

D.A.V. PUBLIC SCHOOL, BALLABHGARH
HOLIDAYS HOME WORK SESSION 2018-19
CLASS - IX

Mathematics Number System

Thinking skill Based

1. Find a rational and irrational number between :
 (a) 2 & 3 (b) 0.1010010001..... & 0.1001000100001.... (c) 0.111111..... & 0.1101
2. Represent $\sqrt{2}$, $\sqrt{12.8}$ on the number line.
3. Simplify:
 (a) $\left\{ \frac{2\sqrt{10} + 3\sqrt{10}}{5\sqrt{2}} \right\}^4$ (b) $\frac{\sqrt[4]{1250}}{\sqrt[4]{2}}$.
4. Assuming that x, y and z are positive real numbers, simplify the following :
 (a) $\left(x^{-2/3} \cdot y^{-1/2} \right)^2$ (b) $(\sqrt{x})^{-2/3} \sqrt{y^4} \div \sqrt{xy^{-1/2}}$.
5. Prove that : $(9)^{3/2} - 3 \times 2^0 - \left(\frac{1}{81} \right)^{-1/2} = 15$.
6. Find the value of 'x' if: $2^{5x} \div 2^x = \sqrt[5]{2^{20}}$
7. Find the value of 'x' if: $27^x = \frac{9}{3^x}$
8. Simplify each of the following :
 (i) $\frac{5 + \sqrt{6}}{5 - \sqrt{6}}$ (ii) $\frac{7 + 3\sqrt{5}}{7 - 3\sqrt{5}}$
9. Simplify each of the following : $\frac{\sqrt{5} + \sqrt{3}}{\sqrt{80} + \sqrt{48} - \sqrt{45} - \sqrt{27}}$.
10. Determine the rational numbers 'a' and 'b' : $\frac{\sqrt{3}-1}{\sqrt{3}+1} = a - b\sqrt{3}$.
11. If $x = 2 + \sqrt{3}$, find the value of $x^2 + \frac{1}{x^2}$.
12. If $a = 5 + 2\sqrt{6}$ and $b = \frac{1}{a}$, find the value of $a^2 + b^2$.
13. Write four rational numbers between $\frac{1}{2}$ & $\frac{3}{4}$.
14. If $\frac{1}{n} = 0.\overline{142857}$, write $2\frac{3}{n}$ as a recurring decimal expansion.

H.O.Ts

15. Simplify : $\frac{(25)^{5/2} \times (729)^{1/2}}{(125)^{2/3} \times (27)^{2/3} \times (8)^{4/3}}$
16. Prove that : $\frac{a^{-1}}{a^{-1} + b^{-1}} + \frac{a^{-1}}{a^{-1} - b^{-1}} = \frac{2b^2}{b^2 - a^2}$.
17. Prove that : $\sqrt{3} \times 5^{-3} \div \sqrt[3]{3^{-1}} \sqrt{5} \times \sqrt[6]{3} \times 5^6 = \frac{3}{5}$
18. Prove that : $\frac{[(2)^{36}] + \left[\frac{1}{4} \times (2)^{35} \right] + \left[\frac{1}{8} \times (2)^{37} \right]}{\left[\frac{1}{16} \times (2)^{39} \right] + \left[\frac{1}{8} \times (2)^{38} \right]} = \frac{11}{8}$.

Topic – Polynomial

Thinking skill Based Questions

- Which of the following expressions are polynomials in variable 'x' ?
(a) $x^2 + \frac{1}{x^2}$ (b) $x^{\frac{3}{2}} + 5x^{\frac{1}{2}} + 4$.
- Write the degree of the polynomial $p(x) = 4x^4 + 2x^3 + 0x^5 + 0x^6 + 5x + 2x^2 + 7$
- State the Factor Theorem for polynomials with real co-efficient.
- Evaluate by using identities
(i) $(0.98)^2$ (ii) 991×1009 (iii) 117×83 (iv) $(9.9)^3$.
- Simplify :
(i) $322 \times 322 - 2 \times 22 \times 322 + 22 \times 22$ (ii) $0.76 \times 0.76 + 2 \times 0.24 \times 0.76 + 0.24 \times 0.24$
(iii) $\frac{7.83 \times 7.83 - 1.17 \times 1.17}{6.66}$
- If $x - \frac{1}{x} = -1$, find the value of $x^2 + \frac{1}{x^2}$.
- If $x^2 + \frac{1}{x^2} = 79$, find the value of $x + \frac{1}{x}$.
- If $x - \frac{1}{x} = 3$, find the value of $x^3 - \frac{1}{x^3}$.
- If $x^4 + \frac{1}{x^4} = 194$, find the value of $x^3 + \frac{1}{x^3}$.
- Factorise the following: (i) $2x^2 + 11\sqrt{2}x + 24$.
- Show that $(x+4)$, $(x-3)$ and $(x-7)$ are the factors of $x^3 - 6x^2 - 19x + 84$.
- If $x = 2$ is a root of the polynomial $f(x) = 2x^2 - 3x + 7a$, find the value of 'a'.
- Simplify : $\left(\frac{1}{2}a - 3b\right)\left(3b + \frac{1}{2}a\right)\left(\frac{1}{4}a^2 + 9b^2\right)$
- Factorize : $\frac{8}{27}x^3 + 1 + \frac{4}{3}x^2 + 2x$.
- Factorize : $x^3 - 8y^3 + 6x^2y + 12xy^2$.
- What are the possible expressions for the dimensions of a rectangle whose area is $(35y^2 + 13y - 12)$.
- What are the possible expressions for the dimensions of a rectangle whose area is $(16y^2 - 32y + 15)$.
- Factorise the following by using Factor Theorem : $x^3 - 6x^2 + 11x - 6$.
- Factorise the following by using Factor Theorem : $x^3 + 2x^2 - x - 2$.
- Find the integral zeroes of $3z^3 - 10z^2 + z + 6$.

H.O.T's

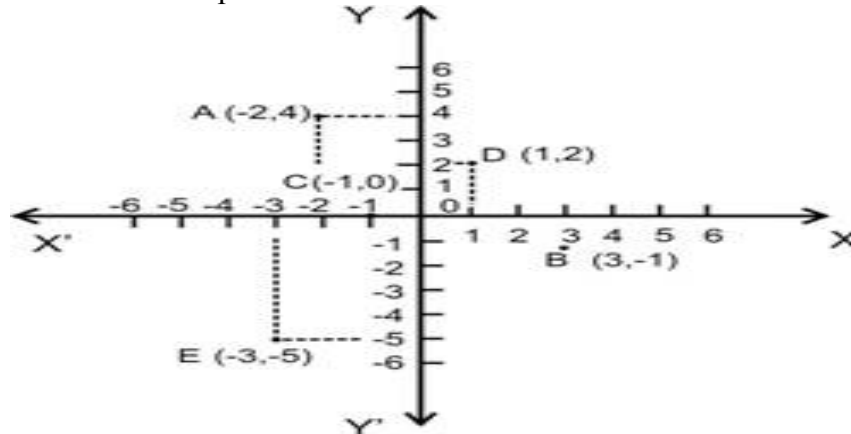
- If $(x + a)$ is a factor of the polynomials $x^2 + px + q$ and $x^2 + mx + n$, prove that $a = \frac{n - q}{m - p}$.
- Factorize : $2\sqrt{2}a^3 + 16\sqrt{2}b^3 + c^3 - 12abc$.
- Prove that $a^3 + b^3 + c^3 - 3abc = \frac{1}{2}(a + b + c)[(a - b)^2 + (b - c)^2 + (c - a)^2]$.
- Factorize : $x^6 - 7x^3 - 8$.
- If $(x - a)$ is a factor of the polynomial $x^3 - mx^2 - 2nx + na^2$. Prove that $a = m + n$ and $a \neq 0$.

Co-ordinate Geometry

Thinking skill Based Questions

- What is the name of horizontal and vertical lines drawn to determine the position of any point in Cartesian plane?
- What is the name of each part of the plane formed by these lines?
- Write the name of the point where these lines intersect?
- A point on x-axis at a distance of 9 units from y-axis. What are its coordinates?

30. Write the quadrants in which the points $(5, -1)$ and $(-3, 2)$ lie.
31. Locate the points in the plane if the coordinates are given as $A(5, 0)$, $B(0, 3)$, $C(7, 2)$.
32. What will be the coordinates if it lies on y-axis at a distance of -7 units from x-axis?
33. What will be the co-ordinate of point E?



34. Which of the following points. $A(1, 1)$, $B(1, 0)$, $C(0, 1)$, $D(0, 0)$, $E(-1, 0)$, $F(0, 1)$, $G(4, 0)$, $H(0, 7)$
 (i) Lie on x-axis? (ii) Lie on y-axis?
35. Abscissa of all the points on the x-axis is : (a) 0 (b) 1 (c) 2 (d) any number

H.O.T's

36. Plot the point $P(-6, 2)$ and from it draw PM and PN perpendicular to x-axis and y-axis respectively. Write the coordinates of the points M and N .
37. Three vertices of a rectangle are $(3, 2)$, $(-4, 2)$ and $(-4, 5)$. Plot the given points and find the coordinates of fourth vertex.
38. Write the coordinates of the vertices of a rectangle whose length and breadth are 5 and 3 units respectively, one vertex at the origin, the longer side lies on the x-axis and one of the vertices lies in the third quadrant.
39. Write the coordinates of a point left of y-axis and on y-axis at a distance of 6 units
40. What is the perpendicular distance of the points $A(7, -4)$ from (i) x-axis (ii) y-axis?

ENGLISH

- Design an English Magazine which should have the following:
 (Use A3 size coloured sheets)
 - An attractive cover page
 - Name of the magazine
 - Advertisements (only 2)
 - Famous sayings of Eminent Personalities (10)
 - Sensible & good jokes in English
 - Articles on: (in 120-150 words)
 - (1) Cramping & Distracting effect of hi-tech devices on youth. Sedentary life style of teenagers – an invitation to diseases.
 - Idioms & Proverbs(with meanings and use them in sentences of your own) (10 each)
 - Riddles in English (5)
 - A Diary page expressing your feelings on your performance in class 8 boards.
 - Stories taking help of the following inputs in (200-250 words):
 - (1) I am sorry ma'am I could not finish my homework because.....
 - (2) I was travelling by train to West Bengal. Suddenly the train stopped and some strange looking men entered the train.....
2. Read any one of the following books and write book review and draw pen portrait of your favourite character (in 200 words) :

*' The Wonderful Wizard of oz ' by Frank Baun

- 'Murder on the Orient Express' by Agatha Christie
- ' The Picture of Dorain Gray' by Oscar Wilde

- 'And then there were none' by Agatha Christie
 - 'A B C Murders' by Agatha Christie
3. Read and revise the syllabus already done in class.
 4. Answer the following questions in 80 -100 words:
 - (i) The poet says, 'I shall be telling this with a sigh.' Do you justify the attitude of the poet? Give reasons. (Road Not Taken)
 - (ii) Did Toto stay with the narrator's family forever? Why/ Why not? (The Adventures of Toto)
 - (iii) What moral lesson do you get from the poem 'Wind'?
 - (iv) What important lesson does the life of Bismillah Khan teach us?
 - (v) How does Evelyn encourage the physically challenge children?

Subject : Social Science ASSIGNMENT -1

L-1:India : Size and Location L-2: Physical Features of IndiaL-1: The Story of Village Palampur

1. What is the latitudinal and longitudinal extent of India ?
2. Give a brief account of India 's contact with outside world in ancient and medieval period.
3. Why 82°30' E has been selected as the standard meridian of India ?
4. Why is the difference between the duration of day and night hardly felt in Kanyakumari but not so in Kashmir?
5. Why do we call Himalayas the young and folded mountain ?
6. Give a detailed account on Purvanchal Range.
7. Describe the three Sections of Northern Plain.
8. Distinguish between Eastern Coastal Plain and Western Coastal Plain
9. How do Riverine Islands Form ? Which is the largest inhabited riverine island in the world.?
10. What are ill-effects or disadvantages of Modern Farming System?
11. Classify the farmers in India on the basis of distribution of land.
12. The wages of workers in India is less than minimum .Why?
13. What do the medium and large farmers do with their surplus products ?
14. Why it is necessary to increase area under irrigation in India?
15. Explain the three types of plate movements? What are the results of plate movements ?
16. Write any five features of Himalayan Mountain
17. Classify the Himalayas into three parallel ranges longitudinally and explain their features.
18. How can we divide Himalayas from east to west on river valley basis ?
19. Write the major characteristics of Central Highland and Deccan Plateau.
20. Distinguish between Western Ghats and Eastern Ghats.
21. Describe Northern Plain on the basis of Relief.
22. Describe the features of Peninsular Plateau.
23. "The physiographic divisions in India are complimentary to each other" Justify your statement.
24. Explain the four major requirements for the production of goods and services.
25. Differentiate between Modern Farming System and Traditional Farming System.
26. What are the characteristics of Farm labourers?
27. Write a short notes on the two Island Groups of India.
28. Describe the significance of central location of India at the head of Indian Ocean.
29. Describe the formation of Northern Plain.
30. Write any three features of Himalayan Mountain.

SOCIAL SCIENCE

1. Do project Work on any one Physical Division of India.
2. Do Project Work on any one Man Made or Natural disaster.
3. Learn Question answer of all lessons done in copy.
4. Do Assignment question answers in separate copy.

COMPUTER

Do Practice Paper 1 and Practice Paper 2 in your notebook.

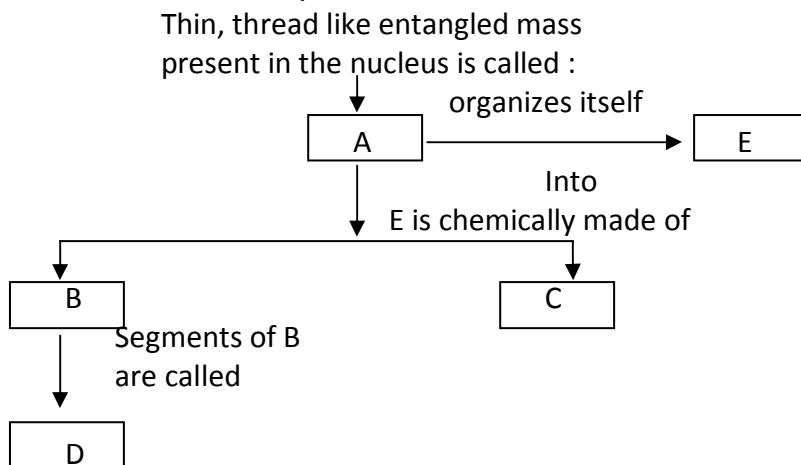
Subject : Science and Technology

- Revise the chapters taught before summer break.
- Do given assignments in respective subject copies.
- Write all the experiments done in laboratory in respective practical files.

Biology (Ch – 3 : The Fundamental unit of Life)

1. Give the chemical composition of plasma membrane.
2. What is membrane biogenesis ? Which cell organelle is concerned with it?
3. What is nucleoid ? Name the type of cell in which it is present .
4. What is plasmolysis ? Give one example.
5. Give two examples of prokaryotes.
6. What is cell wall and how is it formed ?
7. Distinguish between chloroplast and leucoplast with respect to their pigment and function.
8. State any two reasons for plant cell to have a large vacuoles.
9. What would happen to the life of cell if there is no Golgi apparatus ?
10. List two similarities between mitochondria and plastids.
11. What would you observe after five minutes when you drop a deshelled raw egg in pure water? Give reasons.
12. Why do chromosomes contain DNA in the nucleus ?
13. A person takes concentrated solution of salt, after sometime, he starts vomiting. What is the phenomenon responsible for such situation ? Explain.
14. If you are provided with some vegetables to cook. You generally add salt into the vegetables during cooking process. After adding salt, vegetables release water. What mechanism is responsible for this ? Explain.
15. Why is endocytosis found in animals only ?
16. What are genes ? Where are they located ?
17. Which stain is used for staining animal cell? Also state which parts of the cell will take up a darker stain and why does this happen?
18. What is the role of vacuole in unicellular organisms ?
19. Name any two organelles which are bound by a double layered membrane. Give one function of each.
20. Give two examples of osmosis in plants.
21. What is the significance of nuclear pores present in nuclear membrane ?
22. How is bacterial cell different from onion peel ?
23. Why do egg shells dissolve in dilute hydrochloric acid ?
24. What is lacking in a virus which makes it dependent on a living cell to multiply ?
25. State the technical term for a medium wick has exactly the same concentration as the cell. Why does the size of the cell remain the same when placed in such a solution ?
26. Name the only cell organelle seen in prokaryotic cell. Write its function.
27. Where are chromosomes located in a cell ? What are they composed of ? What information do they contain ?
28. Expand RER AND SER .Differentiate between them on the basis of structure and function.
29. Give a technical term for a medium which has exactly the same concentrations as the cell.Why does the size of the cell remain same when placed in such solution?
30. How would a plant cell and animal cell behave when placed in hypotonic solution of NaCl. Explain giving reasons.
31. What is lacking in a virus which makes it dependent on a living cell to multiply?
32. "Chloroplast and Mitochondria are referred as semi-autonomous organelles.". Justify

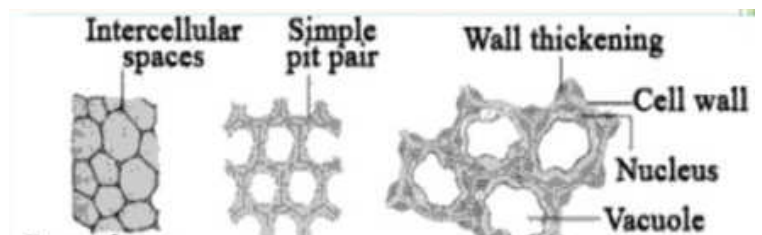
33. Name the organelles which show the analogy written as under :
- | | |
|--|-------------------------------|
| (a) Transporting channels of the cell | (b) power house of the cell |
| (c) packaging and dispatching unit of the cell | (d) Digestive bag of the cell |
| (e) Storage sacs of the cell | (f) kitchen of the cell |
| (g) control room of the cell | |
34. Explain the structure of Mitochondria.
35. If cells of onion peel and RBC are separately kept in hypotonic what among the following will take place ? Explain the reason for your answer
- | | |
|--------------------------------|--|
| (a) Both the cells will swell. | (b) RBC will burst easily while cells of onion peel will resist the bursting to some extent. |
| (c) a and b both are correct | (d) RBC and onion peel cells will behave similarly. |
36. Which kind of plastid is more common in
- | | | |
|------------------------|-------------------------|------------------------|
| (a) roots of the plant | (b) leaves of the plant | (c) flowers and fruits |
|------------------------|-------------------------|------------------------|
37. In brief state what happens when
- | |
|--|
| (a) dry apricots are left for sometime in pure water and later transferred to sugar solution ? |
| (b) a Red Blood cell is kept in concentrated saline solution |
| (c) rheo leaves are boiled in water first and then a drop of sugar syrup is put on it ? |
| (d) golgi apparatus is removed from the cell ? |
38. We eat food composed of all the nutrients like carbohydrates, proteins, fats, vitamins, minerals and water. After digestion, these are absorbed in the form of glucose, amino acids, fatty acids, glycerol etc. What mechanisms are involved in absorption of digested food and water ?
39. Fill in the boxes to identify A, B, C, D, E :



Biology (Ch – 6 : Tissues)

1. What do you mean by cork cells ?
2. What are stomata? Write about their structure and function?
3. If the tip of a sugarcane plant is removed from a field, even then it keeps on growing in length. Why ?
4. A nail is inserted in the trunk of a tree at a height of 1 metre from a ground level. After 3 years, where will the nail be present ?
5. If a potted plant is covered with a glass jar, water vapour appears on the wall of the glass jar. Why?
6. Growth in plant is restricted to certain regions, give reason for this fact. Mention two growth regions in plants.
7. What happens to cells formed by meristematic tissue ?
8. What is the difference between bone and cartilage?
9. Where are tendons and ligaments found ?
10. Write one term for the following tissue :
 - i. That joins muscle to bone
 - ii. Fat reservoir of our body.
 - iii. Supporting, fills the space inside the organ and helps in repair of tissues.
 - iv. Connective tissue with a fluid matrix.
11. Explain the structure and function of Neuron.

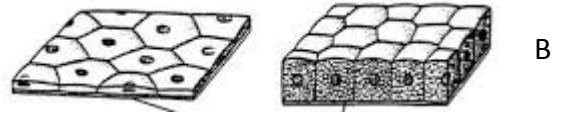
12. On the basis of structural and functional difference, write the characteristics of plant and animal tissues.
13. Draw and identify different elements of phloem.
14. Describe the functions of xylem. Write the function of each component.
15. State the difference between the tissue of the outer layer of the branch of a tree and the outer layer of a young tree stem.
16. (a) Show the diagrammatic representation of the location of lateral meristem and intercalary meristem in plant body.
(b) Name the meristem responsible for the increase of girth of root or stem.
(c) Write two differences between meristematic and permanent tissues in tabular form.
17. (a) Draw a diagram of epidermis of the leaf showing surface view and label stomata with guard cells and epidermal cells.
(b) Answer the following :
(i) How the epidermis of the plants living in very dry habitats is adapted ?
(ii) Write functions of guard cells of stomata in the leaf.
18. Describe three functions of the protective tissue in plants.
19. Why is the epidermis present as a thick waxy coating of cutin in desert plants ?
20. Give reasons :
(a) Meristematic cells have prominent nucleus and dense cytoplasm but they lack vacuoles.
(b) Intercellular spaces are absent in sclerenchymatous tissues.
(c) We get a crunchy and granular feeling when we chew pear fruit.
(d) Branches of tree move and bend freely in high wind velocity.
(e) It is difficult to pull out the husk of a coconut tree.
21. Justify by giving two points that cartilage is a tissue. What is its matrix made up of ? Where are these tissues found in our body ?
22. Write the location and one function of each of the following:
a. Cuboidal epithelium b. Glandular epithelium c. Columnar epithelium
23. How are messages conveyed from one place to another within the body ?
24. Identify the animal tissue from the given description and also mention their location in the human body.
Tissue A - cells are filled with fat globules.
Tissue B - has cylindrical branched cells and the tissue shows rhythmic contraction and relaxation through out life.
25. Explain the haversian canal system of bone.
26. What will happen if-
i. The skin epithelium is not stratified. ii. Stratified squamous epithelium lines the blood vessels.
27. A person met with an accident in which two long bones of the hand were dislocated. What could be the reason ?
28. Identify the animal tissues from the given descriptions and also mention the location in the human body.
(a) Tissue A – cells are filled with fat globules and the tissue acts as an insulator.
(b) Tissue B – has cylindrical branched cells and the tissue show rhythmic contraction and relaxation through out life.
29. (a) Identify figures A,B and C.
(b) Which one of them has heavy deposition of lignin ?
(c) Which one of them provides both mechanical strength as well as flexibility ?
(d) Which one of them can be modified to form air cavities in aquatic plants ?
(e) Which one of them is commercially exploited to obtain Hemp and Jute ?



30.

- (a) Identify figures A and B

- (b) ----- epithelium forms the outer layer of the skin and line cavities and ducts.
- (c) ----- epithelium consists of cells that are tall and pillar like
- (d) Which one allows diffusion of substances ?



Physics (Ch – 8 : Motion)

- Q1. The displacement of a moving object in a given interval of time is zero. Would the distance travelled by the object also be zero? Justify your answer.
- Q2. If you divide the total distance travelled on a car trip by the time for the trip, are you calculating the average speed or the magnitude of the average velocity? Under what circumstances are these two quantities the same? Illustrate with the help of an example.
- Q3. How will the equations of motion for an object moving with a uniform velocity change?
- Q4. An artificial satellite moves around the earth with a velocity of constant magnitude still its motion is said to be an accelerated motion. Why?
- Q5. A particle is moving in a circular path of radius r. What would be the displacement after completing half a circle? Also calculate distance covered.
- Q6. Draw a velocity versus time graph of a stone thrown vertically upwards and then coming downwards after attaining the maximum height.
- Q7. A car moves with a speed of 30km/h for half an hour, 25 km/h for next one hour and 40 km/h for the next 2 h. What is the average speed of the car?
- Q8. On a 120 km track, a train travels the first 30 km at a uniform speed of 30 km/h. How fast must the train travel the next 90 km so as to average 60 km / h for the entire trip?
- Q9. A body starts rolling over a horizontal surface with an initial velocity of 0.5 m/s. Due to friction, its velocity decreases at the rate of 0.05 m /s². How much time will it take for the body to stop?
- Q10. Two particles are moving with constant speed v such that they are always at a constant distance d apart and their velocities are always equal and opposite. After what time will they return to their initial positions?
- Q11. A body covered a distance y metre along a semicircular path. Calculate the magnitude of displacement of the body, and the ratio of distance to displacement.
- Q12. When two bodies move uniformly towards each other, the distance between them decreases by 8 m/s. If both the bodies move in the same direction with the same speeds, the distance between them increases by 4 m/s. What are the speeds of two bodies?
- Q13. Two stones are thrown vertically upwards simultaneously with their initial velocities u₁ and u₂ respectively. Prove that the height reached by them would be in the ratio of u₁² : u₂² (Assume upward acceleration is – g and downward acceleration to be +g).
- Q14. A car starts from rest and moves along the X-axis with constant acceleration 5 m/s² for 8 seconds. If it then continues with constant velocity, what distance will the car cover in 12 seconds since it started from the rest?
- Q15. A person goes to market, makes purchases and comes back at a constant slower speed. Draw displacement- time and velocity- time graphs of the person.
- Q16. An electron moving with a velocity of 5X10⁴ m/s enters into a uniform electric field and acquires a uniform acceleration of 10⁴ m/s² in the direction of its initial motion.
- (i) Calculate the time in which the electron would acquire a velocity double of its initial velocity.
- (ii) How much distance the electron would cover in this time?
- Q17. Using following data, draw displacement- time graph for a moving object :-

Time (s)	0	2	4	6	8	10	12	14	16
Displacement(m)	0	2	4	4	4	6	4	2	0

Use this graph to find average velocity for first 4 s, for next 4 s and for last 6 s.

Chemistry (Ch : Matter in our surrounding)

- Q.1 Some substances cannot exist in the gaseous state, other cannot exist in the liquid state, and some cannot exist either in the gaseous or the liquid state. Giving suitable examples. Justify the above statement?
- Q.2 Which state of matter is characterized by the following properties:
a) A substances with a fixed arrangement of particles.
b) A substances that has large distances between the particles.
- Q.3 why do we call sponge a solid even it is easily compressible?
- Q.4 What are the two factors responsible for interconversion of matter?
- Q.5 What is diffusion? What are the factors on which rate of diffusion depends.
- Q.6 When a liquid boils, its temperature remains the same, so where does the heat go?
- Q.7 A student spilled a bottle of ammonia in one corner of the laboratory. Soon the whole laboratory was filled with pungent irritating smell. The students immediately opened the windows and doors and switched on the exhaust fans. After sometime, student got relief. Explain what did actually happen?
- Q.8 Carbon dioxide which is a gas under normal conditions of temperature and pressure can be liquefied by compressing it to 70 atm at ordinary temperature. What happens when pressure is suddenly released?
- Q.9 Arrange the particles of the three states of matter:-
a) In order of increasing randomness.
b) Decreasing order of inter particle distances.
- Q.10 How boiling is different from evaporation. Give 2 points.
- Q.11 In a hot summer day, Priyanka & Asha are wearing cotton & nylon clothes respectively . Who would be more comfortable & why?
- Q.12 (a)Name the state of matter in which
(i)Layers of particles can slip and slide over each other
(ii)Particles just move around randomly, because of very weak force of attraction.
(b) List two ways by which a gas can be converted into a liquid.
- Q.13 Why clothes dry faster when we spread them out.
- Q.14 Differentiate b/w solids, liquids & gases on the basis of- (a)Density b) compressibility
c) K.E d) Shape & volume e) intermolecular forces
- Q.15 Discuss the various factors which affect rate of evaporation. Latent heat of evaporation of two liquids A and B is 100J/kg and 150J/Kg respectively. Which can produce more cooling effect and why?
- Q.16 A sample of water under study was found to boil at 102degree Celsius at normal temperature and pressure. Is the water pure ? Will this water freeze at 0 degree Celsius? Comment.
- Q.17 When a crystal of potassium permanganate is placed in a beaker containing water, its purple colour spreads throughout the water. What do you conclude from this observation about the nature of potassium permanganate and water?
- Q.18 Why do people sprinkle water on the roof after a hot sunny day?
- Q.19 Suggest an activity to show that rate of diffusion of liquids decreases with increase in density of liquid.
- Q.20 You are given the following substances with their melting and boiling points-

substances	Melting point	Boiling point
X	-129	-183
Y	119	445
Z	-15	78

Identify physical states of X,Y, & Z at room temperature (30°C)

ग्रीष्मकालीन गृहकार्य , सत्र 2018-19

कक्षा- नवमी , विषय-संस्कृत

1. श्लोकपाठ- परोपकारः/परिश्रमः से सम्बद्ध कोई तीन श्लोक अथवा कोई एक संस्कृत-गीत सस्वर स्मरणार्थ।

2. चित्राधारित वर्णन- नदी अथवा उद्यान में से किसी एक पर पाँच वाक्य संस्कृत में लिखें (सचित्र)।
 3. पुस्तक- पाठ 1 से 4 तक साभ्यास स्मरण हेतु।
 4. व्याकरण- प्रथम सत्र के सभी शब्दरूप, धातुरूप तथा 1 से 4 तक संख्या शब्द स्मरण हेतु।
- नोट- उपर्युक्त सभी कार्य A4 शीट पर अथवा कम्प्यूटर द्वारा बनाकर सी.डी. में सुन्दर ढंग से करके लायें।

विषय हिन्दी

नोट : सभी प्रश्नों के उत्तर व्याकरण कॉपी में दें ।

प्र 1 क निम्नलिखित शब्दों से उपसर्ग अलग कीजिए :

उत्थान , दुर्गम , परास्त , उद्घाटन, पर्यावरण

ख निम्नलिखित शब्दों से प्रत्यय अलग कीजिए :

मुस्कुराहट , सजावट , चमकीला , कमाऊ , अनुकरणीय

प्र 2 क निम्नलिखित उपसर्गों का प्रयोग कर दो दो नए शब्द बनाइए :

कु , सु , प्रति , निर , परि , दुर , अप , अति

ख निम्नलिखित प्रत्ययों का प्रयोग कर दो दो नए शब्द बनाइए :

आ , आई, आहट , आउ , इन, ईन , इक

प्र 3 क निम्नलिखित शब्दों में उचित स्थान पर अनुस्वार अनुनासिक चिह्न लगाइए :

अधेरा , अगीठी , कगन , काति , चचल , झडा , मुह , शख , हसमुख , पकज

ख निम्नलिखित शब्दों में उचित स्थान पर नुक्ता लगाइए :

बरफ, तेज , जरा , बाजार, तरफ, हजार, जिंदा , अंदाज , फजीहत , फौलाद, जमीदार

ग निम्नलिखित वाक्यों में उचित स्थान पर विराम चिह्न लगाइए :

1 दो दो डॉक्टर हरदम सिरहाने बैठे रहते थे

2 तुमने इतनी बड़ी जोखिम क्यों ली बछेंद्री

3 झूठा सच यशपाल की प्रमुख कृति

4 पहले बताओ तुम कौन हो

5 दूर हटो जल्दी से यह स्थान खाली करो

प्र 4 कोई दो चित्र व्याकरण कॉपी में चिपकाइए व 25 से 30 शब्दों में उनका चित्र वर्णन कीजिए ।

प्र 5 व्याकरण पुस्तक व्याकरण प्रवेश के पृष्ठ 313 पर दिए गए संवाद विषय के अभ्यास कार्य से कोई दो प्रश्न कीजिए।

प्र 6 व्याकरण प्रवेश के पृष्ठ 291 पर दिए गए अनौपचारिक पत्र के अभ्यास कार्य से कोई दो प्रश्न कीजिए।