APEX PUBLIC SCHOOL
HOLIDAY HOMEWORK
CLASS-IX

"SHOOT FOR THE MOON, EVEN IF YOU
MISS, YOU'LL LAND AMONG
THE STARS"

ENGLISH

Holiday Homework is an initiative to inculcate a student's interest, Creativity and innovativeness in the tasks assigned. It will help the Child to remain focus and connect himself/herself to various learning Processes.

Workbook in English for class – IX (Words and Expressions 1)
UNIT – 1

Reading Comprehension –
1. Text I **(The Future Cars)**
a) Read the given passage and answer the questions given in page no 3 & 4.

2. Text II **(Humanoid Robot, Sophia Back In India)**
b) **Read the passage and answer the questions given in page no 6 & 7.**

3. Grammar Page no 9, 10, 11, 12

Note: Writing - Page no 18
Write a paragraph on any 1 of the following (150 –200 words)
     a)   Electronic Waste and Environmental Pollution.
     b)   Being Human in the Age of Artificial Intelligence.
4.   Complete all the assignments in your fair notebook.

- Attempt Question No – 1, 2, 3 in your Workbook itself.
- Use only an A4 size paper/ sheet to write the Paragraph Writing. Kindly write your Name, class, section. **This will be used for Internal Assessment.**

विषय- हिंदी

निर्देश- सारा कार्य अनिवार्य है।

प्रश्न-1. अपनी पाठ्य-पुस्तक स्पर्श से पाठ-'रैदास' या 'रहीम' पर scrap-book मे परियोजना कार्य तेयार कीजिए।

प्रश्न 2. Term-1 के सभीपढ़ाए। गए पाठों का लिखित कार्य पूर्ण कीजिए।

प्रश्न। 3. 'कोरोना' से संबंधित जानकारी (सुरक्षा, सावधानियाँ आदि) scrap-book में चित्र सहित लिखें।

प्रश्न 4. सभी विद्यार्थी A-4 sheet पर सुंदर,रंगीन संदेश लेखन लिखें।

प्रश्न 5 अवकाश में आपने जो रचनात्मक- कार्य किया उसको अपने शब्दों में A-4 sheet पर सुंदर लिखाई में लिखें।

प्रश्न-6. अनुस्वार और अनुनासिक के 20–20 शब्द लिखें।

MATHEMATICS

WORKSHEET :- 1
Number System

1. Write first five whole numbers in $\frac{p}{q}$ form, where p and q are integers and $q \neq 0$

2. Find decimal expansion of $\frac{17}{8}, \frac{3}{15}, \frac{2}{7}, \frac{50}{3}$.

3. Find four rational numbers between $\frac{2}{9}$ and $\frac{3}{7}$.

4. Find decimal form of $\sqrt{23}$ and $\sqrt{24}$ upto 3 decimal places.

5. Find two Irrational numbers between $\sqrt{23}$ and $\sqrt{24}$.

6. Find one Irrational and one rational number between 2 and $\sqrt{5}$.

7. Write two numbers whose decimal expansions are terminating.

8. What can be the maximum number of digits in the repeating block of digits in the decimal expansion of $\frac{5}{7}$?

9. Write two numbers whose decimal expansions are non-terminating non-repeating (non-recurring).

10. Find the value of $(256)^{0.16} \times (256)^{0.09}$

11. Find two Irrational numbers between 2016 and 2017.

12. Represent $\frac{-7}{5}$ on the number line.

13. Represent following on number line

   i) $\sqrt{5}$ ii) $\sqrt{13}$ iii) $\sqrt{9.3}$ iv) $\sqrt{2}$

14. Represent $3 + \sqrt{2.6}$ on the number line.

15. Insert two Irrational numbers between $\frac{2}{3}$ and $\frac{3}{2}$

WORKSHEET :- 2

Polynomial

1. Write the coefficient of y^3 in $5y^3 + 2y^2 - y + 5$

2. Find the coefficient of x^2 in $(x^2 - 1)(x - 2)$

3. If $(x - 2)$ is one of the factor of $3x - 2a$, then find the value of a.

4. Find the degree of polynomial $\dfrac{x^3 + 3x - 1}{5} - \dfrac{5}{2}x^2 - x^5$

5. If $p(x) = x^3 - 3x^2 + 2x - 3$ find the value of $p(1) + p(-1)$.

6. Find zeros of the polynomial $z^2 - 8$

7. Divident = Divisor × Quotient + _____.

8. Give an example of Trinomial of degree 3.

9. Give one example of each monomial, binomial and quadratic polynomial.

10. Check whether $x = 3$ is a zero of polynomial $x^2 - 3x + x - 3$.

11. Write the degree of the polynomial $\sqrt{7}$

12. If one of the zero of polynomial $3x^2 + 5x + k$ is -1, then find out the value of k.

13. Express $4x^2 - 4x + 1$ as a square of binomial.

Part – B

14. Check whether $q(x)$ is a multiple of $r(x)$ or not.
    If $q(x) = 2x^3 - 11x^2 - 4x + 5$, $r(x) = 2x + 1$

15. Show that $(x - 5)$ is a factor of $x^3 - 3x^2 - 4x - 30$ by Remainder theorem.

16. Evaluate by using suitable identity : $(997)^3$

WORKSHEET :- 3

Co-ordinate geometry

1. In which quadrant do the given points lie.

   (i) (3, –2)   (ii) (17, –30)   (iii) (–2, 5)

   (iv) (–50, –20)   (v) (10, 100)   (vi) (–81, 80)

2. On which axes do the given points lie.

   (i) (11, 0)   (ii)(–11, 0)   (iii) (0, 14)

   (iv) (0, –100)

3. The abscissa and ordinate of a point A are –3 and –5 respectively then write down the coordinate of A.

4. Write the name of the point where both axes intersect?

5. Is P(7, 0) and Q (0, 7) represent the same point?

6. In which quadrants x coordinate is negative?

7. Name the figure formed when we plot the points (0, 0), (4, 4) and (0, 4) on a graph paper.

8. In which quadrant, does the point A (x, y) with values x > and y > 0 exists.

9. If Q is a point on x-axis then its ordinate will definitely be _____.

10. Write the coordinates of the fourth vertex of a square when three of its vertices are given by (1, 2) (5, 2) (5, –2).

11. The perpendicular distance of the point P (5, 2) from x-axis is _____ and from y-axis is _____.

12. The perpendicular distance of the point Q (–116, –80) from x-axis is _____ and from y-axis is _____.

13. If abscissa of a point A is positive & ordinate is negative then in which quadrant do A lie.

14. Write the coordinates of a point whose perpendicular distance from x-axis is 5 units & perpendicular distance from y-axis is 3 & it lies in II quadrant.

WORKSHEET :- 4
Linear Equation in two Variable

1. The graph of the linear equation 4x=6 is parallel to which axis?

2. Point (a,o) lie on which axis?

3. Write the equation of x axis.

4. Write a linear equation of two variables for x=5, y=—2.

5. Find the value of K, if x=—1 is a solution of equation Kx—2y=0.

6. Write the linear equation which is parallel to x-axis and is at a distance of 2 units from the origin in upward direction.

7. How many solutions are there for equation y=5x+2.

8. Express the equation 5y=9 as linear equation in two variables.

9. If the graph of equation 2x+Ky=10 K intersects x axis at point (5,0) find the value of K.

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10. Express the linear equation $\sqrt{2}$x—4=5y in the form of ax+by+c=0 and thus indicate the values of a, b and c.

11. Express x in terms of y for the equation 3x+4y=7

12. Express y in the terms of x.

    3y+5x = 9

13. Examine whether the point (5,2) lie on the graph of equation 2x+3y = 16?

14. Find any two solutions of equation

    2x+y = x+5.

15. Find the value of P if x=2, y=3 is a solution of equations. 5x+3py=4a

16. Write the equations of two lines passing through (3, 10).

17. Write the coordinates of the point where the graph of the equation 5x+2y=10 intersect both the axes.

18. If the points A (3,5) and B (1, 4) lies on the graph of line ax+by=7. Find the value of a.

19. The cost of coloured paper is   7 more than 1/3 of the cost of white paper. Write this statement in linear equation in two variables.

20. Draw the graph of equation x+y=5.

WORKSHEET :- 5
Euclid Geometry

1. Write the number of dimensions, that a surface contain.

2. A proof is required for _____ (Postulate, Axioms, Theorem).

3. The number of line segments determined by three collinear points is _____ (Two, three, only one).

4. Euclid stated that if Equals are subtracted from Equal then the remainders are equal in the form of _____ (an axiom, a definition, a postulate).

5. In given figure AD = BC then AC and BD are equal or not.

6. How many lines can pass through a single point?

7. State Euclid's first postulate.

8. Write Euclid's fifth postulate.

9. If $a + b = 15$ and $a + b + c = 15 + c$

    which axiom of Euclid does the statement illustrate?

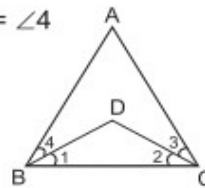10. If A, B and C are three points on a line and B is between A and C then prove that $AC - BC = AB$.

Part – B

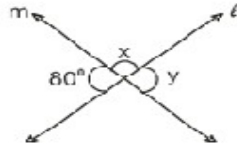11. If $x + y = 10$ and $x = z$ then show that $z + y = 10$

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12. In given figure AX = AY, AB = AC Show that BX = CY
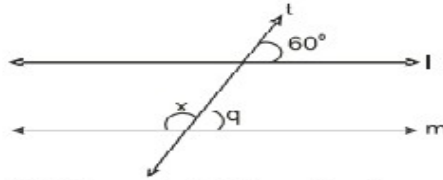
    Show that : BX = CY
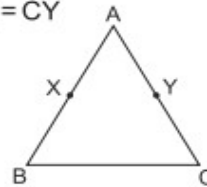
13. In given figure $\angle ABC = \angle ACB$ and $\angle 3 = \angle 4$
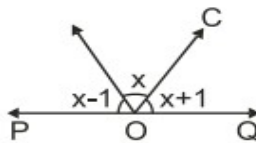
    Show that $\angle 1 = \angle 2$

WORKSHEET :- 6
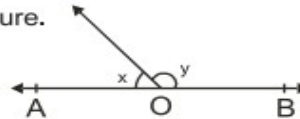
Lines and angle

1. From the figure find x and y

2. If an angle is equal to its complement find the angle.

3. In the adjoining figure if l || m and t is transversal, find the value of x.
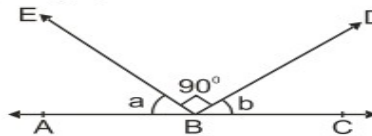

4. In the figure POQ is a straight line. The three adjacent angles are consecutive numbers. What are the measure of these angles.
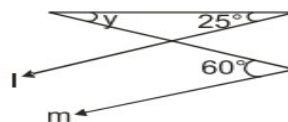

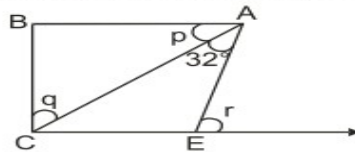5. Twice of x is 30^0 less than y find x & y from figure.

7. In the adjoining figure find that value of a + b if ÐDBE = 90°

8. In the figure l || m find ∠y

9. If p : q = 11 : 19, AB || CE what are the values of p, q & r.

10. What is x in the figure?
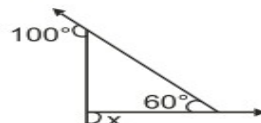
Lab Manual Activity (Given in School Bookset)
(i) Activity 1 , (ii) Activity 6 , (iii) Activity 7 , (iv) Activity18
(v) Project 28 :- Framing of Cross Word Puzzle (page no. 77)

SOCIAL SCIENCE

HISTORY and CIVICS

Read the instructions carefully: -
1. The assignment should be done in the History and civics Notebook.
2. The work should be neat and systematic.
3. Label the assignment properly; use headings and sub-headings wherever required.

FRENCH REVOLUTION
ASSIGNMENT 1

Q.1 Explain how did the freedom of speech and expression under the revolutionary government in France promote the ideals of Liberty and Equality into everyday practice.

Q.2 What were the causes for the empty treasure of France under Louis XIV? Assess any three causes.

Q.3 Why were the representatives of the Third Estate disappointed with the pattern of voting in the 'Estates General.'

Q.4 Why did subsistence crisis frequently occur in France during the old Regime?

Q.5 What was the significance of 'The Tennis court Oath' in the French Revolution.

Q.6 Explain triangular slave trade carried on during 18th and 19th century.

Q.7 Who was Robespierre? Why is his reign referred as ''The Reign of Terror''?

Q.8 Write three main features of the French Constitution of 1791.

Q.9 What were the reforms introduced by Napoleon Bonaparte in France?

Q.10 ''The inequality that existed in the French society in the Old Regime became the cause of French Revolution''. Justify the statement by giving three suitable examples.

CIVICS
ASSIGNMENT 2
WHAT IS DEMOCRACY? WHY DEMOCRACY?

1.   Why is democracy called the best form of government?

2. What are the flaws in a democratic govt?

3. What is democracy?

4. Write the main features of democracy.

5. General Musharraf conducted elections. However, Pakistan is still not called a democracy. Why?

6. What is free and fair electoral competition? Does China have it?

7. How is the principle of one person one vote denied in the following countries-?

8. How can you say that Zimbabwe does not have rule of law?

9. Why is democratic govt called a more accountable form of government?

10. How does democracy improve the quality of decision making?

11. Why is it said that democracy enhances the dignity of citizens?

12. How does a democracy govt allow its citizens to correct its own mistakes?

13. What is the role of press in a good democratic govt?

14. Why is Mexico not considered an example of democracy?

15. How can a popular got be undemocratic? Explain by giving the example of Zimbabwe.

Assignment 3
Chapter: <u>Constitutional Design</u>

1.   Name the South Africa leader who opposed apartheid regime.
2.   What was Apartheid?
3.   How was the system of apartheid practiced?
4.   How was segregation carried out by whites?

5.   Who all fought against the apartheid system?
6.   When was Nelson Mandela freed?
7.   For how many years did Nelson Mandela remain in prison?
8.   When did South Africa become a democracy?
9.   Why is South Africa constitution called the finest constitution of the world?
10.   Why is South African constitution considered a source of inspiration for all?
11.   Define constitution.
12.   Why do we need a constitution?
13. What kind of compromise was made between the Blacks and whites after South Africa became a democracy?
14. Why did constitution making become important in South Africa?
14. Why was making of the Indian constitution not an easy affair?
14. Who drafted a constitutional guideline for India in 1928?
14. What were the main principles of 1928 Constitution and 1931 resolution at the Karachi session?
14. Explain those factors which contributed to the making of our constitution.
14. What is the importance of 26th January?
14. What is Preamble? What does it contain?
14. Explain the terms- Sovereign, socialist, secular, democratic, republic, justice, liberty, equality, fraternity.

GEOGRAPHY

A. Project Work – DISASTER MANAGEMENT

Activity-Individual Activity

1. Make a project on earthquake prone areas in India – causes, impact on life and property seismic zones , mitigation strategies used to reduce the impact in earthquake prone areas. (Roll No. 1-20)

2. Collect information on areas prone to cyclones in India –warning systems, effects of cyclones, mitigation strategies to be used while construction of buildings (Roll. No. 21-40)

GUIDELINES FOR THE PROJECT

a. Project to be done on A-4 size sheet

b. Project should be hand written for 15 pages

 c. On the first page student Performa to be given- Name, Class, Roll no., Name of the school, year of submission and topic.

d. Acknowledgement

 e. Content or Index

f. At the last Bibliography or references

g. Newspaper cuttings, maps, diagram , illustrations are must

h. Project should be strictly based on India

 i. Use your Disaster Management book for reference

B. "The Covid-19 pandemic could have a devastating impact on the livelihood and food security of millions of people across India " On an A4 size sheet, write down the steps that can be taken by Central government of India to ensure and tackle Food security in India during pandemic situation.[Refer to Ch-4 (Economics) Food Security in India]

C. Read the chapters taught carefully of both the subjects of SST and draw the Concept map of each chapter (Covered till 30th May,2020).

SCIENCE

Physics

1) Revise chapter-8"MOTION" . Do all in text questions and back exercise in your physics notebook.

2) Activity-'How to determine direction of motion in circular path?"

 Make a video or power point presentation to demonstrate it.

3) Do assignment in physics notebook.

ASSIGNMENT -1

MOTION

Multiple Choice Questions

1. If the displacement of an object is proportional to square of time, then the object moves with
    (a) uniform velocity
    (b) uniform acceleration
    (c) increasing acceleration
    (d) decreasing acceleration

2. The distance time graph of a body coincides with its time axis. The body must be
    (a) in uniform motion
    (b) at rest

(c) in uniformly accelerated motion
(d) in zig-zag motion

3. From the given $v - t$ graph (see below Fig.), it can be inferred that the object is
(a) in uniform motion
(b) at rest
(c) in non-uniform motion
(d) moving with uniform acceleration
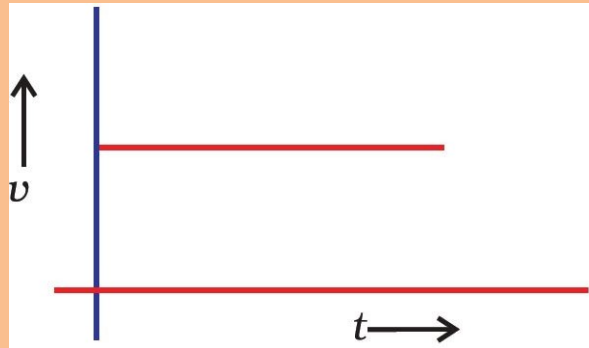
4. The velocity time graph of a body is parallel to the time axis. The body is
(a) at rest
(b) having uniform acceleration
(c) having zero acceleration
(d) having non-uniform acceleration

5. A particle is moving in a circular path of radius r. The displacement after half a circle would be:
(a) Zero
(b) π r
(c) 2 r
(d) 2π r

6. A body is thrown vertically upward with velocity u, the greatest height h to which it will rise is,
(a) u/g (b) $u^2/2g$ (c) u^2/g (d) $u/2g$

7. The numerical ratio of displacement to distance for a moving object is
(a) always less than 1
(b) always equal to 1
(c) always more than 1
(d) equal or less than 1

8. Suppose a boy is enjoying a ride on a *merry-go-round* which is moving with a constant speed of 10 m/s. It implies that the boy is
(e) at rest
(f) moving with no acceleration
(g) in accelerated motion
(h) moving with uniform velocity

9. Area under a $v - t$ graph represents a physical quantity which has the unit
(i) m^2

(j) m

(k) m³

(l) m/s

10. Four cars A, B, C and D are moving on a levelled road. Their distance versus time graphs are shown in below Fig. Choose the correct statement
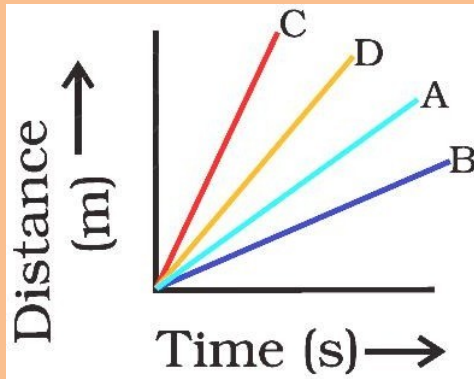
(a)Car A is faster than car D.

(b)Car B is the slowest.

©Car D is faster than car C.

(d)Car C is the slowest


11.Slope of a velocity – time graph gives

(a) the distance

(b) the displacement

(c) the acceleration

(d) the speed

12. In which of the following cases of motions, the distance moved and the magnitude of displacement are equal?

(a) If the car is moving on straight road

(b) If the car is moving in circular path

(c) The pendulum is moving to and fro

(d) The earth is revolving around the Sun

13. Which of the following figures (see below Figure) represents uniform
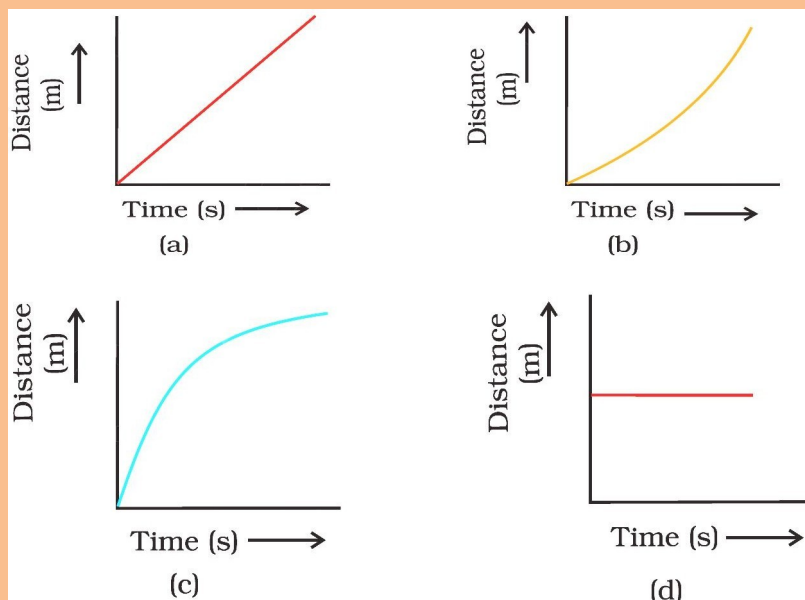
motion of a moving object correctly?

SHORT ANSWER QUESTIONS

14. 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 you answer.

15. How will the equations of motion for an object moving with a uniform velocity change?

16. A car starts from rest and moves along *the x*-axis with constant acceleration 5 m/s^2 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?

17. A motorcyclist drives from A to B with a uniform speed of 30 km/h and returns back with a speed of 20 km/h. Find its average speed.

18. Draw a velocity versus time graph of a stone thrown vertically upwards and then coming downwards after attaining the maximum height.

19. The velocity-time graph (see below Figure) shows the motion of a cyclist. Find (i) its acceleration (ii) its velocity and (iii) the distance covered by the cyclist in 15 seconds.
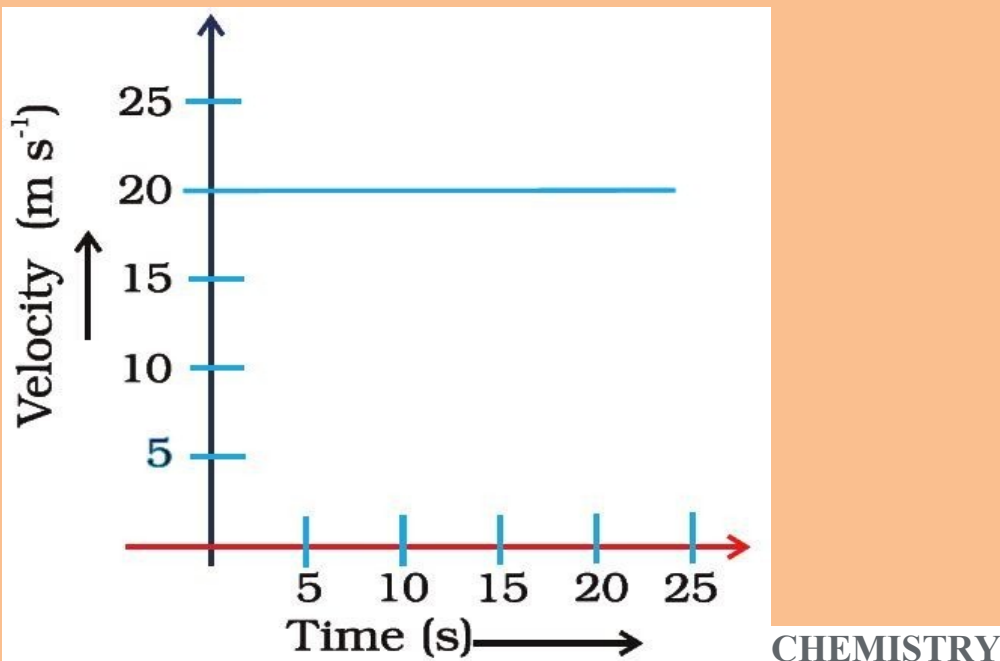
CHEMISTRY

1) A Pictorial Project Report On The States of Matter.
2) Revise Ch-1 "Matter in our surrounding"
Do all intext question and back exercise in your chemistry notebook.
3) ACTIVITY-
i) Show compressibility of gases and liquid.
ii) To show that the rate of evaporation of different liquids are different.
4) Do assignment in chemistry notebook.

ASSIGNMENT – 1
MATTER IN OUR SURROUNDINGS

1. Fill in the blanks
   a. The process of_____causes cooling.
   b. The process of cooling glass is known as_____.
   c. Liquids have no fixed____but have fixed____.
   d. ____exists in all three states of matter.
   e. Carbon dioxide is a white solid called_at temperature below____.

2. State True or False
   a. Evaporation of water is a bulk phenomenon.
   b. Diffusion takes place in haphazard and random way.
   c. SI unit of pressure is Pascal.
   d. A gas is highly incompressible fluid.

e. Solids and liquids can be identified from their characteristic melting and boiling points.

3. Zig-zag movement of the solute particle in a solution is known as
   (a) Linear motion
   (b) Circular motion
   (c) Brownian motion
   (d) Curved motion.

4. Gases can be liquified by
   (a) increasing pressure
   (b) decreasing temperature
   (c) both (a) and (b)
   (d) decreasing pressure

5. Density of a substance is defined as
   (a) ratio of mass and volume
   (b) product of mass and volume
   (c) ratio of mass and temperature
   (d) product of mass and temperature

6. Which of the following is not matter
   (a) Blood
   (b) Humidity
   (c) Electron
   (d) Moon rock

7. Which is more effective in cooling?
   (a) Ice at 0° C
   (b) Water at 0° C
   (c) Water at 100° C
   (d) Ice at 100° C

8. 0° C temperature is equal to
   (a) 0 K
   (b) 273 K
   (c) -273 K
   (d) 300 K

9. The process involving the change of state from solid to gas is called
   (a) melting
   (b) boiling
   (c) sublimation
   (d) fusion

10. A solid has
   (a) definite volume and no definite shape

(b) no definite volume no definite shape
(c) definite shape and volume
(d) definite shape but no definite volume

11. A liquid has
    (a) definite volume and no definite shape
    (b) no definite volume no definite shape
    (c) definite shape and volume
    (d) definite shape but no definite volume

12. A gas has
    (a) definite volume and no definite shape
    (b) no definite volume no definite shape
    (c) definite shape and volume
    (d) definite shape but no definite volume

13. Which of the following is NOT a property of particles of a matter?
    (a) The particles of matter are extremely small
    (b) The particles of matter have spaces between them.
    (c) The particles of matter are in stationery state.
    (d) The particles of matter attract each other.

14. Which of the following has minimum spaces among the particles?
    (a) Solids
    (b) Liquids
    (c) Gases
    (d) None of these

15. During summer, water kept in an earthen pot becomes cool because of the phenomenon of
    (a) diffusion
    (b) transpiration
    (c) osmosis
    (d) evaporation

16. Rate of diffusion is the fastest in
    (a) Solids
    (b) Liquids
    (c) Gases
    (d) None of these

17. Thermal conduction takes places in
    (a) solids only
    (b) liquids only
    (c) gases only
    (d) solids, liquids and gases.

18. Evaporation always causes

(a) thermal expansion
(b) Liquification
(c) Cooling down

19. A change of state directly from solid to gas without changing into liquid state (or vice versa) is called
(a) Evalopartion
(b) Sublimation
(c) Diffusion
(d) Condensation

20. The rate of evaporation decreases with
(a) increase in humidity
(b) increase of temperature
(c) increase in wind speed
(d) increase of surface area

21. Expand CNG and LPG.

22. Arrange the following substances in increasing order of force of attraction between the particles. (i) milk (ii) salt (iii) oxygen

23. Why is sponge a solid though compressible?

24. Write one important characteristic of matter.

BIOLOGY

1) Learn and write the Q/A (Questions and answers) of:-
Ch. - Fundamental unit of life and
Ch.-Tissues in a separate copy.
2) Make a project on modern methods of agriculture.
3) Draw the following diagrams in a separate copy:-
•Plant and animal cell
•Striated, unstriated and cardiac muscle fibres
•Parenchyma, collenchyma and sclerenchym

ART

1. Landscape OR Bird's Painting by using Pencil Colours

2. Doodle Art

And best out of waste using oil cans for making plant pot 4:18 PM ✓✓

Enjoy your holiday
Stay safe,
stay healthy
Best wishes