</p> <p>(b)</p>	<p>1 mole of <math>\text{CH}_4</math> releases 890.3 kJ of heat upon complete combustion.</p> <p>890.3 kJ of heat is produced by complete combustion of 1 mol of <math>\text{CH}_4</math> Therefore, 445.1 kJ of heat is produced by x moles</p> <p>Where , <math>x = \frac{443.15}{890.3} = 0.5 \text{ mol}</math></p> <p>Mass of 1 mole of <math>\text{CH}_4 = 16\text{g}</math> Therefore, mass of 0.5 mol = <math>16 \times 0.5 = 8 \text{ g}</math></p> <p>To calculate enthalpy of formation of HCl , following reaction to be considered</p> $\frac{1}{2} \text{H}_2 (\text{g}) + \frac{1}{2} \text{Cl}_{2(\text{g})} \rightarrow \text{HCl} (\text{g})$ $\Delta_f H^0 = -\frac{184}{2} = -92 \text{ kJ mol}^{-1}$	<p>1</p> <p>1</p>	2

21	(A)	Equilibrium shifts towards forward direction	1	2
	(B)	When Pressure is increased , there is no shift in equilibrium When Temperature decreases , equilibrium shifts in backward direction.	$\frac{1}{2}$ $\frac{1}{2}$	
22.		$KE = 500 \text{ eV} \times (1.6 \times 10^{-19} \text{ J/eV}) = 8.0 \times 10^{-17} \text{ J}$ $KE = \frac{1}{2} mv^2$ $p = \sqrt{(2 \times 1.67 \times 10^{-27} \text{ kg} \times 8.0 \times 10^{-17} \text{ J})}$ $= 5.17 \times 10^{-22} \text{ kg m/s}$  $\lambda = h / p$ $= 1.28 \times 10^{-12} \text{ m}$	$\frac{1}{2}$  $\frac{1}{2}$  1  1	3
23.		Moles of $Pb(NO_3)_2 = M \times V$ $= .100 \times 150$ $= 0.015 \text{ mole}$ Moles of $NaCl = .150 \times 200$ $= .030 \text{ mole}$ 1 mole of $Pb(NO_3)_2$ requires two moles of $NaCl$ 0.015 moles of $Pb(NO_3)_2$ requires 0.030 moles of $NaCl$ Both the reactants are completely consumed $1 \text{ mol of } Pb(NO_3)_2 \rightarrow 1 \text{ mol of } PbCl_2$ So, 0.015 mol of $Pb(NO_3)_2$ forms 0.015 mol of $PbCl_2$ . Molar mass of $PbCl_2 = 278.1 \text{ g/mol}$ Mass of $PbCl_2 = 0.015 \text{ mol} \times 278.1 \text{ g/mol} = 4.17 \text{ g}$	$\frac{1}{2}$  $\frac{1}{2}$  $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	3

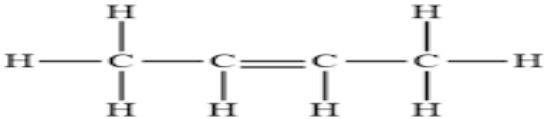
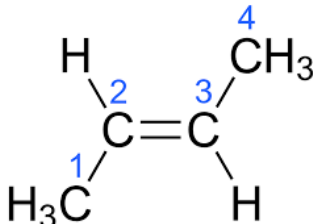
24.		<p><math>\text{CH}_3\text{COOH}_{(l)} + \text{C}_2\text{H}_5\text{OH}_{(l)} \rightleftharpoons \text{CH}_3\text{COOC}_2\text{H}_5_{(l)} + \text{H}_2\text{O}_{(l)}</math></p> <p>Initial      1 mol              1mol              0              0 Conc.</p> <p>Eqbm        <math>\frac{1}{4}</math>              <math>\frac{1}{4}</math>              <math>\frac{3}{4}</math>              <math>\frac{3}{4}</math> Conc.</p> <p><math>K_{\text{eq}} = [\text{CH}_3\text{COOC}_2\text{H}_5][\text{H}_2\text{O}] / [\text{CH}_3\text{COOH}] [\text{C}_2\text{H}_5\text{OH}]</math></p> <p><math>K_{\text{eq}} = (\frac{3}{4})(\frac{3}{4}) / (\frac{1}{4})(\frac{1}{4}) = 9</math></p> <p><math>\Delta G^0 = - 2.303 RT \log K_{\text{eq}}</math></p> <p><math>= - 2.303 \times 8.314 \times 310 \log 9</math>  <math>= - 5662.5 \text{ J mol}^{-1}</math>  <math>= 5.66 \text{ kJ mol}^{-1}</math></p>	<p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p>1</p>	3
25.	<p>(a)</p> <p>(b)</p> <p>(c)</p>	<p><b>Dissolution &amp; <math>K_{\text{sp}}</math> expression</b>  <math>\text{A}_x\text{B}_y (\text{s}) \rightleftharpoons x\text{A}^{y+} + y\text{B}^{x-} ; K_{\text{sp}} = [\text{A}^{y+}]^x [\text{B}^{x-}]^y</math></p> <p><b>Molar solubility expression</b>          If solubility = S, then <math>[\text{A}^{y+}] = xS</math> and <math>[\text{B}^{x-}] = yS</math></p> <p>Thus,  <math>K_{\text{sp}} = (xS)^x (yS)^y = x^x y^y S^{x+y}</math>          Therefore,  <math>S = \left( \frac{K_{\text{sp}}}{x^x y^y} \right)^{1/x+y}</math></p> <p><b>Predicting precipitation</b>          Compare the ionic product Q to <math>K_{\text{sp}}</math></p> <p>If <math>Q &gt; K_{\text{sp}}</math>      precipitation occurs          If <math>Q &lt; \text{or} = K_{\text{sp}}</math>      no precipitation occurs          The principle is known as the common ion effect</p> <p>OR</p> <p>Buffer Action of <math>\text{NaHCO}_3 / \text{Na}_2\text{CO}_3</math> System</p> <p>This is a basic buffer system, consisting of:</p>	<p>1</p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p>	3

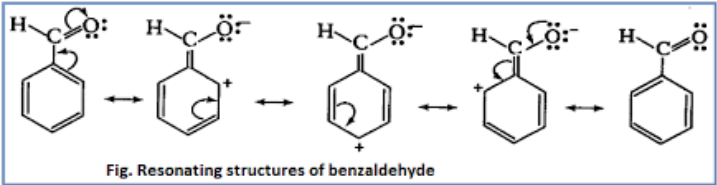
	<ul style="list-style-type: none"><li>• <math>\text{NaHCO}_3</math>: a weak acid (bicarbonate ion, <math>\text{HCO}_3^-</math>)</li><li>• <math>\text{Na}_2\text{CO}_3</math>: the salt of its conjugate base (carbonate ion, <math>\text{CO}_3^{2-}</math>)</li></ul> <p>The buffer equilibrium:</p> $\text{HCO}_3^- \rightleftharpoons \text{H}^+ + \text{CO}_3^{2-}$ <p>(i) When a small amount of HCl (strong acid) is added:</p> <ul style="list-style-type: none"><li>• HCl provides <math>\text{H}^+</math> ions</li><li>• The <math>\text{CO}_3^{2-}</math> ion reacts with <math>\text{H}^+</math> to form more <math>\text{HCO}_3^-</math>:</li></ul> $\text{CO}_3^{2-} + \text{H}^+ \rightarrow \text{HCO}_3^-$ <p>This removes excess <math>\text{H}^+</math>, minimizing pH decrease.</p>	$\frac{1}{2}$ $\frac{1}{2}$	
	<p>(ii) When a small amount of NaOH (strong base) is added:</p> <ul style="list-style-type: none"><li>• NaOH provides <math>\text{OH}^-</math> ions</li><li>• The <math>\text{HCO}_3^-</math> ion reacts with <math>\text{OH}^-</math> to form <math>\text{CO}_3^{2-}</math> and water:</li></ul> $\text{HCO}_3^- + \text{OH}^- \rightarrow \text{CO}_3^{2-} + \text{H}_2\text{O}$ $\text{HCO}_3^- + \text{OH}^- \rightarrow \text{CO}_3^{2-} + \text{H}_2\text{O}$ <p>This neutralizes the <math>\text{OH}^-</math>, minimizing pH increase.</p> <p>Blood plasma uses a similar bicarbonate buffer system (<math>\text{H}_2\text{CO}_3/\text{HCO}_3^-</math>) to maintain blood pH around 7.4.</p> <ul style="list-style-type: none"><li>• Helps neutralize acids produced by metabolism (like lactic acid)</li><li>• Prevents drastic pH shifts that could disrupt cellular</li></ul>	$\frac{1}{2}$ $\frac{1}{2}$  1	



		function		
26	(a)	N-Methyl propanamine( $\text{CH}_3\text{NHC}_3\text{H}_7$ ) (any other appropriate metamer)	1	3
	(b)	4-Ethylhept-3-ene	1	
	(c)	Electrophiles are $\text{BF}_3$ , $\text{Cl}^+$	$\frac{1}{2} + \frac{1}{2}$	



29.	a)	No Two electrons in the same atom cannot have the same set of all four quantum numbers according to Pauli's rule.	1 1	4
	b)	3d subshell 3d <sup>z<sup>2</sup></sup> .	1/2 1/2	
	c)	5 orbitals	1	
	c)	Hund's rule	1	
30.	a)	But-2-ene <div></div>	1  1	4
	b)	Trans- But-2-ene <div></div>	1	
	c)	OR		

		<p>2-Methylpropene, <math>\begin{array}{c} \text{CH}_3 \\   \\ \text{CH}_3\text{C}=\text{CH}_2 \end{array}</math></p> <p>OR</p> <p>Ethanoic acid / Acetic acid</p>	1	
			1	
31.	(A)	 <p>(a) Fig. Resonating structures of benzaldehyde</p> <p>(b) (i) Elimination Reaction (ii) Substitution reaction</p> <p>(c) Principle : Distillation is based on the difference in boiling points of components in a liquid mixture. The component with the lower boiling point vaporises first and is condensed and collected.</p> <p>Example: acetone and water. (any other suitable example)</p>	1 1 1 1	1X5 =5
	(B)	<p>OR</p> <p>(a) Lassaigne's Test</p> <p>(b) The organic compound is fused with sodium metal, converting covalently bonded nitrogen into ionic form.</p> <p>This forms sodium cyanide(NaCN)</p> <p>The fused mass is then treated with ferrous sulphate (<math>\text{FeSO}_4</math>). This results in formation of sodium hexacyanoferrate(II)</p> <p>Upon acidification with dilute sulphuric acid, a Prussian blue colour confirms the presence of nitrogen.</p> <p><b>Either explain in words as above or give the following reactions</b></p>	1 $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	

		$\text{Na} + \text{C} + \text{N} \rightarrow \text{NaCN}$ $\text{Fe}^{2+} + 6\text{CN}^- \rightarrow \text{Fe}[\text{CN}]_6^{4-}$ $4\text{Fe}^{3+} + 3\text{Fe}[(\text{CN})_6]^{4-} + x\text{H}_2\text{O} \rightarrow \text{Fe}_4[\text{Fe}(\text{CN})_6]_3 \cdot x\text{H}_2\text{O}$ <p style="text-align: center;">(Prussian blue)</p> <p>(c) <math>\text{Na} + 2\text{S} \rightarrow \text{Na}_2\text{S}</math></p> $\text{Na}_2\text{S} + \text{Na}_2[\text{Fe}(\text{CN})_5\text{NO}] \rightarrow \text{Na}_4[\text{Fe}(\text{CN})_5\text{NOS}]$ <p style="text-align: center;">Violet Colour</p>	$\frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2}$ $1 + \frac{1}{2}$	
32.	A.a)	$\text{Be}_2 = \sigma 1s^2 < \sigma^* 1s^2 < \sigma 2s^2 < \sigma^* 2s^2$ <p>Bond Order= <math>\frac{1}{2} (n_b - n_a) = \frac{1}{2} (4 - 4) = 0</math></p> $\text{Li}_2 = \sigma 1s^2 < \sigma^* 1s^2 < \sigma 2s^2$ <p>Bond Order= <math>\frac{1}{2} (n_b - n_a) = \frac{1}{2} (4 - 2) = 1</math></p> <p>Bond order = 0 <math>\rightarrow</math> <math>\text{Be}_2</math> is unstable</p> <p>No net bonding <math>\rightarrow</math> molecule does not exist under normal conditions</p>	1  <	

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33.	(A)	(i) $\text{Mg}^{2+}$	1	5
		(ii) Be	1	
		(iii) O	1	
	(B)	(i) p-block	1	
		(ii) Ununseptium (Uus)	1	
	OR			
	(A)	(i) It forms a basic oxide (as it's a metal)	1	
		(ii) It has higher ionization enthalpy than other alkali metals below it.	1	
	(B)	The first member of each group of the representative elements shows anomalous behaviour from rest of the members of the same group because of the following reasons:		
		(a) Small size	$\frac{1}{2}$	
		(b) High ionization enthalpy	$\frac{1}{2}$	
		(c) High electronegativity		
		(d) Absence of d-orbitals		
		(Any two reasons)		
		1. Example : maximum covalency of boron is 4 but aluminium which belongs to the same group has covalency more than 4 as Al has vacant d-orbital in its outermost shell.	1	
		2. Example : first member of p-block elements displays greater ability to form $p\pi - p\pi$ multiple bonds with itself.	1	
		(any other suitable example)		





# SAMPLE QUESTION PAPER

## CLASS XI (2025-26)

### MATHEMATICS

Time Allowed: 3 hours

Maximum marks: 80

#### **General Instructions:**

- The Question paper contains - five sections A, B, C, D and E. Each section is compulsory. However, there are internal choices in some questions.
- Section A has 18 MCQ's and 2 Assertion-Reason based questions of 1 mark each.
- Section B has 5 Very Short Answer (VSA) type questions of 2 marks each.
- Section C has 6 Short (SA) type questions of 3 marks each.
- Section D has 4 Long Answer (LA) type questions of 5 marks each.
- Section E has 3 Source Based/Case Based questions of 4 marks each with sub parts.

#### **SECTION- A** **(Multiple Choice Questions)** Each question carries 1 mark

- Q1 The number of non-empty subsets of the set  $\{1,2,3\}$  is  
(A)8 (B)9 (C)6 (D)7
- Q2 The value of  $\frac{\cos 15^\circ + \sin 15^\circ}{\cos 15^\circ - \sin 15^\circ}$  is  
(A)  $\sqrt{3}$  (B)  $\frac{1}{\sqrt{3}}$  (C)  $\frac{1}{2}$  (D) 2
- Q3 If  $A = \{4,5,6\}$  and  $B = \{6,7,8\}$ , then which of these is not an element of  $A \times B$  ?  
(A)(4,6) (B) (6,6) (C) (4,4) (D)(6,7)
- Q4 Multiplicative Inverse of  $\sqrt{-16}$  is  
(A) $-i$  (B) $i$  (C) $\frac{i}{4}$  (D) $\frac{-i}{4}$
- Q5 If  ${}^nC_3 = {}^nC_7$ , then  ${}^nP_2 =$   
(A)45 (B)72 (C) 80 (D) 90
- Q6 If the sum to infinity of the geometric progression  $1, \frac{1}{p}, \frac{1}{p^2}, \dots$  is  $\frac{25}{4}$ , then value of  $p$  is  
(A) $\frac{25}{21}$  (B) $\frac{21}{25}$  (C) $\frac{4}{25}$  (D) $\frac{25}{4}$
- Q7 If  $A = (-1,3)$  and  $B = (3,5)$ , then  $A \cap B$  is  
(A)  $(-1,5)$  (B)  $(3,5)$  (C)  $\{3\}$  (D)  $\emptyset$
- Q8 The number of terms in the expansion of  $(x+1)^n(x-1)^n$  is  
(A) $n^2$  (B) $2n+2$  (C) $2n$  (D) $n+1$
- Q9 The number of words which can be formed from the letters of the word **MAXIMUM**, such that no two consonants occur together are  
(A) 120 (B) 18 (C) 24 (D) 144
- Q10 The inclination of a line  $x + y - \sqrt{3} = 0$  with the positive direction of y- axis is :  
(A) $135^\circ$  (B)  $45^\circ$  (C)  $60^\circ$  (D)  $120^\circ$

- Q11 The length of a pendulum is 75 cm and its tip describes an arc of length 15 cm. The angle (in radian) through which the pendulum swings is  
 (A)  $\frac{2}{15}$  (B)  $\frac{1}{5}$  (C)  $\frac{7}{25}$  (D) 5
- Q12 Seven persons are to be seated in a row. The probability that two particular persons sit next to each other is:  
 A)  $\frac{1}{3}$  (B)  $\frac{1}{6}$  (C)  $\frac{2}{7}$  (D)  $\frac{1}{2}$
- Q13 If  $\frac{x-3}{x-5} > 0$ , then  $x$  belongs to  
 (A)  $(-\infty, 3) \cup (5, \infty)$  (B)  $(-\infty, 3] \cup [5, \infty)$   
 (C)  $(-\infty, -3) \cup (-5, \infty)$  (D)  $(3, 5)$
- Q14 If  $x$  and  $y$  be two positive real numbers, then  $\left(x + \frac{1}{x}\right)\left(y + \frac{1}{y}\right)$  is greater than or equal to  
 A) 2 (B) 3 (C) 4 (D) 5
- Q15 The image of the point (1, -2, 3) in the XZ plane is  
 (A) (1, 2, 3) (B) (-1, -2, 3)  
 (C) (-1, 2, 3) (D) (1, -2, -3)
- Q16 Which of the following is a function from  $\{1, 2, 3, 4\}$  to  $\{a, b, c, d\}$ ?  
 (A)  $\{(1, a), (3, b), (4, c)\}$   
 (B)  $\{(1, d), (2, c), (3, b), (4, b)\}$   
 (C)  $\{(1, a), (2, b), (2, c), (4, d)\}$   
 (D)  $\{(1, a), (2, b), (2, c), (4, e)\}$
- Q17 The equation  $2x^2 + 2y^2 - x = 0$  represents a circle with:  
 (A) Centre  $(-\frac{1}{4}, 0)$ , Radius  $= \frac{1}{4}$   
 (B) Centre  $(\frac{1}{4}, 0)$ , Radius  $= \frac{1}{4}$   
 (C) Centre  $(0, -\frac{1}{4})$ , Radius  $= \frac{1}{4}$   
 (D) Centre  $(0, \frac{1}{4})$ , Radius  $= \frac{1}{4}$
- Q18 The mean of 100 observations is 50 and their standard deviation is 5. The sum of the squares of all the observations is:  
 (A) 250500 (B) 250000  
 (C) 252500 (D) 255000

#### Assertion-Reason Based Questions

In Q 19 and Q 20, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).  
 (B) Both (A) and (R) are true but (R) is not the correct explanation of (A).  
 (C) (A) is true but (R) is false.  
 (D) (A) is false but (R) is true.

Q19 **Assertion (A):** If  $z_1 = 6 + 8i$  and  $z_2 = -3 - 4i$  are two complex numbers, then  $|z_1 + z_2| = 5$ .

**Reason (R):** If  $z_1$  and  $z_2$  are any two complex numbers, then  $|z_1 + z_2| = |z_1| + |z_2|$ .

Q20 **Assertion (A):**  $\lim_{x \rightarrow 0} \frac{\sin 2x}{2x}$  is equal to 1.

**Reason (R):**  $\lim_{x \rightarrow 0} \frac{\sin x}{x}$  is equal to 1.

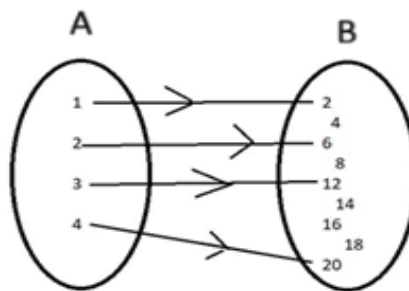
## SECTION - B

This section comprises of Very Short Answer (VSA) type questions of 2 marks each.

Q21 Draw the graph of  $f(x) = |x - 2|$ .

OR

From the given arrow diagram, write the relation in set-builder form.  
Also find the range of the relation.



Q22 Solve for  $x : |3 - x| \leq 4$

Q23 If  $f(x) = \frac{x^2}{x \cos x - \sin x}$ , then find  $f'(x)$ .

Q24 Find the coordinates of point(s) on y-axis which are at a distance of  $5\sqrt{2}$  units from the point  $P(3, -2, 5)$ .

Q25 If A and B are mutually exclusive events such that  $P(A) = 0.37$  and  $P(B) = 0.45$  then find  $P(A^c \cap B^c)$ .

OR

Two students Riya and Diya appeared in a test. The probability that Riya will qualify the test is 0.17 and that Diya will qualify the test is 0.12. The probability that both will qualify the test is 0.09. Find the probability that at least one of them won't qualify the test.

## SECTION - C

This section comprises of Short Answer (SA) type questions of 3 marks each.

Q26 Find the domain and range of the function  $f(x) = \sqrt{x^2 - 1}$

OR

Let  $T$  be a relation from  $R$  to  $R$  defined by  $T = \{(a, b) : a, b \in R \text{ such that } a \leq b^3\}$

Are the following statements true? Justify your answer in each case.

(i)  $(a, b) \in T$  implies  $(b, a) \in T$

(ii)  $(a, b) \in T, (b, c) \in T$  implies  $(a, c) \in T$

Q27 (a) Find the value of  $\tan \frac{\pi}{8}$ .

OR

(b) Prove that:

$$\sin 3x + \sin 2x - \sin x = 4 \sin x \cos \frac{x}{2} \cos \frac{3x}{2}$$

Q28 On a football field, a player kicks the ball. The ball follows a parabolic path, eventually scoring a goal. The highest point of the ball's trajectory is taken as the origin  $(0, 0)$  and the final position of the ball as  $(8, -4)$ .

(i) Draw the parabolic path and find its equation.

(ii) Determine the coordinates of the focus of the parabola.

Q29 If the ratios of 2<sup>nd</sup> term to 3<sup>rd</sup> term in the expansion of  $(a + b)^n$  and 3<sup>rd</sup> term to 4<sup>th</sup> term in the expansion of  $(a + b)^{n+3}$  are equal, then find the value of  $n$ .

Q30 Find the real values of  $\theta$ ,  $\theta \in [0, 2\pi]$  for which  $z = \frac{1-i \sin \theta}{1+i \sin \theta}$  is purely imaginary.

OR

If  $\frac{(1+i)^2}{2-i} = x + iy$ , find the value  $2x + y$ .

Q31 A bag contains 4 white, 3 black and 2 green marbles. If 3 marbles are selected at random then find the probability of getting

- (i) All the marbles are of same colour.
- (ii) All the marbles are of different colour.

### SECTION - D

**This section comprises of long answer (LA) type questions of 5 marks each.**

Q32 If  $\sin x = -\frac{2\sqrt{2}}{3}$ ,  $x$  lies in the third quadrant, then find the value of  $\sin \frac{x}{2}$ ,  $\cos \frac{x}{2}$  and  $\tan \frac{x}{2}$

Q33 Using First Principle find the derivative of  $\sqrt{\tan (3x - 5)}$ .

OR

Let us consider the function

$$f(x) = \begin{cases} \frac{\sin(a+1)x + \sin x}{x} & ; \quad \text{for } x < 0 \\ c & ; \quad \text{for } x = 0 \\ \frac{\sqrt{x+bx^2} - \sqrt{x}}{bx^{3/2}} & ; \quad \text{for } x > 0 \end{cases}$$

Determine the values of  $a$ ,  $b$  and  $c$  if  $\lim_{x \rightarrow 0^-} f(x) = \lim_{x \rightarrow 0^+} f(x) = f(0)$ .

Q34 If  $x$ ,  $2y$ ,  $3z$  are in A.P., where the distinct numbers  $x$ ,  $y$ ,  $z$  are in G.P., then find the common ratio(s) of G.P.

Q35 Calculate the mean deviation about median for the following data:

Class interval	0 - 60	60 - 120	120 - 180	180 - 240	240 - 300
Frequency	4	5	3	6	2

OR

Calculate Mean, Standard Deviation and Variance for following data:

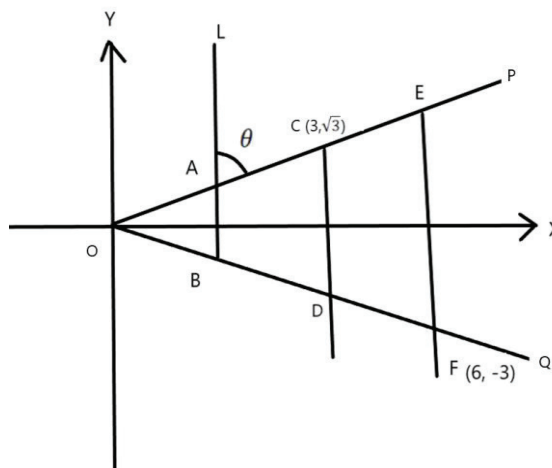
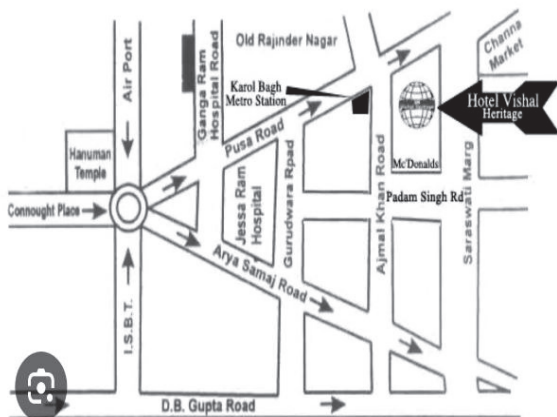
Class interval	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90
Frequency	3	7	12	15	8	5

### SECTION – E

**This section comprises of 3 case-study/passage-based questions of 4 marks each with sub-parts. First two case study questions have three sub parts (i), (ii), (iii) of marks 1,1,2 respectively. The third case study question has two sub-parts (i) and (ii) of marks 2 each.**

Q36 The map below represents a part of Karol Bagh, a commercial area in Delhi. Key locations like Karol Bagh Metro Station, Jessa Ram Hospital, and Hotel Vishal Heritage can be seen.

The above network is shown in the form of a diagram (not to the scale) given below. Taking position of Connaught place as origin, roads are marked along straight lines. Here lines AB, CD and EF are parallel to y-axis and coordinates of points C and F are  $(3, \sqrt{3})$  and  $(6, -3)$  respectively.

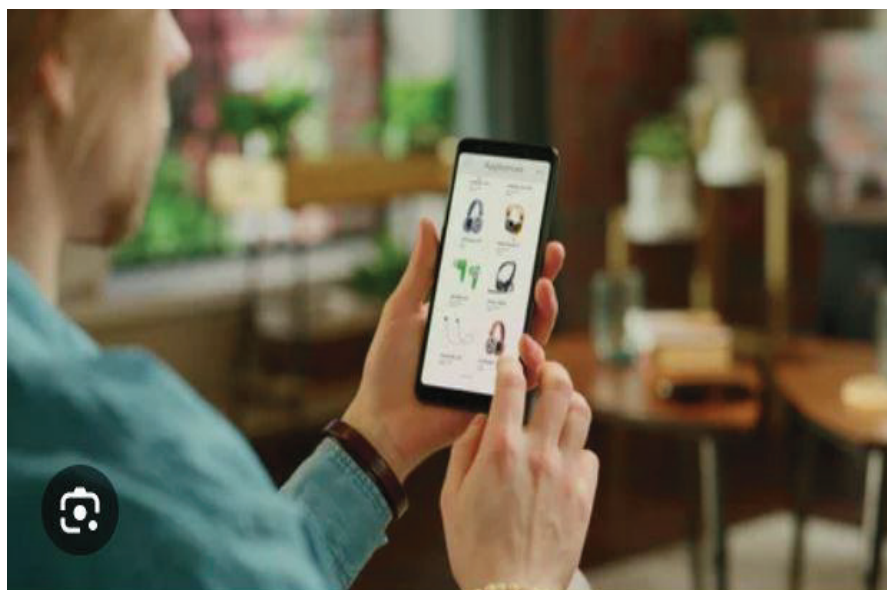


Based on the above information, answer the following:

- (i) Find the slope of line OF. (1)
- (ii) Find equation of OP. (1)
- (iii) (a) If  $\angle LAC = \theta$ , then find the value of  $\theta$ .  
OR  
(b) Find the equation of EF. Also find distance of point F from OP. (2)

Q37 On the occasion of Diwali, Rahul decided to do online shopping from a shopping app which offers a diverse range of products. He added a few products to his wish list across three categories: Electronics, Accessories and Men Fashion. Some products available in these categories are given below

- Electronics (set E) contains: smartphone ( $s_1$ ), smartwatch ( $w_1$ ), headphones ( $h$ ), laptop ( $l$ ), power bank ( $p$ ), Tablets ( $t_1$ ), camera ( $c_1$ )
- Accessories (set A) contains: smartwatch ( $w_1$ ), sunglasses ( $g$ ), wallet ( $w_2$ ), headphones ( $h$ ), belt ( $b_1$ ), ring ( $r$ ), bracelet ( $b_2$ ), cap ( $c_2$ ), socks ( $s_2$ )
- Men Fashion (set M) contains: wallet ( $w_2$ ), belt ( $b_1$ ), sunglasses ( $g$ ), t-shirt ( $t_2$ ), jeans ( $j$ ), smartwatch ( $w_1$ ), footwear ( $f$ ), ethnic wear ( $e$ )



Based on the above information, answer the following:

- (i) Write sets E, A and M in roster form. (1)
- (ii) Write the set  $(M - A)$ . (1)
- (iii) (a) Taking universal set as  $(E \cup A \cup M)$ , find  $(E \cap A)'$   
OR (2)
- (b) Find  $(A \cup M) - (E \cap A \cap M)$

Q38 To promote healthy eating habits, creativity and teamwork among students an Inter- House Salad Making Competition was organised for the students of Classes 8 and 9. Participants were provided with the following set of ingredients to prepare their salads

<u>Base</u>	<u>Toppings</u>	<u>Dressing</u>
Lettuce	Tomato	Olive Oil
	Cucumber	Vinegar
	Onion	Honey
	Carrot	Maple Syrup
	Broccoli	
	Avocado	
	Corn	



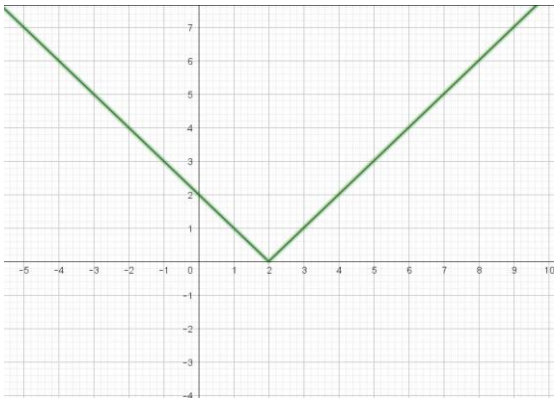
Based on the above information answer the following questions:

- (i) If all the toppings are to be arranged in a single row for aesthetic presentation and Corn cannot be the first topping, how many such arrangements are possible? (2)
- (ii) If the salad must include Corn as one of the toppings, how many different combinations are possible using given base, 4 toppings and 2 dressings? (2)

**MARKING SCHEME****CLASS-XI (2025-26)****SUBJECT-MATHEMATICS****MAXIMUM MARKS: 80**

NOTE: Any other relevant answer, not given herein but given by the candidate, be suitably awarded.

Q.No.	Answer/Solutions/Value points	Step Marks	Total Marks
<b>SECTION - A</b>			
1.	(D)7	1	1
2.	(A) $\sqrt{3}$	1	1
3.	(C) (4,4)	1	1
4.	(D) $\frac{-i}{4}$	1	1
5.	(D)90	1	1
6.	(A) $\frac{25}{21}$	1	1
7.	(D) $\emptyset$	1	1
8.	(D) $n + 1$	1	1
9.	(C)24	1	1
10.	(B) $45^\circ$	1	1
11.	(B) $\frac{1}{5}$	1	1
12.	(C) $\frac{2}{7}$	1	1
13.	(A) $(-\infty, 3) \cup (5, \infty)$	1	1
14.	(C) 4	1	1
15.	(A)(1,2,3)	1	1
16.	(B) $\{(1, d), (2, c), (3, b), (4, b)\}$	1	1
17.	(B)Centre $(\frac{1}{4}, 0)$ , Radius $= \frac{1}{4}$	1	1
18.	(C)252500	1	1
19.	(C) (A) is true but (R) is false.	1	1
20.	(D) (A) is false but (R) is true.	1	1
<b>SECTION – B</b>			

21.	$f(x) = \begin{cases} x - 2 & \text{if } x \geq 2 \\ -x + 2 & \text{if } x < 2 \end{cases}$  <p>OR</p> $R = \{(a, b) : b = a^2 + a, a \in A, b \in B\}$ $\text{Range} = \{2, 6, 12, 20\}$	1  1	2
22.	$-4 \leq 3 - x \leq 4$ $-7 \leq -x \leq 1$ $\Rightarrow x \in [-1, 7]$	1 $\frac{1}{2}$ $\frac{1}{2}$	2
23.	<p>Given that, <math>f(x) = \frac{x^2}{x \cos x - \sin x}</math></p> $\Rightarrow f'(x) = \frac{(x \cos x - \sin x)2x - x^2(\cos x - x \sin x - \cos x)}{(x \cos x - \sin x)^2}$ $\Rightarrow f'(x) = \frac{2x^2 \cos x - 2x \sin x + x^3 \sin x}{(x \cos x - \sin x)^2}$	$1\frac{1}{2}$  $\frac{1}{2}$	2
24.	<p>Let the required point be <math>(0, y, 0)</math>.</p> $\Rightarrow \sqrt{9 + (y + 2)^2 + 25} = 5\sqrt{2}$ <p>Squaring both sides, we get</p> $y^2 + 4y - 12 = 0$ $\Rightarrow (y + 6)(y - 2) = 0$ $\Rightarrow y = -6 \text{ or } y = 2$ <p><math>\therefore</math> Required points are <math>(0, 2, 0)</math> and <math>(0, -6, 0)</math>.</p>	1 $\frac{1}{2}$ $\frac{1}{2}$	2
25.	$P(A^c \cap B^c) = P(A \cup B)^c = 1 - P(A \cup B)$ $= 1 - [P(A) + P(B) - P(A \cap B)]$ $= 1 - [0.37 + 0.45 - 0]$ $= 1 - 0.82$ $= 0.18$	1  1	2







	$= \frac{1 - \sin^2 \theta}{1 + \sin^2 \theta} - \frac{2i \sin \theta}{1 + \sin^2 \theta}$ <p>As <math>Z</math> is purely imaginary</p> $\Rightarrow \operatorname{Re}(Z) = 0$ $\Rightarrow 1 - \sin^2 \theta = 0$ $\Rightarrow \sin \theta = \pm 1$ $\Rightarrow \theta = \frac{\pi}{2} \text{ or } \frac{3\pi}{2}$ <p style="text-align: center;">OR</p> <p>Given <math>\frac{(1+i)^2}{2-i} = x + iy</math></p> $\Rightarrow \frac{(2i)}{2-i} = x + iy$ $\Rightarrow \frac{2i(2+i)}{5} = x + iy$ $\Rightarrow \frac{4i}{5} - \frac{2}{5} = x + iy$ $\Rightarrow x = \frac{-2}{5} \text{ and } y = \frac{4}{5}$ $2x + y = 0$	1	3
		$\frac{1}{2}$	
		1	
		$\frac{1}{2}$	
		1	
		1	3
		$\frac{1}{2}$	
31.	<p>(i) Required Probability = <math>P(\text{all are white}) + P(\text{all are black})</math></p> $= \frac{4c_3}{9c_3} + \frac{3c_3}{9c_3}$ $= \frac{4 \times 3 \times 2}{9 \times 8 \times 7} + \frac{3 \times 2 \times 1}{9 \times 8 \times 7}$ $= \frac{1}{21} + \frac{1}{84} = \frac{5}{84}$ <p>(ii) Required Probability = <math>P(w \&amp; R \&amp; G)</math></p> $= \frac{{}^4C_1 \times {}^3C_1 \times {}^2C_1}{{}^9C_3}$ $= \frac{4 \times 3 \times 2}{9 \times 8 \times 7} \times 3 \times 2 \times 1$ $= \frac{2}{7}$	1	3
		$\frac{1}{2}$	
		1	
		$\frac{1}{2}$	
<b>SECTION – D</b>			
32.	<p>Since, <math>\sin x = -\frac{2\sqrt{2}}{3}</math>, <math>x \in \text{III}^{\text{rd}}</math> Quadrant</p> $\Rightarrow \cos x = -\frac{1}{3}$ <p>Since, <math>x \in \text{III}^{\text{rd}}</math> Quadrant</p>	1	





	<div><div>= 140</div><div>Mean Deviation about Median = <math>\frac{\sum fd}{\sum f} = \frac{1400}{20} = 70</math></div><div>OR</div><div>(b)</div><table><thead><tr><th>C.I</th><th><math>f</math></th><th><math>x</math></th><th><math>d = \frac{x - 55}{10}</math></th><th><math>fd</math></th><th><math>fd^2</math></th></tr></thead><tbody><tr><td>30 – 40</td><td>3</td><td>35</td><td>-2</td><td>-6</td><td>12</td></tr><tr><td>40 – 50</td><td>7</td><td>45</td><td>-1</td><td>-7</td><td>7</td></tr><tr><td>50 – 60</td><td>12</td><td>55</td><td>0</td><td>0</td><td>0</td></tr><tr><td>60 – 70</td><td>15</td><td>65</td><td>1</td><td>15</td><td>15</td></tr><tr><td>70 – 80</td><td>8</td><td>75</td><td>2</td><td>16</td><td>32</td></tr><tr><td>80 – 90</td><td>5</td><td>85</td><td>3</td><td>15</td><td>45</td></tr><tr><td></td><td>50</td><td></td><td></td><td>33</td><td>111</td></tr></tbody></table><div><div>Mean = <math>55 + 10 \times \frac{33}{50}</math></div><div>= <math>55 + 6.6 = 61.6</math></div><div>Variance = <math>h^2 \left[ \frac{\sum fd^2}{\sum f} - \left( \frac{\sum fd}{\sum f} \right)^2 \right]</math></div><div>= <math>100 \left[ \frac{111}{50} - \left( \frac{33}{50} \right)^2 \right]</math></div><div>= <math>100 \left[ \frac{5550 - 1089}{2500} \right] = \frac{4461}{25} = 178.44</math></div><div>Standard deviation = <math>\sqrt{\text{variance}} = \sqrt{178.44} = 13.35</math> (approx.)</div></div></div>	C.I	$f$	$x$	$d = \frac{x - 55}{10}$	$fd$	$fd^2$	30 – 40	3	35	-2	-6	12	40 – 50	7	45	-1	-7	7	50 – 60	12	55	0	0	0	60 – 70	15	65	1	15	15	70 – 80	8	75	2	16	32	80 – 90	5	85	3	15	45		50			33	111	<div><div><math>\frac{1}{2}</math></div><div>1</div><div>2 marks for correct table</div><div>1</div><div>1</div><div><math>\frac{1}{2}</math></div><div><math>\frac{1}{2}</math></div></div>	
C.I	$f$	$x$	$d = \frac{x - 55}{10}$	$fd$	$fd^2$																																														
30 – 40	3	35	-2	-6	12																																														
40 – 50	7	45	-1	-7	7																																														
50 – 60	12	55	0	0	0																																														
60 – 70	15	65	1	15	15																																														
70 – 80	8	75	2	16	32																																														
80 – 90	5	85	3	15	45																																														
	50			33	111																																														
SECTION – E																																																			
36.	<div><div>(i) Slope of OF = <math>\frac{-3-0}{6-0} = \frac{-1}{2}</math></div><div>(ii) Equation of OP :</div><div><math display="block">y - 0 = \frac{\sqrt{3} - 0}{3 - 0} (x - 0)</math><math display="block">\Rightarrow y = \frac{1}{\sqrt{3}}x \text{ or } x = \sqrt{3}y</math></div><div>(iii) a) <math>\theta = 90^\circ - \alpha</math> ,where <math>\alpha</math> is the inclination of line OP</div><div><math display="block">\tan \alpha = \frac{\sqrt{3} - 0}{3 - 0}</math><math display="block">\Rightarrow \tan \alpha = \frac{1}{\sqrt{3}} \Rightarrow \alpha = 30^\circ</math><math display="block">\theta = 90^\circ - 30^\circ = 60^\circ</math></div><div>OR</div><div>Since, EF <math>\parallel</math> y – axis with F at (6, -3) therefore, equation of EF is <math>x = 6</math>.</div></div>	<div><div>1</div><div>1</div><div>1</div><div>1</div><div>1</div><div>1</div></div>	4																																																

	<p>Let d be the distance of point F from OP</p> <p>Then, <math>d = \frac{ 6 - \sqrt{3}(-3) }{\sqrt{1^2 + (-\sqrt{3})^2}}</math></p> <p><math>d = \frac{6 + 3\sqrt{3}}{2}</math> or <math>\frac{3(2 + \sqrt{3})}{2}</math></p>	1	
37.	<p>(i) <math>E = \{s_1, w_1, h, l, p, t_1, c_1\}</math>  <math>A = \{w_1, g, w_2, h, b_1, r, b_2, c_2, s_2\}</math>  <math>M = \{w_2, b_1, g, t_2, j, w_1, f, e\}</math></p> <p>(ii) <math>M - A = \{t_2, j, f, e\}</math></p> <p>(iii) <math>E \cup A \cup M = \{s_1, w_1, h, l, p, t_1, c_1, g, w_2, b_1, r, b_2, c_2, s_2, j, f, e\}</math></p> <p><math>E \cap A = \{w_1, h\}</math></p> <p><math>(E \cap A)' = \{s_1, l, p, t_1, c_1, g, w_2, b_1, r, b_2, c_2, s_2, t_2, j, f, e\}</math></p> <p style="text-align: center;">OR</p> <p>(b) <math>A \cup M = \{w_1, g, w_2, h, b_1, r, b_2, c_2, s_2, t_2, j, f, e\}</math></p> <p><math>E \cap A \cap M = \{w_1\}</math></p> <p><math>(A \cup M) - (E \cap A \cap M) = \{g, w_2, h, b_1, r, b_2, c_2, s_2, t_2, j, f, e\}</math></p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	4
38.	<p>(i) Total arrangements = 7!</p> <p>Arrangements with Corn as first topping = 6!</p> <p>Required arrangements = <math>7! - 6! = 6! (7-1) = 4320</math></p> <p>(ii) Since Corn must be included so 3 toppings out of 6 can be selected in <math>{}^6C_3</math> ways</p> <p>Also, two dressings out of four can be selected in <math>{}^4C_2</math> ways</p> <p>Possible combinations = <math>1({}^6C_3) ({}^4C_2) = 20(6) = 120</math></p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>	4

**CLASS XI**  
**BIOLOGY (044)**

**Maximum Marks: 70**

**Time: 3 hours**

**General Instructions:**

- (i) All questions are compulsory.
- (ii) The question paper has five sections and 33 questions.
- (iii) Section–A has 16 questions of 1 mark each; Section–B has 5 questions of 2 marks each; Section– C has 7 questions of 3 marks each; Section– D has 2 case-based questions of 4 marks each; and Section–E has 3 questions of 5 marks each.
- (iv) There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
- (v) Wherever necessary, neat and properly labelled diagrams should be drawn.

**SECTION A**

1. A taxonomist discovers a new flowering plant species. To correctly place it in the biological system, she first observes its features and compares them with known plants. Then she assigns it a scientific name following binomial rules. This process best demonstrates the interrelationship among which of the following elements of taxonomy?
  - A. Classification → Nomenclature → Identification
  - B. Identification → Classification → Nomenclature
  - C. Nomenclature → Classification → Identification
  - D. Identification → Nomenclature → Classification
2. The feature which makes Euglenoids like *Euglena* difficult to classify strictly as plants or animals is:
  - A. They are unicellular without a nucleus
  - B. They reproduce only by binary fission
  - C. They show both autotrophic and heterotrophic modes of nutrition
  - D. They remain inactive in the absence of light
3. A plant cell is placed in a solution where the concentration of glucose is higher inside the cell than in the surrounding medium. Yet, glucose continues to enter the cell. The best explanation for the observation is:
  - A. Glucose moves by passive diffusion due to a concentration gradient.
  - B. Glucose enters the cell through osmosis.
  - C. Glucose is transported actively using energy from ATP.
  - D. Glucose is transported by facilitated diffusion without using energy.



4. The feature which is absent in monocot leaves but is present in dicot leaves-
  - A. Bulliform cells
  - B. Palisade parenchyma
  - C. Parallel venation
  - D. Isobilateral symmetry
5. The Inspiratory Capacity (IC) of the lungs is represented by:
  - A. Tidal Volume (TV) + Expiratory Reserve Volume (ERV)
  - B. Inspiratory Reserve Volume (IRV) + Tidal Volume (TV)
  - C. Vital Capacity (VC) – Tidal Volume (TV)
  - D. Residual Volume (RV) + Expiratory Reserve Volume (ERV)
6. The maternal-fetal combination which is most likely to result in Rh incompatibility is:
  - A. Rh<sup>-</sup> mother and Rh<sup>-</sup> fetus
  - B. Rh<sup>+</sup> mother and Rh<sup>-</sup> fetus
  - C. Rh<sup>-</sup> mother and Rh<sup>+</sup> fetus
  - D. Rh<sup>+</sup> mother and Rh<sup>+</sup> fetus
7. The type of vascular bundle in dicot stem is
  - A. Open, conjoint with endarch protoxylem
  - B. Open, conjoint with exarch protoxylem
  - C. Close, conjoint with endarch protoxylem
  - D. Open, conjoint with endarch metaxylem
8. Choose the **INCORRECT** statement -
  - A. Grana lamellae have both PSI and PSII
  - B. Cyclic photophosphorylation involves both PSI and PSII
  - C. Both ATP and NADPH + H<sup>+</sup> are synthesised during non-cyclic photophosphorylation
  - D. stroma lamellae lacks PS II and NADP reductase
9. If a respiratory substrate yields 10 mL CO<sub>2</sub> and consumes 20 mL O<sub>2</sub>, the RQ value will be:
  - A. 0.5
  - B. 1.0
  - C. 2.0
  - D. 1.5

10. Match the column I and column II

**Column I (Joint Type)**

- P. Ball and Socket Joint
- Q. Hinge Joint
- R. Pivot Joint
- S. Gliding Joint
- T. Saddle Joint
- U. Cartilaginous Joint
- V. Fibrous Joint

**Column II (Location/Description)**

- I) Between vertebrae in the spine
- II) Shoulder and hip
- III) Elbow and knee
- IV) Between the atlas and axis vertebrae
- V) Wrist and ankle joints
- VI) Between the thumb and the wrist
- VII) Joints between the bones of the skull

**Select the correct option:**

- A. P – III, Q – I, R – IV, S – V, T – VI, U – VII, V – II
- B. P – II, Q – III, R – I, S – V, T – VI, U – VII, V – IV
- C. P – II, Q – III, R – IV, S – VI, T – V, U – I, V – VII
- D. P – II, Q – III, R – IV, S – V, T – VI, U – I, V – VII

11. The main difference between cytokinesis in plant and animal cells is due to:

- A. Presence of centrosomes in plant cells
- B. Lack of spindle fibers in animal cells
- C. Rigid cell wall in plant cell
- D. Absence of cytoplasm in animal cells

12. The Renin-Angiotensin-Aldosterone System (RAAS) plays a crucial role in regulating blood pressure and fluid balance in the body. It is activated in response to low blood pressure or low sodium levels.

The statement which correctly describes the sequence of events in the RAAS pathway is:

- A. Decreased blood pressure stimulates the release of renin from the liver, which directly increases sodium excretion in the kidney.
- B. Renin is released by the juxtaglomerular cells of the kidney, which converts angiotensinogen into angiotensin I, which is later converted into angiotensin II
- C. Angiotensin II stimulates the release of aldosterone from the pancreas, leading to decreased water retention in the kidneys.
- D. Aldosterone decreases sodium reabsorption in the kidneys, leading to increased urine production.

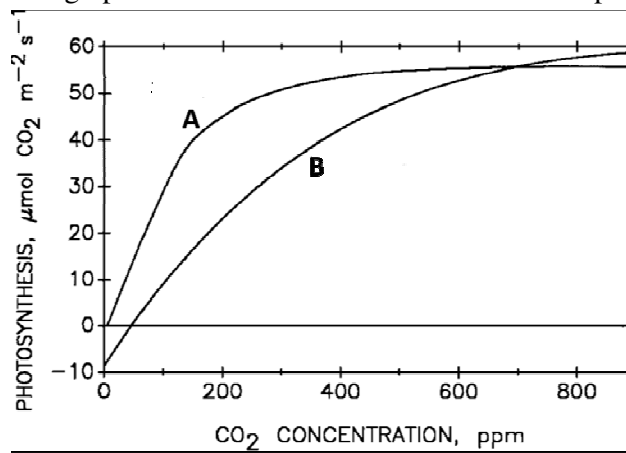
**Question No. 13 to 16 consist of two** statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

- A. Both A and R are true and R is the correct explanation of A.
- B. Both A and R are true and R is not the correct explanation of A.
- C. A is true but R is false.
- D. A is false but R is true.

13. **Assertion (A):** The Calvin cycle operates in the stroma of chloroplasts and is independent of light.  
**Reason (R):** It requires ATP and NADPH produced during the light-dependent reactions.
14. **Assertion (A):** Both cilia and flagella are involved in cell movement and show similar internal structure.  
**Reason (R):** Cilia and flagella are composed of a 9 + 2 arrangement of microtubules and arise from centrioles.
15. **Assertion (A):** Neurotransmitters play a crucial role in transmitting signals across a chemical synapse.  
**Reason (R):** In a chemical synapse, neurotransmitters are released from the presynaptic neuron, cross the synaptic cleft, and bind to receptors on the postsynaptic neuron to transmit the signal.
16. **Assertion (A):** Frogs can respire through their skin, lungs, and the lining of the buccal cavity.  
**Reason (R):** Cutaneous respiration in frogs occurs only when they are in water.

### SECTION B

17. Give reason  
 A. When vinegar is added to milk, it forms cottage cheese.  
 B. An egg solidifies upon boiling.
18. In a graph shown below which curve - A or B represents C<sub>4</sub> plants? Justify.



19. Name the type of sense organ in a frog for:  
 A. Touch  
 B. Balancing  
 C. Smell  
 D. Taste

20. During an acting audition, two actors performed a scene involving heavy breathing after running.

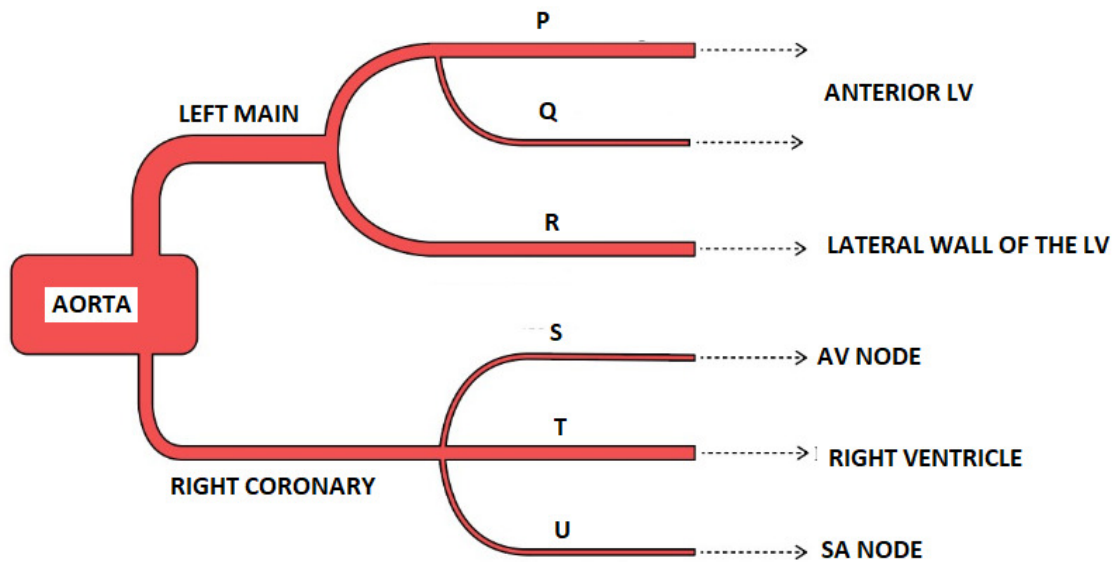
**Actor A** showed short, quick inhalation followed by long, deep exhalation.

**Actor B** showed long inhalation followed by short, shallow exhalation.

As a biology student, analyze which actor portrayed post-exercise breathing more accurately and explain why based on respiratory physiology.

**OR**

Given below is the diagram of coronary circulation. Observe the flow of blood represented and answer the question that follow:



- A. What will be the impact on the functioning of the heart if artery 'U' is blocked?
- B. Which wave of ECG would be affected if artery 'T' is blocked?
21. What is heterospory in pteridophytes? How does it act as a precursor to the seed habit?

### SECTION C

22. Differentiate between *Spirogyra* and *Porphyra* on the basis of
- Stored food
  - Pigments
  - Cell wall
23. A cell is actively forming new membranes and requires specific biomolecules for this process. List the organelles involved and explain how they coordinate to supply the necessary biomolecules for membrane formation.

24. Given below are intermediate steps of the TCA cycle. What are the energy equivalents produced during each step?. How many ATP molecules are generated by oxidation of these energy equivalents?

- A. Citric acid  $\rightarrow$   $\alpha$  ketoglutarate
- B.  $\alpha$  ketoglutarate  $\rightarrow$  Succinate
- C. Succinate  $\rightarrow$  malate

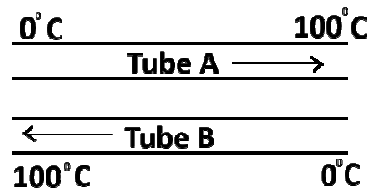
25. Draw the diagrammatic representation of a sarcomere in

- A. Relaxed state
- B. Contracted state

Label the regions undergoing change in length.

26. Differentiate between primary and secondary metabolites in terms of their functions and examples. List two secondary metabolites useful in human welfare.

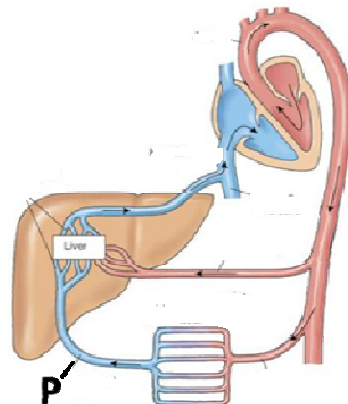
27. The diagram below shows two tubes with fluid flowing in opposite directions, facilitating heat exchange.



- A. Name the mechanism and two parts forming such an arrangement in the kidney for osmoregulation.
- B. How does this mechanism help the body conserve water?

**OR**

Observe the diagram and answer the questions that follow



- A. Identify the blood vessel P.
- B. What is unique about this vascular connection?
- C. What is the significance of blood vessel P?

28. Unlike animals and plants, fungi exhibit a unique pattern of sexual reproduction that involves three distinct phases. These phases help them transition from haploid cells to the formation of spores in a specialized way. Identify and describe these three phases of fungal sexual reproduction in the correct sequence.

#### SECTION D

29. A diploid cell in a plant has  $2n = 8$  chromosomes. During its life cycle, this cell may either divide by mitosis for growth or by meiosis for the formation of gametes. The C value represents the amount of DNA in a nucleus of haploid cell.
- A. During which phase of mitosis does the C value become  $4C$ , and why?
  - B. If the diploid cell stated failed to separate homologous chromosomes during Anaphase I, what would be the chromosomal outcome in the gametes?
  - C. After Meiosis I, how many chromosomes and chromatids are present in each daughter cell of this organism?

**OR**

- D. At Metaphase II, what is the chromosome and chromatid count per cell?

**(1+1+2)**

30. A student conducted an experiment to study the growth of two types of plant tissues under controlled conditions:

Parameter	Tissue P	Tissue Q
Initial stage	2 cm	1 unit
Growth rate	0.5 per day	Doubles every day
Experimental duration	6 days	6 days

- A. Calculate the final length of Tissue P after 6 days.
- B. Identify the type of growth curve shown by Tissue Q.
- C. Plot a simple labeled sketch showing the growth curve for Tissue P.

**OR**

- D. Plot a simple labeled sketch showing the growth curve for Tissue Q.

**(1+1+2)**

#### SECTION E

31. Explain the mechanism of hormone action with reference to progesterone.
- A. Give the chemical nature of the hormone?
  - B. Where are the receptors for progesterone located?
  - C. Once progesterone binds to its receptor, how does it initiate a response?
  - D. Draw a diagram to show the mechanism of progesterone action.

**OR**

Explain the mechanism of nerve impulse transmission in an axon by including the following:

- A. Describe the polarized state of the neuron at rest. How is the resting potential maintained across the axonal membrane?
- B. Explain the depolarization process during an action potential. How do sodium ( $\text{Na}^+$ ) ions influence this process?
- C. Describe the process of repolarization after the action potential. How do potassium ( $\text{K}^+$ ) ions contribute to this process?
- D. Draw a diagram of a nerve impulse traveling through the axon.

32. Observe the pictures of animal shown below:



A



B

Identify the classes to which animal A and B belong. Give four features on the basis of which they are classified into different classes.

**OR**

Observe the two body forms of organisms belonging to the same phylum



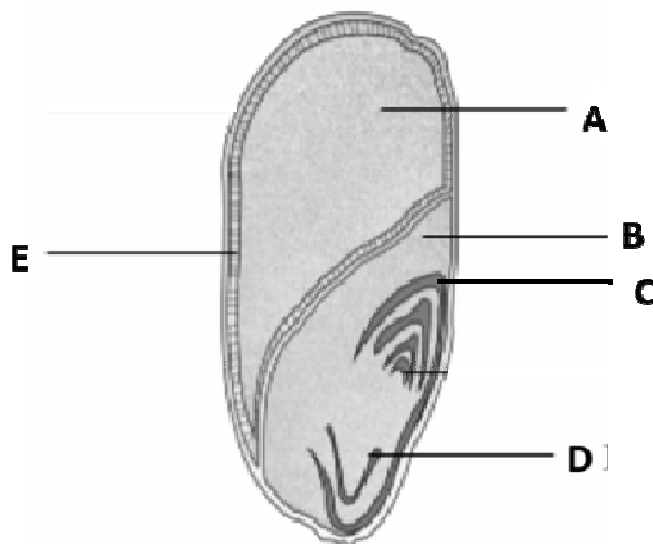
A



B

Identify the two different body forms shown in the diagram (A and B), name the phylum they belong to, mention two characteristic features of this phylum, and state two differences between these body forms.

33. In the diagram given below identify the labels A,B,C,D and E. State one function of each.



OR

Identify and describe the given symbols used in the representation of floral formula.

A.

B.

C. G

D.  $A_{(4)+(4)}$

E.



**CLASS XI SAMPLE PAPER**

**BIOLOGY (044)**

**Marking Scheme**

(Marking scheme and Hints to solution)

Note: (Any other relevant answer not given here in but given by the candidate be also suitably awarded)

Q.No.	Value Points / Key points	Marks allotted to each value point/key point	Total marks
1	B- identification-classification-nomenclature	1	1
2	C- They show both autotrophic and heterotrophic modes of nutrition.	1	1
3	C- Glucose is transported actively using energy from ATP.	1	1
4	B- Palisade parenchyma	1	1
5	B- Inspiratory Reserve Volume (IRV) + Tidal Volume (TV)	1	1
6	C- Rh <sup>-</sup> mother and Rh <sup>+</sup> fetus	1	1
7	A- Open, conjoint with endarch protoxylem	1	1
8	B- Cyclic photophosphorylation involves both PSI and PSII	1	1
9	A-0.5	1	1
10	D-P – II, Q – III, R – IV, S – V, T – VI, U – I, V – VII	1	1
11	C-Rigid cell wall in plant cell	1	1
12	B- Renin is released by the juxtaglomerular cells of the kidney, which converts angiotensinogen into angiotensin I, which is later converted into angiotensin II.	1	1
13	D- A is false but R is true.	1	1

14	A- Both A and R are true and R is the correct explanation of A.	1	1
15	A- Both A and R are true and R is the correct explanation of A.	1	1
16	B- Both A and R are true and R is not the correct explanation of A.	1	1
17	A- When vinegar (acetic acid) is added to milk, it lowers the pH of the milk / denature and coagulate B- An egg contains proteins, mainly albumin in the egg white / When an egg is heated, the proteins in the egg denature (i.e., their structure is altered due to the heat).	$\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$	2
18	A, as saturation point is attained earlier than C3	1+1	2
19	Touch - sensory papillae Balancing - ear Smell - nasal epithelium Taste - taste buds	$\frac{1}{2} * 4$	2
20	<b>Actor A</b> is more accurate , Centre present in the <b>pons region</b> of the brain called <b>pneumotaxic centre</b> can moderate the functions of the respiratory rhythm centre. Neural signal from this centre can <b>reduce the duration of inspiration</b> and thereby alter the respiratory rate <b>OR</b> Pacemaker will not work QRS wave will be affected	$\frac{1}{2} * 4$  1+1	2
21	- producing two kinds of spores - The development of the zygotes into young embryos take place within the female gametophytes	1+1	2
22	<b>Spirogyra</b> - Chlorophyll a,b; Starch Cellulose <b>Pophyra</b> - Chlorophyll a,d, phycoerythrin; Floridean starch; Cellulose, pectin	$\frac{1}{2} * 6$	3
23	RER SER GOLGI + VESICLE (function of each)	1 1 $\frac{1}{2} * 2$	3
24	A- 1 NADH = 3ATP B- 1 NADH, 1 GTP= 4 ATP	$\frac{1}{2} * 6$	3

	C- $1 \text{ FADH}_2 = 2\text{ATP}$		
25	Refer NCERT page 223, fig 17.5 Label H and I band	1+1 diagram 1 label	3
26	Any one difference One example each Two useful metabolites	1 $\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$	3
27	Counter current mechanism, loop of henle + vasa recta This mechanism helps to maintain a concentration gradient in the medullary interstitium. Presence of such interstitial gradient helps in an easy passage of water from the collecting tubule thereby concentrating the filtrate (urine)  <b>OR</b> A- Hepatic portal vein B- exist between two capillary network C - carries nutrients from intestine to liver for metabolism	$\frac{1}{2} * 2$  1  1   1*3	3
28	Plasmogamy Karyogamy Dikaryon phase Meiosis	1 $\frac{1}{2}$ $\frac{1}{2}$ 1	3
29	A. S phase B. Irregular numbers <8> C. 4 chromosomes , 8 chromatids D. 4 chromosomes , 4 chromatids	1 1 1+1 1+1	4
30	A. $0.5*6+2 \text{ cm} = 5 \text{ cm}$ B. Sigmoid C. Fig 13.5 pg 170 NCERT D. Fig 13.6 pg 170 NCERT	$\frac{1}{2} + \frac{1}{2}$ 1 2 2	4
31	A. Steroid B. Intracellular C. Regulate gene expression D. Fig 19.5 B pg 249 NCERT  <b>OR</b> A. . a. At rest membrane is	1 1 1 2    $\frac{1}{2} * 4$	5

	<p>comparatively more permeable to potassium ions (K<sup>+</sup>) and nearly impermeable to sodium ions.</p> <p>b. Similarly, the membrane is impermeable to negatively charged proteins</p> <p>c. the axoplasm inside the axon contains high concentration of K<sup>+</sup> and negatively charged proteins and low concentration of Na<sup>+</sup>.</p> <p>d. In contrast, the fluid outside the axon contains a low concentration of K<sup>+</sup>, a high concentration of Na<sup>+</sup> and thus form a concentration gradient.</p> <p>B. When a stimulus is applied at a site on the polarised membrane, the membrane at the site A becomes freely permeable to Na<sup>+</sup>. This leads to a rapid influx of Na<sup>+</sup> followed by the reversal of the polarity</p> <p>C. Within a fraction of a second, K<sup>+</sup> diffuses outside the membrane and restores the resting potential of the membrane</p> <p>D. FIG 18.2 Pg 233 NCERT</p>	<p>1</p> <p>1</p> <p>1</p>	
32	<p>A- Osteichthyes B- Chondrichthyes Any four features</p> <p style="text-align: center;"><b>OR</b></p> <p>A- Medusae B- Polyp Phylum - Cnidaria Two characteristic features Two differences between polyp and medusae</p>	<p><math>\frac{1}{2}</math> <math>\frac{1}{2}</math> 1*4</p> <p><math>\frac{1}{2}</math> <math>\frac{1}{2}</math> 1 <math>\frac{1}{2} + \frac{1}{2}</math> 1+1</p>	5
33	<p>A- endosperm B- scutellum C- coleoptile D- radicle E - aleurone layer (one function of each)</p> <p style="text-align: center;"><b>OR</b></p> <p>A - bisexual B- actinomorphic C - superior ovary D- diadelphous E - epipetalous (one line description of each)</p>	<p><math>(\frac{1}{2} + \frac{1}{2}) * 5</math></p> <p><math>(\frac{1}{2} + \frac{1}{2}) * 5</math></p>	5

**Class: XI**  
**PHYSICAL EDUCATION**

Time: 03 Hours

**SAMPLE PAPER – 2025-26**

Maximum Marks: 70

**General instructions:**

- The questions paper consists of 5 sections and 37 questions.
- Section A consists of question 1-18 carrying 1 mark each and is multiple choice questions. All questions are compulsory.
- Section B consists of questions 19-24 carrying 2 marks each and are very short answer types and should not exceed 60-90 words. Attempt any 5.
- Section C consists of questions 25-30 carrying 3 marks each and are short answer types and should not exceed 100-150 words. Attempt any 5.
- Section D consists of questions 31-33 carrying 4 marks each and are case studies. There are internal choices available.
- Section E consists of questions 34-37 carrying 5 marks each and are long answer types and should not exceed 200-300 words. Attempt any 3.

**Section A**

- 1) Identify the State/UT for which the 'Sports for Peace and Development' scheme has been implemented exclusively.  
a) Jammu & Kashmir  
b) Delhi and NCR  
c) Uttar Pradesh  
d) Punjab
- 2) Which surface is used for playing lawn tennis at Wimbledon?  
a) Clay  
b) Synthetic  
c) Grass  
d) Rubber
- 3) "Playing beyond the rules of the game is a violation" of which of the following educational values  
a) Pursuit of excellence  
b) Balance between body will and mind  
c) Joy of effort  
d) Fair play
- 4) Who banned the Ancient Olympic Games and in which year?  
a) Emperor Nero in 100 AD  
b) Emperor Constantine in 313 AD  
c) Emperor Theodosius I in 393 AD  
d) Emperor Augustus in 27 BC
- 5) Identify the pranayama from picture given?



- a) Sheetal  
b) Sheetkari  
c) Bhramari  
d) Anulom-Vilom
- 6) Match List – I with List – II and select the correct answer from the code given below:

List - I		List – II	
(i)	Ahara	1	Right food
(ii)	Achara	2	Right Recreation
(iii)	Vihara	3	Right conduct
(iv)	vichara	4	Right thinking

CODES				
	i	ii	iii	iv
a)	1	3	2	4
b)	4	3	2	1
c)	2	3	4	1
d)	4	2	1	3

- 7) Given below are the two statements labeled Assertion (A) and Reason (R):  
**Assertion (A):** Disability etiquette is a set of guidelines dealing specifically with how to approach people with disabilities.  
**Reason (R):** we should use a high tone of voice when welcoming a person with a disability.
- Both (A) and ( R ) are true and ( R ) is the correct explanation of (A).
  - Both (A) and ( R ) are true but ( R ) is not the correct explanation of (A).
  - (A) is true and ( R ) is false.
  - (A) is false but ( R ) is true.
- 8) \_\_\_\_\_ is the main goal of adaptive physical education.
- Achieving success in competitive sports
  - Preparing children for professional sports
  - Enhancing the schools overall performance ranking.
  - Ensuring inclusive physical education for CWSN.
- 9) In order to prevent external blood loss, it is best to:
- Apply direct pressure over the wound.
  - Take the patient to hospital
  - Wash the wound with water.
  - Apply cream on the wound
- 10) Given below are the two statements labeled Assertion (A) and Reason (R):  
**Assertion (A):** First aid should be administered only after ensuring the safety of both the rescuer and the victim.  
**Reason (R):** The rescuer may become a secondary victim if the scene is not secured.
- Both (A) and ( R ) are true and ( R ) is the correct explanation of (A).
  - Both (A) and ( R ) are true but ( R ) is not the correct explanation of (A).
  - Both (A) and ( R ) are false.
  - (A) is false but ( R ) is true.
- 11) Waist-Hip Ratio (WHR) is an indicator of:
- Overall body strength
  - Body fat distribution
  - Muscle mass
  - Aerobic fitness
- 12) During exercise, which hormone is primarily responsible for increasing the heart rate?
- Insulin
  - Adrenaline
  - Cortisol
  - Glucagon
- 13) The ability of muscle of a muscle to shorten forcefully is known as:
- Extensibility
  - Contractility
  - Elasticity
  - Excitability
- 14) Which term describes the quantity of motion possessed by a moving body?
- Momentum
  - Acceleration
  - Force
  - Power
- 15) Moving a body part away from the body's midline and back to the midline represent two movements known as :
- Pronation and supination
  - Elevation and depression
  - Abduction and adduction
  - Flexion and extension

- 16) This stage of growth and development is regarded as the golden age of skill learning and mental capacity growth.
- |            |                    |
|------------|--------------------|
| a) Infancy | b) Later Childhood |
| c) Old age | d) Adolescence     |
- 17) To bring the body temperature to normal level after finishing any physical activity. What will you follow?
- |                     |                           |
|---------------------|---------------------------|
| a) Sprint           | b) Drinking hot beverages |
| c) Overload routine | d) Cooling down           |
- 18) Name the substance which is used to remove fluid from the body?
- |              |               |
|--------------|---------------|
| a) Narcotics | b) Stimulants |
| c) Tobacco   | d) Diuretics  |

### **Section B**

#### **(Attempt any five questions)**

- 19) Highlight the initiatives taken by the government of India to promote sports among people with disabilities under Khelo India Program.
- 20) Mention any two rules of the Ancient Olympics?
- 21) Suggest preventive measures that schools and parents can adopt to minimize the risk factors related to disorders and disabilities.
- 22) Write the significance of flexibility in maintaining overall physical fitness.
- 23) What role do tendons play in the muscular system?
- 24) Differentiate between kinetics and kinematics in the context of sports.

### **Section C**

#### **(Attempt any five questions)**

- 25) Ravi is a good athlete but often loses his temper during competition. Which Olympic value does he need to improve and why?
- 26) Monika a female athlete whose weight is 80 kg and her height is 170 cm. Calculate her BMI and state the category in which she falls?
- 27) Write a short note on skin fold measurement.
- 28) Describe how the skeletal system interacts with the muscular system to facilitate movement.
- 29) Discuss how knowledge of psychology contributes to an athlete overall growth and mental health.
- 30) Assess the role of the World Anti-Doping Agency (WADA) in maintaining fair competition. What challenges does WADA face in enforcing anti-doping rules?

### **Section D**

#### **(Internal Choices Available)**

- 31) Rohan is a 13-year-old student studying in Class VIII. His teachers noticed that he struggles to read simple sentences, often confuses similar-looking letters, and finds it difficult to concentrate for long periods. Despite having normal intelligence, he performs poorly in written exams. After assessment, it was found that Rohan has dyslexia, a specific learning disorder. In another case, his classmate Aarav uses a wheelchair due to spinal cord injury he suffered in an accident two years ago. Aarav is an intelligent and active student, participating in debates and quizzes. However, he needs help accessing classrooms on higher floors, as the school lacks ramps and elevators. Their school organized a workshop to spread awareness about disabilities and disorders, emphasizing the importance of inclusive education. Teachers were trained to use appropriate teaching strategies and classroom accommodations. The focus was to differentiate between disability (a physical or mental condition that limits a person's movements, senses, or activities) and disorder (a disruption to regular bodily or mental functions).

**From the case study, answer the following questions**

- 1) Which of the following best describes Rohan's condition?
  - A. Physical disability
  - B. Intellectual disability
  - C. Learning disorder
  - D. Sensory impairment
- 2) What type of disability does Aarav have?
  - A. Hearing impairment
  - B. Locomotor disability
  - C. Cognitive disorder
  - D. Visual impairment
- 3) Which action by the school promotes inclusive education?
  - A. Assigning more homework
  - B. Removing students with disabilities from regular classes
  - C. Organizing awareness workshops and training teachers
  - D. Giving fewer marks to disabled students
4. What is the key difference between a disability and a disorder?
  - A. Disability affects only mental health; disorder affects only physical health
  - B. Disorder is always more serious than disability
  - C. Disability limits activity; disorder affects function of body or mind
  - D. There is no difference between the two.

Or

Why is it important to identify learning disorders like dyslexia early?

- A. To punish the child for poor performance
- B. To provide proper support and teaching strategies
- C. To remove the child from school
- D. To label the child permanently

- 32) Ananya is a student-athlete who participates in gymnastics and yoga. During her training sessions, her coach explains the importance of understanding how the body moves in relation to anatomical planes and axes. For example, while performing a cartwheel, Ananya's body moves through the **frontal plane** around a **sagittal axis**. Similarly, when she performs a forward roll, the movement takes place in the **sagittal plane** around a **frontal axis**. Twisting movements, like a 360° spin, happen in the **transverse plane** around the **vertical axis**. Understanding these concepts has helped Ananya improve her posture, alignment, and execution of complex moves. She can now visualize how different parts of her body move relative to planes and axes, which reduces her risk of injury and enhances her performance. This knowledge of body planes and axes is also used in physiotherapy, sports training, and rehabilitation programs to design movements and exercises suitable for each individual.

**From the case study, answer the following questions**

1. A person performing a jumping jack primarily moves in which plane and around which axis?
  - A. Sagittal plane – frontal axis
  - B. Frontal plane – sagittal axis
  - C. Transverse plane – vertical axis
  - D. Sagittal plane – vertical axis
2. Which movement best demonstrates rotation in the transverse plane?
  - A. Bending forward to touch toes
  - B. Spinning while standing upright



- C. Side lunges
- D. Jumping vertically

3. Why would understanding the axis of rotation be important for designing a safe rehabilitation program after a knee injury?

- A. To ensure the patient avoids strength training
- B. To isolate movements only in the sagittal plane
- C. To match the movements with natural joint mechanics
- D. To increase resistance without considering alignment

4. How does analyzing body movement in planes and axes help an athlete improve performance in their sport?

- A. By limiting movement to one direction
- B. By enhancing body control and reducing injury risk
- C. By focusing only on flexibility training
- D. By avoiding dynamic movements

33) Vanya, a competitive swimmer, followed a structured training program. She gradually increased her training load (overload) to improve performance, allowing time for adaptation and recovery. Vanya's coach emphasized proper warming up to prevent injury and limbering down to aid recovery. Her training focused on refining skills, techniques, and tactics to optimize her performance. However, during a major competition, a fellow athlete was disqualified for doping, highlighting the importance of clean sportsmanship and the dangers of performance-enhancing drugs.

**From the case study, answer the following questions**

1. What does the principle of overload in sports training refer to?

- A) Reducing training intensity
- B) Gradually increasing training load
- C) Stopping training sessions
- D) Maintaining the same training routine

2. Why is adaptation important in sports training?

- A) It helps maintain performance without improvement
- B) It prevents muscle growth
- C) It allows the body to adjust to increased training demands
- D) It reduces the need for recovery

3) **How do tactics differ from techniques in sports?**

- A) Tactics are situational strategies, while techniques are specific skills or movements
- B) Tactics are basic movements, while techniques are overall strategies
- C) Tactics and techniques are the same
- D) Techniques are broader game plans, while tactics are specific movements

4) What is the purpose of warming up before exercise?

- A) To increase muscle strength
- B) To prevent injury by preparing the body for physical activity
- C) To reduce training time
- D) To increase body fat percentage

**Or**

Why limbering down is important?

- A) A way to increase training intensity
- B) A cooling-down process to aid recovery and reduce muscle stiffness
- C) A method to build muscle mass

D) A strategy to improve flexibility before training

**Section E**

**(Attempt any three questions)**

- 34) Elaborate the health and media related career in physical education.
- 35) "Your sister frequently catches a cold during seasonal changes. As a student of Physical Education, suggest a specific yogic kriya to help her and explain how it will benefit her health."
- 36) "How would you promote traditional and regional games in your school's culture sports festival? explain their relevance in modern lifestyle?"
- 37) Compare the physical and social development of children during childhood (3–12 years) and adolescence (13–18 years) in the context of life in metropolitan cities."

**MARKING SCHEME**  
**Physical Education**  
**class XI (2025-26)**

**Note:** Any other relevant answer, not given here but given by the candidates, should be awarded accordingly.

Q.N O:	KEY POINTS/ VALUE POINTS	ALLOTTE D MARKS	TOTAL MARKS
1	a) Jammu & Kashmir	1	1
2	c) Grass	1	1
3	d) Fair play	1	1
4	c) Emperor Theodosius I in 393 AD	1	1
5	b) Sheetkari	1	1
6	a) 1-3-2-4	1	1
7	c) (A) is true and ( R ) is false.	1	1
8	d) Ensuring inclusive physical education for CWSN.	1	1
9	a) Apply direct pressure over the wound.	1	1
10	a) a) Both (A) and ( R ) are true and ( R ) is the correct explanation of (A).	1	1
11	b) Body fat distribution	1	1
12	b) Adrenaline	1	1
13	b) Contractility	1	1
14	a) Momentum	1	1
15	c) Abduction and adduction	1	1
16	b) Later Childhood	1	1
17	d) cooling down	1	1
18	d) Diuretics	1	1
19	The initiative taken by the government to promote sports among people with disabilities under Khelo India Program: 1. Launch of Khelo India Para Games 2. Providing the financial assistance 3. Specialized coaching facilities 4. Enhancement of Medical & Facility Support at Para Games 5. Integration of Para Athletes into TOPS (any two points)	1+1	2
20	<b>Rules for Ancient Olympic competitions</b> When the Olympic Games were organized in 776 B.C. certain rules were framed for competitions of various sports competitors of various sports competitions which were engraved on bronze plate. <u>These rules are given below:</u> 1. The competitors must be only Greek, and must be physically well. 2. Savages and punished persons were not allowed to participate	1+1	2

Q.N O:	KEY POINTS/ VALUE POINTS	ALLOTTE D MARKS	TOTAL MARKS
	<p>in these games.</p> <p>3. The competitor had to stay in Olympia for one month before the beginning of the games. They had to take the oath that they had already taken the training for 10 months in their state.</p> <p>4. Married women were not only allowed to participate in competitions but they were allowed to see these games also.</p> <p>5. For participation in games, they had to do practice for one month.</p> <p>6. Only amateur sportspersons could participate in these games and not the professionals.</p> <p>(Any two)</p>		
21	<p><b>Preventive measures school and parents can adopt:</b></p> <ol style="list-style-type: none"> <li>1. Regular health check ups</li> <li>2. Inclusive environment</li> <li>3. Parental awareness and counselling</li> <li>4. Safe and supportive atmosphere</li> <li>5. Modified equipment</li> <li>6. Special educator and support staff</li> </ol>	2	2
22	<p><b>Significance of flexibility in maintaining overall health</b></p> <ol style="list-style-type: none"> <li>1. Improve range of motion</li> <li>2. Reduce risk of injuries</li> <li>3. Enhance posture and alignment</li> <li>4. Enhance physical performance</li> </ol>	2	2
23	<p><b>Role of tendons in the muscular system</b></p> <ol style="list-style-type: none"> <li>1. Connect muscle to bone</li> <li>2. Transmit force</li> <li>3. Support joint stability</li> <li>4. Enable efficient movement</li> </ol>	2	2
24	<ol style="list-style-type: none"> <li>1. <b>Kinetics focuses on forces</b> – It studies the forces that cause or change motion, such as gravity, muscle force, and friction.</li> <li>2. <b>Kinematics focuses on motion without considering forces</b> – It describes how an object or body moves, including speed, velocity, acceleration, and direction.</li> <li>3. <b>Kinetics is used for understanding performance and preventing injuries</b> – By analyzing forces, coaches can improve how athletes apply power and reduce injury risk.</li> <li>4. <b>Kinematics is used to improve movement technique</b> – It helps in refining skills like jumping, throwing, or running by analyzing movement patterns and body positions.</li> </ol>	1+1	2
25	<p><b>Olympic values which help Ravi in controlling his temper are:</b></p> <ol style="list-style-type: none"> <li>1. Respect</li> <li>2. Friendship</li> <li>3. Excellence</li> </ol>	1+2	3

Q.N O:	KEY POINTS/ VALUE POINTS	ALLOTTE D MARKS	TOTAL MARKS
	<p>4. Fair Play</p> <p>All values guide athletes to behave with self-control, fairness and dignity, making them essential for managing temper in sports and life.</p>		
26	<p>Calculation BMI</p> <p>Formula</p> $\text{BMI} = \text{Weight (kg)} / \text{Height (mtr)}^2$ $\text{BMI} = 80 / 1.70 \times 1.70$ $\text{BMI} = 80 / 2.89$ $\text{BMI} = 27.7$ <p><b>Category: Overweight</b></p>	2+1	3
27	<p><b>Skinfold Measurement</b> is a widely used method to estimate body fat percentage by measuring the thickness of subcutaneous fat (fat under the skin) at specific body sites. It is a simple, inexpensive, and non-invasive technique that helps assess an individual's body composition, especially in sports and fitness settings.</p> <p>Trained professionals use <b>skinfold calipers</b> to pinch and measure fat thickness at various sites such as the triceps, biceps, subscapular, suprailiac, abdomen, and thigh. These measurements are then entered into formulas or charts to calculate the estimated body fat percentage.</p> <p>Accuracy depends on proper technique, consistent measurement locations, and the skill of the person taking the readings. Skinfold measurement is ideal for tracking changes in body fat over time rather than giving exact values. While not as precise as advanced methods like DEXA or hydrostatic weighing, it remains a practical tool for coaches, trainers, and health professionals.</p>	3	3
28	<p><b>Interaction between muscular and skeletal system</b></p> <ol style="list-style-type: none"> <li>1. Muscles attach to bones via tendons</li> <li>2. Muscle contract, bone moves</li> <li>3. Joint allow movement</li> <li>4. Support and stability</li> <li>5. Protection of the vital organs</li> </ol>	3	3
29	<p><b>Knowledge of psychology contributes significantly to an athlete's overall growth and mental health in the following ways:</b></p> <ol style="list-style-type: none"> <li>1. Improve focus and concentration</li> <li>2. Stress and anxiety management</li> <li>3. Building confidence and motivation</li> <li>4. Better recovery from injuries</li> <li>5. Team coordination and leadership</li> <li>6. Emotional control</li> </ol>	3	3
30	<b>Role of WADA in maintaining fair competition</b>	1.5+1.5	3

Q.N O:	KEY POINTS/ VALUE POINTS	ALLOTTE D MARKS	TOTAL MARKS
	<ol style="list-style-type: none"> <li>1. <b>Promotion of Clean Sport:</b> WADA ensures all athletes compete without the use of banned substances or methods.</li> <li>2. <b>Equal Opportunity:</b> Anti-doping rules help provide a level playing field for all athletes.</li> <li>3. <b>Health Protection:</b> Banning harmful substances protects athletes' physical and mental health.</li> <li>4. <b>Global Standardization:</b> The WADA Code applies to all countries and sports, ensuring uniform rules worldwide.</li> <li>5. <b>Testing and Monitoring:</b> WADA conducts in-competition and out-of-competition testing to detect violations.</li> <li>6. <b>Strict Penalties:</b> Athletes found guilty of doping face suspensions, bans, or disqualification from events.</li> <li>7. <b>Education and Awareness:</b> WADA educates athletes and support staff about prohibited substances and ethical conduct.</li> <li>8. <b>Fair Judging:</b> Ensures performance is judged based on natural ability, training, and hard work — not drug use.</li> </ol> <p><b>Challenges Faced by WADA:</b></p> <ul style="list-style-type: none"> <li>• <b>Evolving Doping Techniques:</b> New substances and methods are constantly being developed, making detection harder.</li> <li>• <b>Lack of Uniform Enforcement:</b> Some countries or sports organizations may have weaker enforcement or political interference.</li> <li>• <b>Limited Resources:</b> Budget constraints restrict extensive global testing and research.</li> <li>• <b>Legal Challenges:</b> Athletes may contest bans, leading to lengthy and complex legal disputes.</li> </ul>		
31 (1)	C. Learning disorder	1	1
31 (2)	B. Locomotor disability	1	1
31 (3)	C. Organizing awareness workshops and training teachers	1	1
31 (4)	C. Disability limits activity; disorder affects function of body or mind or B. To provide proper support and teaching strategies	1	1
32 (1)	B. Frontal plane – sagittal axis	1	1
32 (2)	B. Spinning while standing upright	1	1
32	C. To match the movements with natural joint mechanic	1	1

Q.N O:	KEY POINTS/ VALUE POINTS	ALLOTTE D MARKS	TOTAL MARKS
(3)			
32 (d4)	B. By enhancing body control and reducing injury risk	1	1
33 (1)	B) Gradually increasing training load	1	1
33 (2)	C) It allows the body to adjust to increased training demands	1	1
33 (3)	A) Tactics are situational strategies, while techniques are specific skills or movements	1	1
33 (4)	B) To prevent injury by preparing the body for physical activity OR B) A cooling-down process to aid recovery and reduce muscle stiffness	1	1
34	<b>Career options in physical education</b> <b>Health career</b> <ol style="list-style-type: none"> <li>1. Sport Nutrition</li> <li>2. Rehabilitation</li> <li>3. Physiotherapist</li> <li>4. Yoga trainer</li> <li>5. Fitness trainer</li> <li>6. Wellness clubs</li> <li>7. YouTube health blogger</li> </ol> <b>Media career</b> <ol style="list-style-type: none"> <li>1. Sports journalism</li> <li>2. Sports photography</li> <li>3. Book writing</li> <li>4. Book publishing</li> <li>5. Sports industry</li> <li>6. Sports broadcasting</li> </ol>	2.5+2.5	5
35	<p>To overcome the problem of continues cold during the seasonal change Neti kriya is the best for her. Neti (particularly <i>Jal Neti</i>) is a yogic cleansing technique that involves flushing the nasal passages with warm saline water using a Neti pot. It is especially helpful for those suffering from colds, sinus congestion, or allergies.</p> <p><b>Benefits of Neti in Cold:</b></p> <ol style="list-style-type: none"> <li>1. Clears Nasal Congestion:</li> <li>2. Reduces Sinus Pressure and Headache:</li> <li>3. Flushes Out Germs and Irritants:</li> <li>4. Improves Breathing and Sleep:</li> <li>5. Prevents Secondary Infections:</li> <li>6. Soothes Nasal Membranes</li> </ol> <p><b>(Explain any four)</b></p>	1+4	5
36	<b>Promoting traditional and regional games</b> <ol style="list-style-type: none"> <li>1. Organize a “Traditional Games Zone” <ul style="list-style-type: none"> <li>• Include games like Kho-Kho, Kabaddi, Gilli Danda, Pittu, and Langdi.</li> </ul> </li> </ol>	3+2	5

Q.N O:	KEY POINTS/ VALUE POINTS	ALLOTTE D MARKS	TOTAL MARKS
	<ul style="list-style-type: none"> <li>• Set up dedicated spaces and fun competitions.</li> </ul> <ol style="list-style-type: none"> <li>2. Invite Local Experts or Elders           <ul style="list-style-type: none"> <li>• Invite community members to demonstrate games and share stories behind them.</li> </ul> </li> <li>3. Dress Code and Theme           <ul style="list-style-type: none"> <li>• Encourage traditional attire to match the regional spirit of the games.</li> </ul> </li> <li>4. Inter-House Competitions           <ul style="list-style-type: none"> <li>• Conduct house-wise contests to increase student participation and enthusiasm.</li> </ul> </li> <li>5. Create Informative Stalls           <ul style="list-style-type: none"> <li>• Put up displays explaining the origin, rules, and health benefits of each game.</li> </ul> </li> <li>6. Include in Morning Assemblies           <ul style="list-style-type: none"> <li>• Short demonstrations or trivia about a game each day leading up to the event.</li> </ul> </li> <li>7. Promote on Posters &amp; Social Media           <ul style="list-style-type: none"> <li>• Use colorful posters and online platforms to generate interest and awareness.</li> </ul> </li> </ol> <p>✦ <b>Relevance Today:</b></p> <ul style="list-style-type: none"> <li>- Improves physical fitness using low-cost methods.</li> <li>- Builds team spirit, reflexes, and agility.</li> <li>- Preserves cultural heritage and connects students to roots.</li> <li>- Fosters inclusiveness and fun for all skill levels.</li> </ul>		
37	<p>Physical Development</p> <ul style="list-style-type: none"> <li>• <b>Childhood (3–12 years):</b> <ul style="list-style-type: none"> <li>○ Gradual growth in height and weight.</li> <li>○ Development of fine and gross motor skills (e.g., writing, running).</li> <li>○ Higher vulnerability to lifestyle-related issues like obesity due to limited outdoor play in urban settings.</li> </ul> </li> <li>• <b>Adolescence (13–18 years):</b> <ul style="list-style-type: none"> <li>○ Rapid physical changes during puberty (e.g., hormonal shifts, sexual maturation).</li> <li>○ Increase in strength, endurance, and height.</li> <li>○ Higher exposure to unhealthy habits (junk food, screen time) in metros can impact overall health.</li> </ul> </li> </ul> <p>Social Development</p> <ul style="list-style-type: none"> <li>• <b>Childhood (3–12 years):</b> <ul style="list-style-type: none"> <li>○ Learning basic social skills like sharing, cooperation, and communication.</li> <li>○ Dependence on family and teachers for emotional support.</li> <li>○ Limited peer interaction due to nuclear families and academic pressure in cities.</li> </ul> </li> </ul>	2.5+2.5	5



Q.N O:	KEY POINTS/ VALUE POINTS	ALLOTTE D MARKS	TOTAL MARKS
	<ul style="list-style-type: none"> <li>• <b>Adolescence (13–18 years):</b> <ul style="list-style-type: none"> <li>○ Strong influence of peer groups and social media on behavior and identity.</li> <li>○ Development of independence and self-identity.</li> <li>○ Exposure to urban social issues like competition, stress, and peer pressure.</li> </ul> </li> </ul>		

## Sample Question Paper 2025-2026

Class : XI

Subject: Computer Science(083)

Max Time:3 Hours

Maximum Marks:70

General Instructions:

1. This question paper contains five sections, **Sections A to E**.
2. All questions of a particular section must be attempted in the correct order.
3. SECTION A has 21 Objective Type Questions of 1 mark each.
4. SECTION B has 07 Very Short Answer Type Questions carrying 02 marks each.
5. SECTION C has 04 Short Answer Type Questions carrying 03 marks each.
6. SECTION D has 02 Questions carrying 04 marks each.
7. SECTION E has 03 Questions carrying 05 marks each.
8. All programming questions are to be answered using Python Language only

Section A		
1.	Which of the following devices uses magnetic storage? a) Flash memory/USB drive b) SSD card c) Compact Disk Drive d) Hard Disk Drive	1
2.	A digital circuit requires an output of 1 only when both inputs are different (One is 0 and the other is 1). Which logic gate should be used to implement this functionality? a) AND b) OR c) XOR d) NAND	1
3.	A developer wants to create a web application that can run on multiple platforms without modification. Which type of translator would be most suitable for this task? a) Compiler b) Interpreter c) Assembler d) Debugger	1
4.	Arjun is a software developer who downloaded an open-source program to modify it for a school project. After making changes, he decides to share his modified version online. However, he notices that the original software was licensed under terms that require any redistributed version to also be open source and freely available to others.	1

	<p>Which license was most likely used in the original software that Arjun modified?</p> <p>a) Apache License b) Creative Commons Attribution c) GNU General Public License (GPL) d) Proprietary License</p>	
5.	<p>Which function out of the following will return data type of object</p> <p>a) id() b) ord() c) str() d) type()</p>	1
6.	<p>Consider the following statements:</p> <p>a=0 b=10 c=b/a The above code results in</p> <p>a) Syntax Error b) Logical Error c) Runtime Error d) None of the above</p>	1
7.	<p>Riya has purchased a new laptop but is not able to take the printout from her old printer. Identify the type of software needed to take the printout.</p> <p>a) Application software b) Device driver c) Microsoft Software d) Antivirus</p>	1
8.	<p>What is the output of the following code:</p> <pre>num=10 while num&gt;0:     print(num,end=" ")     num-=3 else:     print("loop completed")</pre> <p>a) 10 7 4 1 loop completed b) 10 7 4 1 c) loop completed d) 1 4 7 10</p>	1

9.	<p>What is the output of the following code:</p> <pre>L=[1,2,3,4,5,6] s=0 for x in L:     s=s+(x % 2) print(s)</pre> <p>a) 0 b) 3 c) 9 d) None of these</p>	1
10.	<p>Which of the following statement will return last three characters of the string Str</p> <p>a) Str[3:] b) Str[:3] c) Str[-3:] d) Str[:-3]</p>	1
11.	<p>Suppose list L is declared as</p> <pre>L=[5*i for i in range(0,4)]</pre> <p>then the list L is</p> <p>a) [0,1,2,3] b) [0,1,2,3,4] c) [0,5,10,15] d) [0,5,10,15,20]</p>	1
12.	<p>What is the output of following?</p> <pre>k=('100','200','300','400') d=dict.fromkeys(k) print(d)</pre> <p>a) Error b) {'100':None,'200':None,'300':None, '400',None} c) {'100':0,'200':0,'300':0,'400':0} d) None of these</p>	1
13.	<p>What is the output of following:</p> <pre>d={1:100,2:50,3:25,4:15} s=0 for i in d:     s=s+ ( i*d[i] )     if i&gt;2:         break print(s)</pre> <p>a) 335 b) 100 c) 200</p>	1

	d) 275	
14.	<p>What will be the output of following:  t=(1,2,3,4)  print(sum( t[1:3]*3) )</p> <p>a) Error  b) 15  c) 27  d) 9</p>	1
15.	<p>What is the output of following:  import math  x=-2.4  y=13.6  print(math.floor(x) + math.ceil(y) )</p> <p>a) 12  b) 11  c) 10  d) None of the above</p>	1
16.	<p>Amit received an unexpected email claiming he has won a car in a lucky draw. The message asks him to share his bank account details for identity verification. What kind of cyber threat does this situation represent?</p> <p>a) Cyberbullying  b) Hacking  c) Phishing  d) Eavesdropping</p>	1
17.	<p>Which of the following is considered good social media etiquette?</p> <p>a) Sharing fake news without checking the source  b) Engaging in respectful and constructive comments.  c) Posting private information without permission.  d) Using offensive language in discussion</p>	1
18.	<p>What is the primary objective of the Indian Information Technology Act 2000?</p> <p>a) to regulate internet speed in India  b) to promote social media usage  c) to provide guidelines on the processing, storage and transmission of sensitive information  d) to control television and radio broadcasting</p>	1

19.	<p>What is the primary environmental concern associated with improper disposal of e-waste?</p> <p>a) Increased internet usage b) Loss of phone contacts c) Release of toxic substances into soil and water d) Decrease in software performance</p>	1
	<p>Q20 and 21 are ASSERTION AND REASONING based questions. Make the correct choice as</p> <p>a. Both A and R are True and R is the correct explanation for A. b. Both A and R are True and R is not the correct explanation for A. c. A is True but R is False. d. A is False but R is True.</p>	
20.	<p><b>Assertion (A)</b> : List traversal in python is done through for loop. <b>Reasoning (R)</b> : In list, there is traversal only through forward indexing.</p>	1
21.	<p><b>Assertion (A)</b> : Tuple in python is an ordered and immutable data type. <b>Reasoning (R)</b> : Tuples can contain heterogenous data and permit duplicate values as well.</p>	1
<b>Section B</b>		
22.	<p>Consider the following memory unit expressions:</p> <p>a) <math>2^{10}</math> KB X <math>2^{20}</math> TB b) <math>2^{20}</math> KB X <math>2^{30}</math> MB c) <math>2^{10}</math> MB X <math>2^{30}</math> GB</p> <p>Answer the questions given below:</p> <p>(i) Identify the options with equal storage value (ii) Identify the option that represents highest storage value</p>	2
23.	<p>Differentiate between ASCII and ISCII. OR State and prove the De Morgan's law using truth table.</p>	2
24.	<p>Convert the following:</p> <p>a) <math>(110101.110)_2 = (?)_8</math> b) <math>(BCA2)_{16} = (?)_2</math></p> <p>OR</p> <p>Draw the logic circuit diagram of the following Boolean expression: <math>F = (X' \cdot Y) + (X' + Y')</math></p>	2
25.	<p>Observe the following Python code and find the possible output from the possible output(s) from options (a) to (d). Also, write the minimum value that can be possibly assigned to variable x and maximum value that can be possibly assigned</p>	2

	<p>to variable y.</p> <pre>import random colors = ("Red", "Green", "Blue", "Yellow") x = random.randint(0, 2) y = random.randint(1, 3) for i in range(x, y + 1):     print(colors[i], end="#")</pre> <p>a. Green#Blue# b. Red#Green#Blue# c. Blue#Yellow#Red d. Yellow#Red#</p>	
26.	<p>Write the output of the following code:</p> <pre>stationary = {"Pen": 10, "Pencil": 20, "Eraser": 5} stationary.pop("Pencil") stationary["Marker"] = 12 print(stationary)</pre>	2
27.	<p>Differentiate between Active Digital Footprint and Passive Digital Footprint. OR Write any two ways to make computer education more inclusive for students with disabilities and of all genders.</p>	2
28.	<p>Sonia has written a code in Python to print factorial of a number. Rewrite the corrected code after removing all errors:</p> <pre>m =input( 'enter a number ' ) fact = 1 for i in range( m+1)     fact = fact * i print ( " Factorial " fact)</pre>	2
<b>SECTION C</b>		
29.	<p>What will be the output of the following Python code?</p> <pre>S = 'IPL 2025!' for i in range(len(S)):     if i% 2 ==0:         print (S[i], end='')     elif S[i].isdigit():         print ('*', end='&amp;')     elif S[i] &gt;="L" and S[i] &lt;='O':         print (S[i:], end='@')     else:         print ('\$')</pre>	3

30.	Draw a flowchart to find sum of first n natural numbers.	3
31.	<p>Given a tuple  <math>T=(10,20,30,20,30,100,200)</math>  Write a program that inserts all the elements of tuple T inside a list L without duplicacy as shown:  L will be <math>[10,20,30,100,200]</math></p>	3
32.	<p>Read the following statements carefully:  (i) Ravi copies an article from the internet and submits it as his own in a school competition without crediting the original author.  (ii) Meena downloads a copyrighted image and uses it in her school project without taking permission from the owner, even though she gives credit to the original source.  Answer the following questions:  (a) Identify the type of IPR violation in each of the above cases.  (b) Explain why each act is considered a violation under IPR rules.</p>	1+2=3
<b>Section D</b>		
33.	<p>What will the output of following:  <math>d1=\{1:'one',2:'two',3:'three',4:'four'\}</math>  <math>d2=\{5:'five',6:'six'\}</math>  <math>d3=d1</math>  <math>d1.update(d2)</math>  <math>print(d1)</math>  <math>d1.pop(4)</math>  <math>print(d1)</math>  <math>d1[7]='seven'</math>  <math>print(d3)</math>  <math>print(d1==d3)</math></p>	4
34.	<p>Write a program that accepts a code (string value) from user. The code should adhere to following rules:  (i) Length of code should be exactly 8.  (ii) First three characters of the code must be alphabets(a-z or A-Z)  (iii) Fourth character must be from one of the following  \$, # , @ !  (iv) Last three characters must be digits.  The program prints "Code OK" if all the above rules are met otherwise it should display "Invalid code format".</p>	4
<b>Section E</b>		



35.	<p>a) Write a Python program that takes a string and an integer shift_value as input. The program should then create a new string where each character in the original string is shifted forward by shift_value positions in the alphabet. If a character shifts past 'z' (or 'Z'), it should wrap around to the beginning of the alphabet ('a' or 'A'). Non-alphabetic characters should remain unchanged.</p> <p>For example: If user enter the string as : He23%llo and shift value as 3 then the output should be : Kh23%oor</p> <p>b) Convert the following for loop into while loop: s=0 for i in [1,2,3,4,5]:     s=s+i print(s)</p>	4+1
36.	<p>Write a Python program to create a dictionary called student with the following key-value pairs: - name: "John Doe" - age: 20 - grade: "A"</p> <p>Then, perform the following operations: a) Print the value of the name key. b) Update the value of the age key to 21. c) Add a new key-value pair: course: "Python Programming". d) Remove the grade key-value pair. e) Print the updated dictionary.</p> <p style="text-align: center;">OR</p> <p>Given the following list: numbers = [1, 2, 3, 4, 5] Write a Python statement to a) append the number 6 to the end of the list. b) insert the number 0 at the beginning of the list. c) remove the first occurrence of the number 3 from the list. d) sort the list in descending order. e) print the last element of the list.</p>	1+1+1+1=5
37.	<p>Read the case carefully and answer the questions that follow:</p> <p>Sonali received an email claiming she had won a prize and needed to click a link to claim it. She clicked the link, and a program began installing on her computer without asking for permission. Soon after, her browser homepage changed, unwanted pop-up ads started appearing, and some of her saved passwords stopped working. When she contacted a technician, he explained that multiple forms of malware have infected her system.</p> <p>a) What type of malware did Sonali most likely install by clicking the link? b) What is the impact of the following terms with respect to the Sonali's situation:</p>	1 + 3+1=5

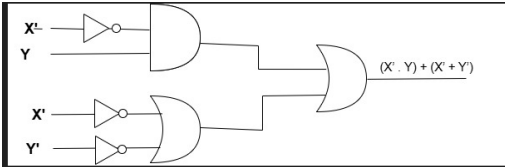
	<p>i. Virus ii. Trojan iii. Adware</p> <p>c) Write two ways to protect Sonali's computer from such malware.</p> <p style="text-align: center;">OR</p> <p>a) Rohan's family recently bought new electronic gadgets, including a laptop and a smartphone. Instead of disposing of the old devices responsibly, they threw them away with household waste. Later, Rohan learned in school that improper disposal of electronic waste can harm the environment and human health due to the toxic substances in e-waste. Based on the above case, answer the following:</p> <p style="padding-left: 40px;">i) What is e-waste? ii) Why is it harmful to dispose of e-waste with regular garbage? iii) Mention any one responsible method of e-waste disposal.</p> <p>b) Reema downloaded a free wallpaper application from an unknown website. Soon after, she lost access to her computer files, and a message appeared asking for money to unlock them.</p> <p style="padding-left: 40px;">Answer the following questions based on the case given above:</p> <p style="padding-left: 80px;">i) Name the type of cybercrime Reema has become a victim of. ii) Mention one precaution she could have taken to avoid this situation.</p>	<p>1+1+1</p> <p>1+1</p>
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**Marking Scheme 2025-2026**  
**Class :XI**  
**Subject: Computer Science(083)**

	Section A	Marks
1.	d) Hard Disk Drive	1
2.	c) XOR	1
3.	b) Interpreter	1
4.	c) GNU General Public License (GPL)	1
5.	d) type()	1
6.	c) Runtime Error	1
7.	b) Device driver	1
8.	a) 10 7 4 1 loop completed	1
9.	b) 3	1
10.	c) Str[-3:]	1
11.	c) [0, 5, 10, 15]	1
12.	b) {'100':None,'200':None,'300':None, '400',None}	1
13.	d) 275	1
14.	b) 15	1
15.	b) 11	1
16.	c) Phishing	1
17.	b) Engaging in respectful and constructive comments.	1
18.	c) to provide guidelines on the processing, storage and transmission of sensitive information	1

19.	c) Release of toxic substances into soil and water	1
20	c) A is True but R is False.	1
21 .	b) Both A and R are True and R is not the correct explanation for A.	1
	<b>Section B</b>	
22 .	(i) a) and b) (ii) c)	$\frac{1}{2} + \frac{1}{2}$  1

23 .	<table> <tr> <th>Feature</th><th>ASCII (American Standard Code for Information Interchange)</th><th>ISCII (Indian Standard Code for Information Interchange)</th></tr> <tr> <td><b>Full Form</b></td><td>American Standard Code for Information Interchange</td><td>Indian Standard Code for Information Interchange</td></tr> <tr> <td><b>Developed by</b></td><td>ANSI (American National Standards Institute)</td><td>Bureau of Indian Standards (BIS), India</td></tr> <tr> <td><b>Purpose</b></td><td>Represent English characters using binary codes</td><td>Represent Indian scripts like Devanagari, Tamil, Telugu, etc.</td></tr> <tr> <td><b>Character Set Size</b></td><td>128 characters (7-bit)</td><td>256 characters (8-bit)</td></tr> <tr> <td><b>Language Support</b></td><td>English only</td><td>Supports many Indian languages</td></tr> <tr> <td><b>Examples</b></td><td>A = 65, a = 97, 1 = 49</td><td>Includes characters like क, ख, अ, etc.</td></tr> <tr> <td><b>Usage</b></td><td>Widely used globally in programming, networking, etc.</td><td>Used in Indian language processing</td></tr> <tr> <td><b>Limitations</b></td><td>Cannot handle Indian or other complex scripts</td><td>Limited to Indian languages but better suited for them</td></tr> </table>	Feature	ASCII (American Standard Code for Information Interchange)	ISCII (Indian Standard Code for Information Interchange)	<b>Full Form</b>	American Standard Code for Information Interchange	Indian Standard Code for Information Interchange	<b>Developed by</b>	ANSI (American National Standards Institute)	Bureau of Indian Standards (BIS), India	<b>Purpose</b>	Represent English characters using binary codes	Represent Indian scripts like Devanagari, Tamil, Telugu, etc.	<b>Character Set Size</b>	128 characters (7-bit)	256 characters (8-bit)	<b>Language Support</b>	English only	Supports many Indian languages	<b>Examples</b>	A = 65, a = 97, 1 = 49	Includes characters like क, ख, अ, etc.	<b>Usage</b>	Widely used globally in programming, networking, etc.	Used in Indian language processing	<b>Limitations</b>	Cannot handle Indian or other complex scripts	Limited to Indian languages but better suited for them	1 + 1 = 2
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	<p>OR</p> <p>De Morgans Law state: <math>(A.B)'= A'+B'</math></p> <table><tr><td>A</td><td>B</td><td>A'</td><td>B'</td><td>(A.B)'</td><td>A'+B'</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table> <p>OR</p> <p><math>(A+B)'= A'.B'</math></p> <table><tr><td>A</td><td>B</td><td>A'</td><td>B'</td><td>(A+B)'</td><td>A'.B'</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>	A	B	A'	B'	(A.B)'	A'+B'	0	0	1	1	1	1	0	1	1	0	1	1	1	0	0	1	1	1	1	1	0	0	0	0	A	B	A'	B'	(A+B)'	A'.B'	0	0	1	1	1	1	0	1	1	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	
A	B	A'	B'	(A.B)'	A'+B'																																																									
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25	<p>a. Green#Blue#</p> <p>b. Red#Green#Blue#</p> <p>Minimum value of x = 0</p> <p>Maximum value of y = 3</p>	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 2$																																																												
26	<p><code>{"Pen": 10, "Eraser": 5, "Marker": 12}</code></p>	2																																																												
27	<table><tr><th>Active Digital Footprint</th><th>Passive Digital Footprint</th></tr><tr><td><ul style="list-style-type: none"><li>Created when a user intentionally shares information online.</li><li>It includes activities like:<ul style="list-style-type: none"><li>Sending emails</li><li>Posting on social media</li><li>Filling online forms</li></ul></li></ul></td><td><ul style="list-style-type: none"><li>Created without the user’s direct knowledge or intent.</li><li>It includes data collected automatically when:<ul style="list-style-type: none"><li>Visiting websites</li><li>Browsing the internet</li></ul></li></ul></td></tr></table>	Active Digital Footprint	Passive Digital Footprint	<ul style="list-style-type: none"><li>Created when a user intentionally shares information online.</li><li>It includes activities like:<ul style="list-style-type: none"><li>Sending emails</li><li>Posting on social media</li><li>Filling online forms</li></ul></li></ul>	<ul style="list-style-type: none"><li>Created without the user’s direct knowledge or intent.</li><li>It includes data collected automatically when:<ul style="list-style-type: none"><li>Visiting websites</li><li>Browsing the internet</li></ul></li></ul>	2																																																								
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	<div> <div> <ul style="list-style-type: none"> <li>○ Commenting on websites or apps</li> </ul> </div> <div> <ul style="list-style-type: none"> <li>• Captures details like IP address, device information, and browsing behavior.</li> </ul> </div> </div> <p>OR</p> <ul style="list-style-type: none"> <li>• Use of assistive technologies like screen reader, voice input or adapted keyboard</li> <li>• Creating a respectful and bias free classroom environment</li> <li>• Enhancing equal participation and opportunities for all genders</li> </ul> <p>Any two</p>	
	<b>Section C</b>	
28	<pre> m =int(input( 'enter a number ')) #Error1 fact = 1 for i in range( <u>1</u>, m+1):      #Error 2, 3     fact = fact * i print (" Factorial ", fact)      #Error 4 </pre>	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$
29	<p>I\$</p> <p>L\$</p> <p>2*&amp;2*&amp;!</p>	1+1+1
30	<pre> graph TD     Start([Start]) --&gt; Init[i = 1, sum = 0]     Init --&gt; ReadN[/Read N/]     ReadN --&gt; Decision{if i &lt;= N}     Decision -- yes --&gt; Process[sum=sum+i&lt;br/&gt;i=i+1]     Process --&gt; Decision     Decision -- no --&gt; PrintSum[Print sum]     PrintSum --&gt; Stop([Stop]) </pre>	<p><math>\frac{1}{2}</math> mark for start and stop</p> <p><math>\frac{1}{2}</math> mark for inputting values,</p> <p>1 mark for condition</p> <p><math>\frac{1}{2}</math> mark for cumulative sum and incrementing value of i</p> <p><math>\frac{1}{2}</math> marks for printing result</p>

31	<pre> T=(10,20,30,20,30,100,200) L=[] for x in T:     if not ( x in L):         L.append(x) print(L) </pre>	1 mark for loop 1 mark for if ½ for append ½ for print
32	<p>(a) case (i) Plagiarism and case(ii) Copyright infringement</p> <p>(b)</p> <ul style="list-style-type: none"> <li>• <u>Plagiarism</u>: Ravi submitted someone else's work as his own without giving proper credit. This violates academic and ethical standards, as it misrepresents the original author's work.</li> <li>• <u>Copyright Infringement</u>: Meena used a copyrighted image without permission. Even though she gave credit, using someone's work without a license or consent still infringes on the owner's exclusive rights under copyright law.</li> </ul>	½ + ½   1   1
	<b>Section D</b>	
33	<pre> {1: 'one', 2: 'two', 3: 'three', 4: 'four', 5: 'five', 6: 'six'} {1: 'one', 2: 'two', 3: 'three', 5: 'five', 6: 'six'} {1: 'one', 2: 'two', 3: 'three', 5: 'five', 6: 'six', 7: 'seven'} True </pre>	1+1+1+1
34	<pre> code=input("Enter a string") flag1=0 if len(code)==8:     flag1=1 flag2=1 x=code[0:3] for a in x:     if not (a.isalpha() ):         flag2=0         break flag3=0 y=code[3] if y in "\$#@!":     flag3=1 flag4=1 z=code[5:8] for b in z:     if not(b.isdigit() ):         flag4=0         break if flag1==0 or flag2==0 or flag3==0 or flag4==0: </pre>	1 mark for each part

	<pre> print("invalid code format ") else:     print("code ok ") </pre>	
SECTION E		
35	<pre> text = input("Enter a string: ") shift_value = int(input("Enter shift value: ")) result = "" for char in text:     if char.isalpha():         if char.isupper():             base = ord('A')         else:             base = ord('a')         shifted = chr((ord(char) - base + shift_value) % 26 + base)         result += shifted     else:         result += char # Keep non-alphabetic characters unchanged print("Shifted string:", result)  b. s=0 k=[1,2,3,4,5] i=0 while i&lt; len(k):     s=s+k[i]     i +=1 print(s) </pre>	<p>½</p> <p>1</p> <p>½</p> <p>1</p> <p>½</p> <p>½</p> <p>1</p>
36	<pre> student= {'name': "John Doe", 'age': 20, 'grade': "A"} a) print(student['name']) b) student['age']=21 c) student['course']= "Python Programming" d) del(student['grade']) e) print(student)  OR  a) numbers.append(6) b) numbers.insert(0,0) c) numbers.remove(3) d) numbers.sort(reverse=True) e) print (numbers[-1]) </pre>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>OR</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>



37	<p>(a) Trojan (disguised as a prize-claiming tool), possibly accompanied by adware and virus.</p> <p>(b) <u>Virus</u>: May have spread into her system after downloading the malware, potentially corrupting files or disabling security features.  <u>Trojan</u>: The fake prize-claiming software acted as a Trojan, secretly harming her system after appearing legitimate.  <u>Adware</u>: Caused the frequent appearance of unwanted pop-up advertisements and browser changes.</p> <p>(b) Avoid clicking suspicious email links or downloading attachments from unknown sources.  Use up-to-date antivirus/anti-malware software.  OR</p> <p>a)</p> <p>i) E-waste refers to discarded electronic devices like phones, laptops, and televisions.  ii) E-waste contains harmful chemicals that can leak into the soil and water, polluting the environment and affecting human health.  iii) One responsible method is recycling the devices through certified e-waste collection centers.</p> <p>b)</p> <p>i) Ransomware  ii) She could have avoided downloading software from untrusted or malicious websites.</p>	<p>1</p> <p>1+1+1</p> <p><math>\frac{1}{2} + \frac{1}{2}</math></p> <p>1+1+1</p> <p>1+1</p>
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