

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX (CHEMISTRY)
SUMMER ASSIGNMENT : SCIENCE & TECHNOLOGY
CHAPTER : 1 (MATTER IN OUR SURROUNDING)

1. Change the following temperatures to Kelvin scale:
(a) 40°C (b) 80°C
2. Two materials A and B are taken separately in a jug, a bottle and a jar. The shape of both the materials changes when taken into different containers but volume of A remains the same and the volume of B changes with the sizes of the containers. Identify the state of A and B.
3. Give one similarity between a liquid and a gas and one dissimilarity.
4. Take some water in a glass, a cup and a saucer separately. Leave them in open for few days in a corner of your house and make observation everyday.
 - (i) In which of the three cases evaporation process is faster?
 - (ii) On what factor does it depend?
5. The pistons of three syring one filled with air, 2nd filled with water and 3rd with chalk powder are pushed inward with equal force:
 - (i) What will you observe?
 - (ii) What can be concluded from this activity?
6. You are provided with a mixture of naphthalene and sodium chloride by your teacher. Suggest an activity to separate them with well labeled diagram.
7. What is dry ice? Why it is always stored under high pressure?
8. After a hot sunny day, people often sprinkle water on the roof or open ground. Explain why?
9. A student opened a water tap and tried to break the stream of water with his fingers. Would he be able to cut the stream of water. Give reason for your answer.
10. show the inter conversion of the three states of matter with the help of a flow chart. Also name the process.

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Class : IX
SUMMER ASSIGNMENT : SCIENCE & TECHNOLOGY
CHAPTER : 5 (FUNDAMENTAL UNITS OF LIFE)

1. Why all cells do not look alike? Explain with example.
2. Lysosomes destroy any material which enter the cells. Is there any animal cell which lack lysosomes?
3. What is common between mitochondria and plastid?
4. What kind of plastid is more common in
(a) roots of plant (b) leaves of plant (c) flowers and fruits
5. Describe the structure and function of cell membrane.
6. Name the process for the following:
 - (i) A plant cell in hypertonic solution.
 - (ii) Entry of oxygen into cell
 - (iii) Absorption of water by plant roots
 - (iv) Engulfing of food by Amoeba
 - (v) Formation of plasma membrane by some of the proteins and lipids secreted by Endoplasmic reticulum.
7. Name the cell organelle in which the following structures are found:
 - (i) Cristae (ii) Stroma (iii) Centriole (iv) Chromosomes
8. Draw a well labeled diagram of :
 - (i) Plant Cell (ii) Animal Cell (iii) Prokaryotic Cell
9. Describe Osmosis. What is its significance?
- 10. One word answer:**
 - (i) Finger like structures in mitochondria.
 - (ii) Membrane of Vacuole.
 - (iii) Fluid contained in Vacuole.
 - (iv) Organelle having own DNA.
 - (v) Energy currency of cell.

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX (BIOLOGY)
SUMMER ASSIGNMENT : SCIENCE & TECHNOLOGY
CHAPTER : 6 (PLANT TISSUE)

1. Multiple Choice Questions:

- (i) Meristematic tissue in plant are:
- (a) localized and permanent (b) not limited to certain regions
(c) localized and dividing cells (d) growing in volume
- (ii) The dead element present in phloem tissue is
- (a) companion cell (b) phloem fibres
(c) phloem parenchyma (d) sieve tube
- (iii) The water conducting tissue in plant is
- (a) Xylem (b) Phloem
(c) Sieve tube (d) Companion cells
- (iv) Flexibility in plants is due to
- (a) Collenchyma (b) Sclerenchyma
(c) Parenchyma (d) Chlorenchyma
- (v) If the tip of sugarcane plant is removed, even then it keeps on growing in length. It is due to :
- (a) cambium (b) apical meristem
(c) lateral meristem (d) intercalary meristem
- (vi) Cork cells are made impervious to water and gases by the presence of :
- (a) cellulose (b) suberin
(c) lipids (d) lignin
- (vii) Survival of plants in terrestrial environment has been made possible by presence of:
- (a) intercalary meristem (b) conducting tissue
(c) apical meristem (d) parenchymatous tissue

2. Answer the following questions briefly:

- (i) If well watered potted plant is covered with a glass jar, water vapours appear on the wall of glass jar. Explain why?
- (ii) "Aquatic plants like water hyacinth and lotus floats on water surface." Explain why?

3. Give the suitable reasons for following statements:

- (i) Meristematic cells have a prominent nucleus and dense cytoplasm but lack vacuoles.
- (ii) Intercellular spaces are absent in sclerenchymatous tissue.
- (iii) Branches of a tree move and bend freely in high wind velocity.
- (iv) It is difficult to pull out the husk of a coconut.

4. Identify the type of plant tissue found in :

- (i) Husk of a coconut.
- (ii) Bark of a tree.
- (iii) Stalk of a leaf, fruits.

5. Name the chemical present in :

- (i) Cell wall in cells of parenchyma tissue
- (ii) Cork cells

6. Differentiate between:

- (i) Parenchyma, collenchyma, sclerenchyma on the basis of cell wall, intercellular spaces.
- (ii) Xylem and phloem on the basis of function and elements.

7. Fill in the blanks:

- (i) The girth of the stem increases due to _____.
- (ii) Stomata are enclosed by _____ kidney-shaped cells called _____.
- (iii) _____ is present at the growing tips of roots of stems.
- (iv) A chemical substance which acts as cement and hardens the sclerenchyma is _____.

8. Draw a labelled diagram of phloem tissue.

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Class : IX (CHEMISTRY)
SUMMER ASSIGNMENT : SCIENCE & TECHNOLOGY
CHAPTER : 8 (MOTION)

Q1. In a long race, the athletes were expected to take four rounds of the track such that the line of finish was the same as the line of start. Suppose the length of the track was 200 m.

- (i) What is the total distance to be covered by the athletes?
- (ii) What is the displacement of the athletes when they touch the finish line?
- (iii) Is the motion of the athletes uniform or non-uniform?
- (iv) Is the displacement of an athletes and distance moved by him at the end of race equal?

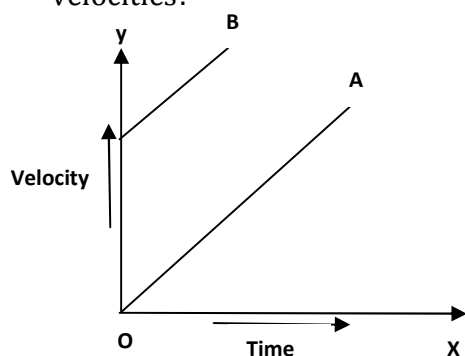
2. A train travels at 60 Km/h for 0.52 h; at 30 Km/h for the next 0.24 h and at 70 Km/h for next 0.71 h. What is the average speed of train?

3. Units of uniform speed and non-uniform speed are :
 (i) m/s, m/s² (b) m/s, m²/s (c) m/s, m/s (d) m-s, m/s

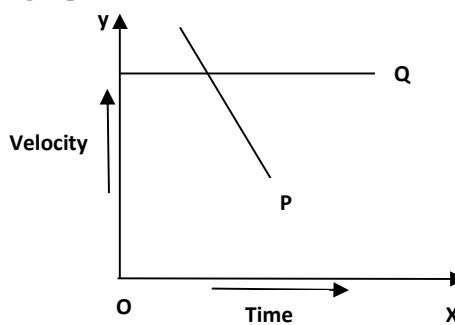
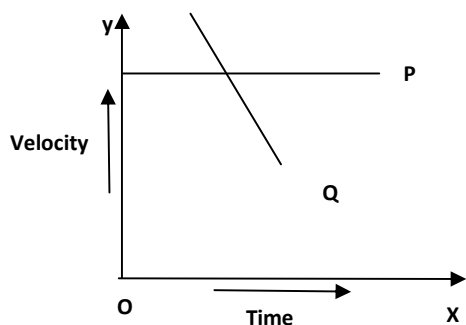
4. A train starting form rest moves with uniform acceleration of 0.2 m/s² for 5 mins. Calculate the speed acquired and distance travelled at this time?

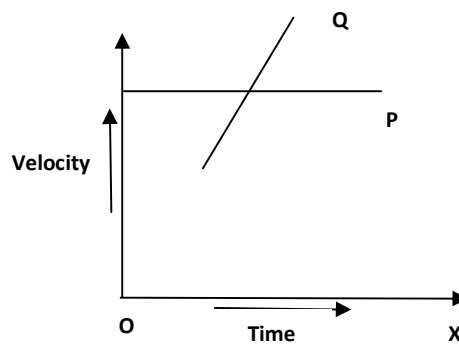
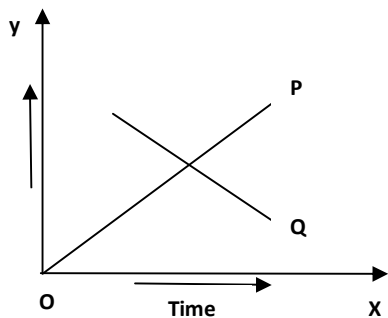
5. A cyclist goes once around a circular track of diameter 105 metre in 5 mins. Calculate his speed.

6. From the velocity time graph of bodies A and B, what do you infer about their initial velocities?

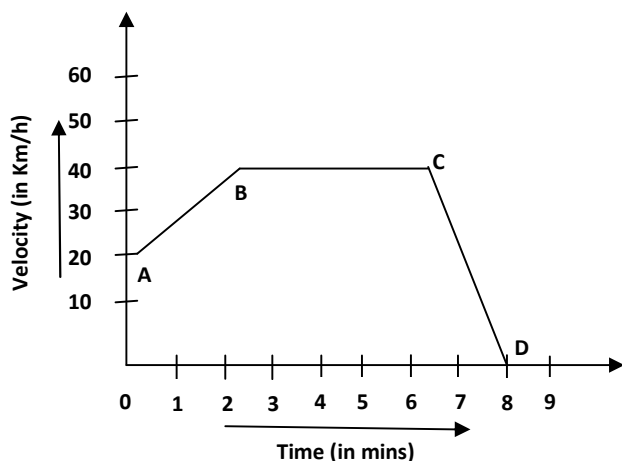


7. A body P moves with uniform velocity and another body Q moves with uniform retardation. The correct velocity time graph of two bodies is :





8. A body is dropped vertically from a certain height. Draw a Velocity-Time graph of a body.
9. Draw a Velocity-Time graph of a stone thrown vertically upwards and then coming downwards after attaining the maximum height.
10. The following is the Velocity-time graph for a moving body:



Find:

- (i) Velocity of body of point C
- (ii) Acceleration acting on body between A and B.
- (iii) Acceleration acting on body between B and C.

Value Based Question

Puja and Neha are close friends. Puja is a science graduate and Neha is a commerce graduate. Puja finds that while driving on a clear highway. Neha often exceeds the limit and argues that there is no harm in doing so when the road is clear. Puja does not agree with her and tells her that with increase in speed stopping distance of car would increase and she would not be able to manage things if some stray cattle etc. appears suddenly on the way.

Read the above passage and answer the following questions:

- (i) Is Puja right in her statement?
- (ii) What values are displayed by Puja in her statement?
- (iii) How is stopping distance related to speed of vehicle?

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX (GEOGRAPHY)
SUMMER ASSIGNMENT : SOCIAL SCIENCE
CHAPTER : 1 (INDIA – SIZE LOCATION)

1 Marks Questions:

- (i) What is the latitudinal extent of India?
- (ii) What is the longitudinal extent of India?
- (iii) Which neighbouring country has the longest land border with India?
- (iv) What is the position of India in terms of area and population?
- (v) Name the two water bodies which separate India from Sri Lanka.
- (vi) What is the North-South extent of India?
- (vii) What is the East-West extent of India?
- (viii) With reference to longitudes, India is situated in which hemisphere.
- (ix) When was the Suez Canal opened?
- (x) When and how was the 'Indira Point' submerged under sea water?

3 or 5 Marks Questions:

- (i) What is the latitudinal extent of India? How is the latitudinal spread in India advantageous to her.
- (ii) Explain the size and location of India.
- (iii) What is the longitudinal extent of India? What does its implication?
- (iv) How did India's land route and maritime contacts with the world contribute its trade and culture in ancient time.
- (v) What is IST? Why it has been so selected? What is the importance of IST?
- (vi) Why is the difference between the duration of day and night hardly felt at Kanyakumari but not so in Kashmir?
- (vii) When the sun has already risen in Arunachal Pradesh. It is still dark in Gujarat, Why?
- (viii) Why is central location of India at the lead of Indian ocean considered of great significance?
- (ix) Write a note on India's neighbouring countries.

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX
SUMMER ASSIGNMENT : SOCIAL SCIENCE
CHAPTER : 1 (FRENCH REVOLUTION)

1 Marks Questions:

- (i) In which book did Rousseau mentioned the idea of one person, one vote.
- (ii) Which rule was established in France after fall of Jacobin Government.
- (iii) Name the Fortress-prison of France.
- (iv) What were subsistence crisis?
- (v) What was the tax levied by the state called?
- (vi) Explain the term active citizen.
- (vii) When did French women get voting rights?
- (viii) List the names of two Indians who responded to the ideas of Revolutionary France.
- (ix) Write the name of some revolutionary women of France.
- (x) Define the term 'Triangular trade'.

3 or 5 Marks Questions:

- (i) Explain the political, economic and social causes of French Revolution.
- (ii) Write about the three main French Philosophers and their role in French Revolution 1789.
- (iii) Why were the representatives of the third estates disappointed with the pattern of voting in Estate General?
- (iv) What were the main features of French constitution of 1791?
- (v) Explain the conditions which led to the rise of Jacobins.
- (vi) Which period in France history is known as the region of terror and why?
- (vii) Describe the changes brought out by the govt. setup after the fall of Jacobin.
- (viii) Explain the role of women in transforming the society.
- (ix) Explain triangular slave trade carried on during 18 & 19 century.
- (x) Discuss the impact of abolition of censorship in Franch.
- (xi) Explain the achievements of Napoleon.
- (xii) Describe the legacy of the French Revolution for the people of the world during the 19th & 20th centuries.

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX (CIVICS)
SUMMER ASSIGNMENT : SOCIAL SCIENCE
CHAPTER : 2 (WHAT IS DEMOCRACY? WHY DEMOCRACY?)

1 Marks Questions:

- (i) What do you mean by rule of law?
- (ii) What is constitutional monarchy?
- (iii) What is the name of the Chinese parliament?
- (iv) In which year Zimbabwe attained independence from white minority?
- (v) Name a country where women do not have the right to vote.
- (vi) By whom was the 'Legal Framework Order' issued in Pakistan?
- (vii) After how many years does Mexico hold elections for electing its president?
- (viii) Before contesting election in China, whose approval does a candidate need to have?
- (ix) During which period did China record its worst famine in the world's history?
- (x) Define dictatorship?

3 or 5 Marks Questions:

- (i) Explain the features of democracy?
- (ii) Elections in China do not represent the people's verdict. Explain.
- (iii) Keeping in mind the basic features of democracy how can you say that India is a democratic country?
- (iv) Illustrate the values we can learn from democracy.
- (v) Explain the major arguments against democracy.
- (vi) Why is democracy better than any other form of government? Write five arguments in support your answer.
- (vii) What was PRI? Highlight dirty tricks played by it to win election in Mexico.
- (viii) Why Pakistan under General Musharaff should not be called a democracy? Mention the reasons.
- (ix) Why can't Zimbabwe be considered a truly democratic country under Robert Mugabe.
- (x) Distinguish between the democratic government and non-democratic government.

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX
SUMMER ASSIGNMENT : SOCIAL SCIENCE
CHAPTER : THE STORY OF VILLAGE PALAMPUR

1 Mark Questions:

- (i) What is main activity of Palampur village?
- (ii) Define human capital.
- (iii) What are Kharif crops?
- (iv) Define Rabi Crops?
- (v) What do you mean by multiple cropping?
- (vi) Define the term HYV.
- (vii) Define the term Green Revolution.
- (viii) What is the minimum wage set up by the government for agriculture labourers?
- (ix) Which is the most abundant factor of production?
- (x) Mention the standard unit for measuring the area of land.

3 or 5 Marks Questions:

- (i) How can you say that Palampur is a well developed village?
- (ii) What is Green Revolution? What are the achievements & drawbacks of Green Revolution?
- (iii) Why are farmers at Palampur able to grow different crops in a year? Explain.
- (iv) What is the aim of production? State any four requirements needed for production of goods.
- (v) How do large, medium and small farmers arrange capital for farming?
- (vi) Why are the wages for farm labourers in Palampur less than minimum wages?
- (vii) What can be done so that more non-farm production can be started in villages?
- (viii) What is physical capital? What are its different types?
- (ix) What is the difference between multiple cropping and modern farming methods?
- (x) What are the non-farming production activities of the rural areas?

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX
SUMMER ASSIGNMENT : SOCIAL SCIENCE
CHAPTER : 2(PHYSICAL FEATURES OF INDIA)

I. Answer the following questions in brief:

- (i) Define Gondwana Land.
- (ii) What is Tethys sea?
- (iii) **Define the following terms:**
 - (a) Peninsula
 - (b) Archipelago
 - (c) Lagoon
 - (d) Duns
 - (e) Alluvial Plain
 - (f) Atoll
 - (g) Levees
 - (h) Bar
 - (i) Bluff
 - (j) Pangea
- (iv) What are the five physical units of India?
- (v) Name the three major rivers of India which constitute North Indian Plains.
- (vi) Name the five hills ranges constituting the Purvanchal.
- (vii) What are the Himalayas are as called young mountains?
- (viii) Which is the largest delta of the world?
- (ix) Which part of India is the oldest?
- (x) What is a lagoon? Which state of India is known for it?
- (xi) What is the length of the Karakoram range and the Himalayan mountains?
- (xii) Mention the names of the parts of Himalayan mountain chain (according to latitude & longitude.)
- (xiii) Mention the extends of the great plains of the North.
- (xiv) How the great plains of the North have been built?
- (xv) Mention the name of the places from where the Indus, Brahmaputra and Ganga originate?
- (xvi) Write the names of five tributaries of the Indus river.
- (xvii) What is the name of Brahmaputra in Tibet and Bangladesh?
- (xviii) Name the largest and most fertile delta in the world.
- (xix) What do you understand by the word 'Doab'?
- (xx) What do you know about Terai Region?

- (xxi) What is meant by 'Pass'?
- (xxii) Name the rivers, those are feeded by glaciers.
- (xxiii) Why it is called that Satluj Basin is a granary of the country?
- (xxiv) What do you know about Northerb circars?
- (xxv) What are sand dunes and Barchans?
- (xxvi) Name the river found in Indian desert.
- (xxvii) Which is the largest saltwater lake in India? Name the state where this lake is located?
- (xxviii) Name the earlier name of Lakshadweep Island.
- (xxix) Where is India's only active volcano?
- (xxx) Define distributaries.

II. Answer the following questions in detail:

- (i) Explain the plate movement.
- (ii) Describe how the Himalayas were formed?
- (iii) Write a note on the Himalayas mountains.
- (iv) How are Himalayas divide in the East-West direction?
- (v) Describe the Northern Great Plains in India. How would you divide the Northern Plains on the basis of relief?
- (vi) Explain the features of the great peninsular plateau of India or Deccan plateau.
- (vii) Give a brief description of Indian desert.
- (viii) Explain the coastal plains of India.
- (ix) Give a brief description about two Island group of India.
- (x) Write about the main features of Himadri, Himachal, Shiwaliks.
- (xi) What is the difference between the Western and Eastern Himalayas?
- (xii) What is the difference between Khandar and Bhangar?
- (xiii) Differentiate between Western Ghats and Eastern Ghats.
- (xiv) What is the difference between gorge and rift valley?
- (xv) Write a note on corals.

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX
SUMMER ASSIGNMENT : MATHEMATICS
CHAPTER : 1(NUMBER SYSTEM)

1. If $a = 2, b=3$ find the value of $(\frac{1}{a} + \frac{a}{b})^a$
2. Represent $\sqrt{10.5}$ on number line.
3. Find the value of $0.\overline{23} + 0.\overline{22}$.
4. If $5^{x-2} \times 5^{2x-3} = 135$, find the value of x .
5. Prove that $\frac{16 \times 2^{n+1} - 4 \times 2^n}{16 \times 2^{n+2} - 2 \times 2^{n+2}} = \frac{1}{2}$
6. Find the value of m for which

$$\left(\left(\left(\left(\frac{1}{7^2} \right) \right)^{-1/3} \right)^{1/4} \right) = 7^m$$
7. Prove that $\frac{a^{-1}}{a^{-1}+b^1} + \frac{a^{-1}}{a^{-1}+b^{-1}} = \frac{2b^2}{b^2-a^2}$
8. Prove that $\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{4}} + \frac{1}{\sqrt{4}+\sqrt{5}} + \frac{1}{\sqrt{5}+\sqrt{6}} + \frac{1}{\sqrt{6}+\sqrt{7}} + \frac{1}{\sqrt{7}+\sqrt{8}} + \frac{1}{\sqrt{8}+\sqrt{9}} = 2$
9. Simplify : $\frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}}$
10. If $2^x = 3^y = 6^{-z}$, find $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$
11. If both a and b are rational number, then find the value of a and b :

$$\frac{3+\sqrt{7}}{3-\sqrt{7}} = a + b\sqrt{7}$$
12. Simplify $\frac{\sqrt[7]{3}}{\sqrt{10+\sqrt{3}}} - \frac{\sqrt[2]{5}}{\sqrt{6+\sqrt{5}}} - \frac{\sqrt[3]{2}}{\sqrt{15+\sqrt[3]{2}}}$
13. Simplify : $\sqrt[4]{81} - 8\sqrt[3]{216} + 15\sqrt[5]{32} + \sqrt{225}$
14. Rationalize : $\frac{1}{\sqrt{2}+\sqrt{3}+\sqrt{5}}$

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Class : IX
SUMMER ASSIGNMENT : MATHEMATICS
CHAPTER : 2(POLYNOMIAL)

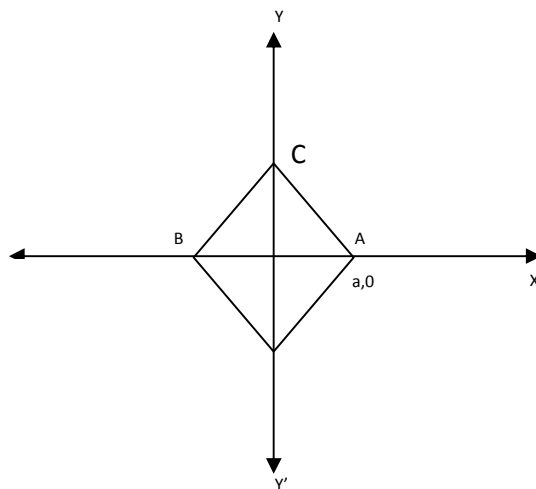
1. If $x + \frac{1}{x} = \sqrt{5}$, find $x^2 + \frac{1}{x^2}$ and $x^4 + \frac{1}{x^4}$
2. If $3x-7y = 10$, $xy = -1$, find $9x^2+49y^2$
3. If $a^2+b^2+c^2 = 250$, $ab+bc+ca = 3$, find $a+b+c$
4. If $x^2 + \frac{1}{x^2} = 83$, find $x^3 - \frac{1}{x^3}$
5. Factorise:
 - (i) $a^{12}x^4 - a^4x^{12}$
 - (iv) $2(5x - \frac{1}{x}) - 3(5x - \frac{1}{x}) - 2$
6. Factorise: $(a^2-b^2)^3 + (b^2-c^2)^3 + (c^2-a^2)^3$
7. Let R_1 & R_2 are remainder when the polynomials $x^3+2x^2-5ax-7$ and $x^3+ax^2-12x+6$ are divided by $x+1$ and $x-2$ resp. If $2R_1 + R_2 = 6$ find value of a .
8. If $f(x) = x^4-2x^3+3x^2-ax+b$ a polynomial s.t. when it is divided by $x-1$ and $x+1$ remainder are resp. 5 and 19. Determine the remainder when $f(x)$ is divided by $x-2$.
9. With actual division, prove that $2x^4 - 5x^3 + 2x^2 - x + 2$ is exactly divided by $x^2 - 3x + 2$.
10. What must be subtracted from $4x^4 - 2x^3 - 6x^2 + x - 5$ so that the result is exactly divisible by $2x^2 + x - 1$?
11. Factorise : $2x^4 + x^3 + 14x^2 - 19x - 6$
12. Factorise : $2y^3 - 5y^2 - 19y + 42$
13. If x^2-1 is a factor of $ax^4+bx^3+cx^2+dx+e$ show that $a+c+e=b+d$
14. If $x^2 + \frac{1}{x^2} = 62$ then find $x^3 + \frac{1}{x^3}$
15. If $x^4 + \frac{1}{x^4} = 194$ then find $x^3 + \frac{1}{x^3}$
16. If $f(x) = x^2 - 5x + 1$, evaluate : $f(2) - f(-1) + f\left(\frac{1}{5}\right)$
17. If $a+b+c=0$, find value of
$$\frac{(b+c)^2}{bc} + \frac{(c+a)^2}{ca} + \frac{(a+b)^2}{ab}$$
18. If $a+b+c=9$, $a^2+b^2+c^2=35$, find value of $a^3+b^3+c^3-3abc$

D.A.V. PUBLIC SCHOOL, KURUKSHETRA

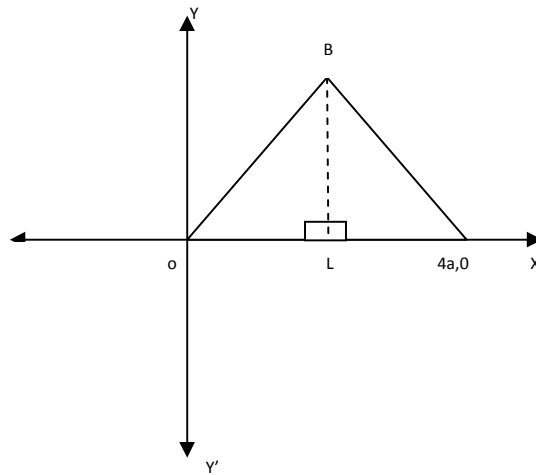
Class : IX

**SUMMER ASSIGNMENT : MATHEMATICS
CHAPTER : 3(COORDINATE GEOMETRY)**

1. Plot the points A(0,3),B(5,0),C(-5,5),D(5,-5),E(1.5,3),F(-2.25,-4)
2. Plot any three points on graph such that abscissa of each point is equal to its ordinate. Join these points do they lie on a line passing origin.
3. Write the equation of y-axis.
4. Write the equation of x-axis.
5. Write the equation of any line parallel to y-axis.
6. Write the coordinate of a point whose ordinate is three more than twice its abscissa.
7. Plot the point P(a,-b) and the point Q(-a,-b) in the Cartesian plane for $a > 0$ and $b > 0$.
8. Find the area of triangle formed by the points (3,4),(-3,0) and (3,0)
9. Find the coordinate of a point which lies on y-axis & at a distance of 5 units above the x-axis.
10. Write the mirror image of the following points w.r.t x-axis and y-axis
(i) (2,3) (ii) (-4,5) (iii) (-3,-3) (iv) (5,-6)
11. Plot the points P(3,0),Q(7,9), R(-6,9) and S(-2,0) and
(i) Name the figure PQRS.
(ii) Find the area of PQRS.
12. Plot the points P(1,0), Q(4,0) and S(1,3). Find the coordinates of Point R such that PQRS is a square.
13. The base AB of two equilateral triangles ABC and ABC' with side 2a along x-axis, such that the mid-point of AB is at the origin as shown. Find the coordinates of the vertices C and C'.



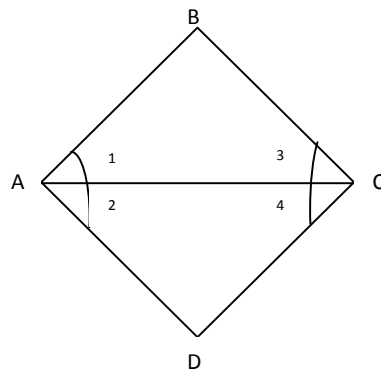
14. Find the coordinate of vertices of an equilateral triangle of sides $4a$ as shown in figure.



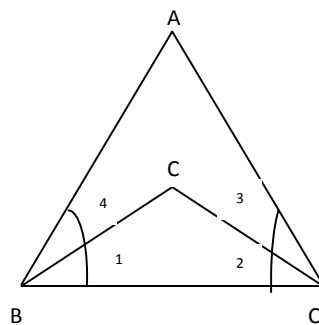
15. Write the coordinates of the vertices of rectangle whose length and breadth are respectively 5 units and 3 units, one vertex at origin, the longer side on the x-axis and one of the vertices lies in the third quadrant.
16. Points $A(5,3)$, $B(-2,3)$ and $D(5,-4)$ are three vertices of a square $ABCD$. Plot these point on the graph paper and hence find the coordinates of the vertex C .

D.A.V. PUBLIC SCHOOL, KURUKSHETRA
Class : IX
SUMMER ASSIGNMENT : MATHEMATICS
CHAPTER : 5 (EUCLID'S GEOMETRY)

1. To which country does Thales belong?
2. In Indus Valley Civilisation (about 300 B.C), what was the ratio of the dimensions of the bricks used for construction work.
3. If $AB = PQ$ and $PQ = XY$ prove that $AB = XY$. Explain by drawing the figure.
4. Prove that an equilateral triangle can be drawn on any given line segment.
5. Learn Euclid's fifth postulate.
6. In figure $\angle 1 = \angle 3$, $\angle 2 = \angle 4$ show that $\angle A = \angle C$ by using appropriate axiom.



7. If l and m are intersecting lines, $l \parallel p$ and $m \parallel q$, show that p and q also intersect.
8. Define :
 (i) Line segment (ii) ray (iii) line (iv) Parallel lines
9. In the given figure, $\angle ABC = \angle ACB$ and $\angle 3 = \angle 4$, show that $BD = DC$.



DAV PUBLIC SCHOOL, KURUKSHETRA
SUMMER ASSIGNMENT
CLASS - IX
HINDI

1. लेखक ने गधे कि तुलना ऋषि-मुनियों से क्यों की है।
2. गिरे हुए बैरी पर सोंग नहीं चलाना चाहिए। - इस कथन के आधार पर हीरा की चारित्रिक विशेषताएँ लिखिए।
3. नीलामी में आए दड़ियल आदमी को देखकर दोनों बैल क्यों भयभीत हो गए?
4. तिब्बत में यात्रियों के लिए क्या कठिनाइयाँ थीं?
5. तिब्बत में डाँड़े क्या हैं? उनकी विशेषता लिखिए।
6. भिक्षु नम्से की चरित्रिक विशेषताओं को लिखिए?
7. इस किसका प्रतीकार्थ है? वे अन्यत्र क्यों नहीं जाना चाहते हैं?
8. निरपेक्ष होई के हरि भजै सोई संत सुजान के माध्यम से कवि ने क्या सीख है?
9. विष अमृत कब बन जाता है?

क्रियाकलाप

1. नूडल्स बर्गर जैसे अस्वास्थ्यकर जंक फूड के विज्ञापन बनाकर ये बताना कि हमारे स्वास्थ्य के लिए ये कितने हानिकारक हैं?
2. 'स्त्री शिक्षा कितनी आवश्यक' से संबंधित सचित्र वर्णन किजिए।

प्रश्न नीचे दिए गद्यांशों को पढ़कर प्रश्नों के उत्तर लिखिए।

डॉ. कलाम को 'मिसाल मैन' कहा जाता है। जब ये छोटी कक्षा में पढ़ते थे, तभी समाचार पत्र में दूसरे महायुद्ध के सुप्रसिद्ध बमवर्षक किमान 'स्पटफायर' (मंत्रवाण) के विषय में पढ़कर इन्होंने वैमानिकी के क्षेत्र में कुछ कर गुजरने का निश्चय कर लिया था। यहाँ नहीं, वैमानिकी की हर बारीकी इन्होंने अपने छात्र जीवन में ही भली प्रकार जान ली थी। डॉ. कलाम के शब्दों - 'विज्ञान वैदिक साहित्य की तरह है, सरस और संवेदनशील।' 1958 में ये रक्षा अनुसंधान और विकास संगठन से जुड़े गए और 1980 तक के लंबे संवाकाल में देश को अंतरिक्ष अनुसंधान की बुलंदी तक पहुँचाया। इस श्रृंखला में 1967 में रोहिणी-75 रॉकेट छोड़ा, 1980 में भारत का पहला उपग्रह प्रक्षेपणयान एस.एल. बी.-3 का श्री हरिकोटा से प्रक्षेपण किया गया। इतना ही नहीं, 1982 में डी.आर.डी.ओ. निदेशक के रूप में मिसाइल परियोजना के तहत पाँच प्रमुख मिसाइल कार्यक्रमों पर अनुसंधान किए। 1983 में आई. जी.एच.डी.पी. का प्रक्षेपण किया व 1984 में प्रथम स्वदेशी जड़त्व निर्देशित प्रणाली के लिए मिसाइल का परीक्षण किया। सन् 1985 में 'रिसर्च सेंटर' की आधारशिला रखने में महत्वपूर्ण भूमिका निभाई। आपका मूल मंत्र है 'विज्ञान, मिशन और गोल।' आपने अपने जीवन का एक लंबा समय अंतरिक्ष अनुसंधान के क्षेत्र में गुजारा। लगभग 20 वर्ष अंतरिक्ष अनुसंधान संगठन में रॉकेट निर्माण की नींव रखने के बाद डॉ. कलाम ने बीस वर्ष रक्षा अनुसंधान के एक विकास प्रयोगशाला में विविध श्रेणी के प्रक्षेपास्त्र बनाने में व्यतीत किए। अपने इस संवाकाल में इन्होंने देश को कृत्रिम उपग्रहों के क्षेत्र में पहली पंक्ति में ला खड़ा किया। इन्होंने 'पृथ्वी', 'आकाश', 'त्रिशूल', 'नाग' और 'अग्नि' मिसाइलों का सफल परीक्षण किया, जो आज भी विकसित और क्रियाशील हैं। इनके इस क्षेत्र में अमूल्य योगदान के कारण आज इनकी गणना विश्व के दस सर्वश्रेष्ठ मिसाइल वैज्ञानिकों में की जाती है।

शून्य से चलकर शिखर पर पहुँचने वाले डॉ. कलाम एक संवेदनशील रचनाकार भी हैं। आम प्रतिदिन

लिखते हैं। जिसमें मन के उद्गार कम, बुद्धि के निष्कर्ष अधिक होते हैं। आप भारतीयता की साक्षात् मूर्ति हैं। आपमें भारतीय संस्कृति के अर्दश गुण कूट-कूटकर भरे हैं। सरलमान विद्यानुयागी ऋषियों के स्वभाव वाले डॉ. कलाम धर्म निरपेक्षता की जीती जागती मिसाल हैं। मुस्लिम होते हुए भी आपका परिवार रामेश्वरम् के मशहूर शिव मंदिर से काफी निकटता से जुड़ा हुआ है। आज की युवा पीढ़ी इन्हें अपना आर्दश मानती है। आपकी वीणा वादन और कर्नाटक संगीत में विशेष रूचि है। भौतिक सुखों में आपकी रूचि नहीं है। 'गीता' का नियमित पाठ करने वाले कलाम सच्चे कर्मयोगी हैं। भाग्य में इनकी निष्ठा नहीं है। इनकी मान्यता है कि - 'पृथ्वी खुद अपनी धुरी पर घूमती है, जिससे दिन और रात होते हैं और सूर्य के चारों ओर उसकी परिक्रमा पूरी होने से वर्ष बनता है। जब तक ये दोनों खगोलीय घटनाएँ होती रहेंगी, तब तक हर-घड़ी मेरे लिए शुभ है। डॉ. कलाम ने सन् 2020 तक भारत को विकसित राष्ट्र बनाने का संकल्प लिया है। इसके लिए इन्होंने शिक्षा आंदोलन चलाने पर अधिक बल दिया है, जिसमें प्रत्येक छात्र दो-दो अशिक्षितों को शिक्षित करेगा। पर्यावरण सुरक्षा हेतु यदि भारत के 20 करोड़ बच्चे 5-5 पौधे लगाएँ तो एक अरब पेड़ तैयार हो जाएँगे। देश के विकास में अभिभावकों और अध्यापकों की भूमिका पर प्रकाश डालते हुए आप ने कहा था। 'अगर किसी राष्ट्र का प्रभ्याचार मुक्त और सुंदर बनाना है तो अभिभावक और अध्यापक ही यह काम करते हैं। सन 2003 के शिक्षक दिवस की पूर्व संध्या पर आपने राष्ट्र के नाम संदेश प्रसारित करने की नई प्रथा को जन्म दिया। 'मेरे भारत को विकसित देश बना दो।' इस सपने को साकार करने के लिए वे कहते हैं कि हमें अपने दृष्टिकोण को व्यापक बनाना चाहिए युवाओं को स्वप्न देखना चाहिए और उन्हें हकीकत में बदलना चाहिए।

प्रश्न :

- (क) डॉ. कलाम को 'मिसाइल मैन' क्यों कहा गया है?
- (ख) भारत का पहला उपग्रह प्रक्षेपण कब और कहाँ से किया गया?
- (ग) डॉ. कलाम ने भारत को कब तक विश्व को विकसित राष्ट्र बनाने का संकल्प किया है और उनके मुख्य आधार क्या-क्या हैं?
- (घ) डॉ. कलाम की सफलता का मूल मंत्र क्या है?
- (ङ) सन् 2003 के शिक्षक दिवस की पूर्वसंध्या पर डॉ. कलाम ने किसी प्रथा को जन्म दिया?
- (च) गद्यांश का उपयुक्त शीर्षक दीजिए।
- (छ) डॉ. कलाम ने विज्ञान की क्या कहकर प्रशंसा की थी।

2. एक साहित्यिक सभा में एक तरुण विद्यार्थ भाषण देने के लिए खड़ा हुआ, पर उसका भाषण जमा नहीं। वह घबरा गया। श्रोताओं ने तालियाँ पीटीं, दस-पाँच वाक्य कहने के बाद ही उसे बैठ जाना पड़ा। मंच पर उसकी कुर्सी हमारी कुर्सी के पास ही थी क्योंकि हमें भी उस सभा में बोलने का निमंत्रण था। अपना पसोना पोछते हुए उसने मुझसे धीरे से कहा : 'यह मेरा भाषण देने का पहला ही मौका था।'
'ऐसा! तब तो तुमने बड़ी हिम्मत दिखाई। मैं तो अपने पहले भाषण में मुश्किल से तीन वाक्य भी ठीक से नहीं बोल पाया था। शुरु-शुरु में ऐसा होता ही है, पर बाद में आदत होने से यह सब दूर हो जाता है।'
'सच! वह उत्साह से बोल उठा। उसकी परेशानी कुछ कम हुई।
'बिल्कुल', मैंने कहा। 'जिन्होंने तालियाँ पीटीं उनमें से ऐसे कितने होंगे जो तुम्हारे जैसे यहाँ खड़े होकर इतने बड़े श्रोता समुदाय का सामना कर सकेंगे?
वहा आश्वस्त हो गया। उसकी हिम्मत लौट आई और आगे चलकर वह काफी अच्छा वक्ता हो गया। दो तीन घंटे

उसने मुझे धन्यवाद दिया और कहा कि यदि उस दिन आप मुझे प्रोत्साहन नहीं देते तो शायद मैं भाषण देना ही छोड़ देता। जब लोग त्रस्त हों, पराजित हों या शोकग्रस्त हों तभी उन्हें हमारी सहानुभूति, सहायता या प्रोत्साहन की आवश्यकता होती है। उस समय उनका आत्मविश्वास लड़खड़ा जाता है। उस समय उनकी खिल्ली उड़ाने का या उनकी परेशानी का मजा लूटने का मोह हमें रोकना चाहिए और उन्हें सहारा देना चाहिए, उनकी हिम्मत बढ़ानी चाहिए। जो ऐसा करते हैं वे उनके हृदय में हमेशा के लिए स्थान प्राप्त कर लेते हैं, अपनी लोकप्रियता की परिधि विस्तृत करते हैं।

दूसरों के सुख-दुःख में सच्चे अंतःकरण से दिलचस्पी लेना अच्छे संस्कार का लक्षण तो है ही साथ ही व्यवहार कुशलता भी है जो लोगों को हमारी ओर आकर्षित करती है। हाँ, इसमें दिखावा, बनावटीपन और ऊपरी-ऊपरी शिष्टाचार नहीं होना चाहिए। जो भावना सच्ची होती है, हृदय से निकलती है वही हृदय को बाँध भी सकती है।

मानव की दो मूल प्रवृत्तियाँ होती हैं। एक तो यह की लोग हमारे गुणों की कद्र करें, हमें दाद दें और हमारा आदर करें और दूसरे वे हम पर प्रेम करें, हमारा अभाव महसूस करें, उनके जीवन में हम कुछ महत्व रखते हैं—ऐसा अनुभव करें।

आपके जरा से कार्य की यदि किसी ने सच्चे दिल से प्रशंसा की तो आपका दिल कैसा खिल उठता है? कोई आपकी सलाह माँगने आता है तो आपका मन कैसे फूल जाता है?

ऊपर से कोई बड़ा आदमी कितना भी आत्मविश्वासी और आत्मतुष्ट क्यों न दिखाई दे, भीतर से वह हमारी आपकी तरह प्रशंसा का, प्रोत्साहन का, स्नेह का भूखा है। यदि उसे, प्रामाणिकतापूर्वक ले सकें तो आप फौरन उसके हृदय के निकट पहुँच जाएँगे। दूसरों की भावनाओं को ठीक ठाक समझना, उसको कद्र करना, उसके साथ सच्चाई और स्नेह का व्यवहार करना यही व्यवहार करना यही व्यवहार कुशलता है। इसी से सामाजिक जीवन में लोकप्रियता के दरवाजे खोलने की कुंजी हाथ लगती है। इससे हमारी अपनी सुख शांति बढ़ती है, सो अलग।

प्रश्न:

- (क) लेखक ने विद्यार्थी को किस प्रकार उत्साहित किया?
- (ख) लोगों को सहानुभूति तथा प्रोत्साहन की कब आवश्यकता होती है?
- (ग) व्यवहार कुशलता से लेखक का क्या तात्पर्य है?
- (घ) मानव की दो मूल प्रवृत्तियाँ कौन सी हैं?
- (ङ) उपरोक्त गद्यांश का शीर्षक लिखिए।
- (च) 'शिष्टाचार' तथा 'प्रोत्साहन' शब्दों का अपने वाक्यों में प्रयोग कीजिए।
- (छ) गद्यांश में आए दो मुहावरे लिखिए और वाक्य में प्रयोग कीजिए।