

WINTER BREAK ASSIGNMENT --- ADDITIONAL QUESTIONS

CLASS: VI

Sub: MATHEMATICS

Session -- 2023-24

QUESTION BANK

TOPIC : DATA HANDLING

1. In a mathematics test the following marks were obtained by 40 students. Arrange these marks in a table using tally marks.

8 1 3 7 6 5 4 4 2 4 9 5 3 7 1 6 5 2 7 7 3 8 4 2 8 9 5 8 6 7 4 5 6 9 6 4 4 6 6

(a) Find how many students obtained marks equal to or more than 7? (b) How many students obtained marks below 4?

2. Following is the choice of sweets of 30 students of Class VI.

Ladoo, Barfi, Ladoo, jalebi, Ladoo, Rashulla, Jalebi, Ladoo, Barfi, Rasgulla, Ladoo, Jalebi, Jalebi, Rashulla, Ladoo, Rasgulla, Jalebi, Ladoo, Rasgulla, Ladoo, Ladoo, Barfi, Rasgulla, Rasgulla, Jalebi, Rasgulla, Ladoo, Rasgulla, Jalebi, Ladoo

(a) Arrange the names of sweets in a table using tally marks.

(b) Which sweet is preferred by most of the students?

3. Catherine threw a dice 40 times and noted the number appearing each time as shown below:

1 3 5 6 6 3 5 4 1 6 2 5 3 4 6 1 5 5 6 1 1 2 2 3 5 2 4 5 5 6 5 1 6 2 3 5 2 4 1 5






























Make a table and enter the data using tally marks. Find the number that appeared.

(a) The minimum number of times.

(b) The maximum number of times.

(c) Find those numbers that appear an equal number of times.


































4. Following pictograph shows the number of tractors in five villages:

Villages	No. of tractors	 – 1 tractor
Village A	     	
Village B	    	
Village C	       	
Village D	  	
Village E	     	

Observe the pictograph and answer the following questions:











































- Which village has the minimum number of tractors?
- Which village has the maximum number of tractors?
- How many more tractors village C has as compared to village B.
- What is the total number of tractors in all the five villages?

5. The number of girl students in each class of a co-educational middle school is depicted by the pictograph. Observe this pictograph and answer the following questions:








































Classes	Number of girl students	 – 4 Girls
I	     	
II	    	
III	    	
IV	   	
V	  	
VI	   	
VII	  	
VIII	 	

- Which class has the minimum number of girl students?
- Is the number of girls in class VI less than the number of girls in class V?
- How many girls are there in class VII?

6. The sale of electric bulbs on different days of a week is shown below: What can be conclude from the said pictograph?

Days	Number of electric bulbs  – 2 Bulbs
Monday	     
Tuesday	      
Wednesday	   
Thursday	    
Friday	      
Saturday	   
Sunday	       

7. In a village six fruit merchants sold the following number of fruit baskets in a particular season:

Name of fruit merchants	Number of fruit baskets  – 100 Fruit baskets
Rahim	   
Lakhanpal	     
Anwar	     
Martin	        
Ranjit Singh	       
Joseph	    

Observe this pictograph and answer the following questions:

- Which merchant sold the maximum number of baskets?
- How many fruit baskets were sold by Anwar?
- The merchants who have sold 600 or more number of baskets are planning to buy a godown for the next season. Can you name them?

TOPIC : MENSURATION

- The lid of a rectangular box of sides 40 cm by 10 cm is sealed all round with tape. What is the length of the tape required?
- A table-top measures 2 m 25 cm by 1 m 50 cm. What is the perimeter of the table-top?
- What is the length of the wooden strip required to frame a photograph of length and breadth 32 cm and 21 cm respectively?
- A rectangular piece of land measures 0.7 km by 0.5 km. Each side is to be fenced with 4 rows of wires. What is the length of the wire needed?

5. Find the perimeter of each of the following shapes: (a) A triangle of sides 3 cm, 4 cm and 5 cm. (b) An equilateral triangle of side 9 cm. (c) An isosceles triangle with equal sides 8 cm each and third side 6 cm.
6. Find the perimeter of a triangle with sides measuring 10 cm, 14 cm and 15 cm.
7. Find the perimeter of a regular hexagon with each side measuring 8 cm.
8. Find the side of the square whose perimeter is 20 m.
9. The perimeter of a regular pentagon is 100 cm. How long is its each side?
10. A piece of string is 30 cm long. What will be the length of each side if the string is used to form: (a) a square (b) an equilateral triangle (c) a regular hexagon?
12. Two sides of a triangle are 12 cm and 14 cm. The perimeter of the triangle is 36 cm. What is the third side?
13. Find the cost of fencing a square park of side 250 m at the rate of ₹ 20 per meter.
14. Find the cost of fencing a rectangular park of length 175 m and breadth 125 m at the rate of ₹ 12 per meter.
15. Sweety runs around a square park of side 75 m. Bulbul runs around a rectangular park with length of 60 m and breadth 45 m. Who covers less distance?

TOPIC : ALGEBRA

1. If each match box contains 50 matchsticks, the number of matchsticks required to fill n such boxes is
 (A) $50 + n$ (B) $50n$ (C) $50 \div n$ (D) $50 - n$
2. Amulya is x years of age now. 5 years ago her age was
 (A) $(5 - x)$ years (B) $(5 + x)$ years (C) $(x - 5)$ years (D) $(5 \div x)$ years
3. If x takes the value 2, then the value of $x + 10$ is
 (A) 20 (B) 12 (C) 5 (D) 8
4. If the perimeter of a regular hexagon is x metres, then the length of each of its sides is
 (A) $(x + 6)$ metres (B) $(x \div 6)$ metres (C) $(x - 6)$ metres (D) $(6 \div x)$ metres
5. $10 - x$ means
 (A) 10 is subtracted x times (B) x is subtracted 10 times (C) x is subtracted from 10
 (D) 10 is subtracted from x
6. If m is a whole number less than 5, complete the table and by inspection of the table, find the solution of the equation $2m - 5 = -1$

m					
$2m - 5$					

7 . A class with p students has planned a picnic. Rs 50 per student is collected, out of which Rs 1800 is paid in advance for transport. How much money is left with them to spend on other items?

8 . In a village, there are 8 water tanks to collect rain water. On a particular day, x litres of rain water is collected per tank. If 100 litres of water was already there in one of the tanks, what is the total amount of water in the tanks on that day?

9. On my last birthday, I weighed 40kg. If I put on m kg of weight after a year, what is my present weight? 5. Sunita is half the age of her mother Geeta. Find their ages (i) after 4 years? (ii) before 3 years?

TOPIC : RATIO AND PROPORTIONS

1. The ratio of 8 books to 20 books is

(A) 2 : 5 (B) 5 : 2 (C) 4 : 5 (D) 5 : 4

2. A picture is 60cm wide and 1.8m long. The ratio of its width to its perimeter in lowest form is

(A) 1 : 2 (B) 1 : 3 (C) 1 : 4 (D) 1 : 8

3. Mathematics textbook for Class VI has 320 pages. The chapter 'symmetry' runs from page 261 to page 272. The ratio of the number of pages of this chapter to the total number of pages of the book is

(A) 11 : 320 (B) 3 : 40 (C) 3 : 80 (D) 272 : 320

4. The greatest ratio among the ratios 2 : 3, 5 : 8, 75 : 121 and 40 : 25 is

(A) 2 : 3 (B) 5 : 8 (C) 75 : 121 (D) 40 : 25

5. If a bus travels 160 km in 4 hours and a train travels 320km in 5 hours at uniform speeds, then the ratio of the distances travelled by them in one hour is

(A) 1 : 2 (B) 4 : 5 (C) 5 : 8 (D) 8 : 5

6. The marked price of a table is Rs 625 and its sale price is Rs 500. What is the ratio of the sale price to the marked price?

7. Which pair of ratios are equal? And why?

(i) $\frac{2}{4}$, $\frac{3}{6}$ (ii) $\frac{8}{2}$, $\frac{4}{1}$ (iii) $\frac{4}{12}$, $\frac{5}{20}$

8. A line segment 56cm long is to be divided into two parts in the ratio of 2 : 5. Find the length of each part.

9. Sex ratio is defined as the number of females per 1000 males in the population. Find the sex ratio if there are 3732 females per 4000 males in a town.

10. A rectangular sheet of paper is of length 1.2m and width 21cm. Find the ratio of width of the paper to its length.

S.D.Biswas.

TGT - Maths

WINTER BREAK ASSIGNMENT --- ADDITIONAL QUESTIONS

CLASS: VII

Sub: MATHEMATICS

Session -- 2023-24

QUESTION BANK

TOPIC: RATIONAL NUMBERS

COMPETANCY BASED QUESTIONS

Question 1: Write each of the following numbers in the form p/q , where p and q are integers.

(a) six-eighths (b) three and half (c) opposite of 1 (d) one-fourth (e) zero (f) opposite of three-fifths

Question 2: In each of the following cases, write the rational number whose numerator and denominator are respectively as under:

(a) 5-39 and 54-6 (b) $(-4) \times 6$ and $8 \div 2$ (c) $35 \div (-7)$ and $35 - 18$ (d) $25 + 15$ and $81 \div 40$

Question 3: Write the following as rational numbers in their standard forms.

Question 4: Find a rational number exactly halfway between

Question 5:

Taking $x = \frac{-4}{9}$, $y = \frac{5}{12}$ and $z = \frac{7}{18}$, find

- (a) The rational number which when added to x gives y .
- (b) The rational number which subtracted from y gives z .
- (c) The rational number which when added to z gives us x .
- (d) The rational number which when multiplied by y to get x .
- (e) The reciprocal of $x + y$.
- (f) The sum of reciprocals of x and y .
- (g) $(x + y) \times z$
- (h) $(x - y) + z$
- (i) $x + (y + z)$
- (j) $x + (y + z)$
- (k) $x - (y + z)$

Question 6: What should be added to $-\frac{1}{2}$ to obtain the nearest natural number?

TOPIC: Perimeter and Area

Competency Based Questions

1. If the diagonal of a rectangle is 17 cm long and its perimeter is 46 cm, find the area of the rectangle.
2. The area of a circle is increased by 22 cm^2 when its radius is increased by 1 cm. find the original radius.
3. The area of a parallelogram is 338 m^2 . If its altitude is twice the corresponding base. Find the base and altitude.
4. On increasing each side of a square by 25%. By how much percent area will increase.
5. The area of rhombus is 144 cm^2 and one of its diagonals is double the other, find the length of diagonals.
6. A copper wire when bent in the form of a square encloses an area of 121 cm^2 . If the same wire is bent in the form of the circle, find the area enclosed by it.
7. The hour hand and minute hand of a clock are 4.2 cm and 7 cm long respectively. Find the sum of the distances covered by their tips in 1 day.
8. The base of triangular field is three times its height. If the cost of cultivating the field at Rs.2800 per hectare is Rs.37800, find its base and height.
9. If the area of rhombus is 96 cm^2 and one of its diagonals is 16 cm, find its perimeter.
10. A square lawn has a 2m wide path surrounding it. If the area of the path is 136 m^2 , find the area of the lawn.
11. The sum of radii of two circles is 140 cm and the difference of their circumference is 88 cm. Find the diameters of the two circles
12. The radii of two circles are 8 cm and 6 cm respectively. Find the radius of the circle having area equal to the sum of the areas of the two circles.
13. How many times will the wheel of a car rotate in a journey of 88km, if it is known that the diameter of the wheel is 56 cm?
14. The cost of fencing a circular ground at 25 paise per meter is Rs.220. find the cost of turfing grass in it at Rs.80 paise per 100 m^2 .
15. The radius of a circle is 5 times that of another circle. Compare their areas and circumferences.
16. Find the radius of a circle whose circumference is equal to the sum of the circumferences of two circles of radii 15cm and 18cm.
17. Find the area of the largest square that can be inscribed in a circle of radius 12 cm.

18. A school has a hall which is 22 m long and 15.5 m broad. A carpet is laid inside the hall leaving all around a margin of 75 cm from the walls. Find the area of the carpet and the area of the strip left uncovered. If the width of the carpet is 82 cm, find its cost at the rate of Rs. 60 per m.

TOPIC: Algebraic Expressions

Competency based questions

1. If $P = 2x^2 - 5x + 2$, $Q = 5x^2 + 6x - 3$ and $R = 3x^2 - x - 1$. Find the value of $2P - Q + R$.
2. If $A = -(2x+3)$, $B = -3(x-2)$ and $C = -2x + 7$. Find the value of K, if $A + B + C = K$.
3. Rohan's mother gave him Rs. $3xy^2$ and his father gave him Rs. $5(xy^2 + 2)$. Out of this total money he spent Rs. $(10 - 3xy^2)$ on his birthday party. How much money is left with him?
4. Arjun bought a rectangular plot with length x and breadth y and then sold a triangular part of it whose base is y and height is z . Find the area of the remaining part of the plot.
5. Amisha has a square plot of side m and another triangular plot with base and height each equal to m . What is the total area of both the plots.
6. A taxi service charges Rs.8/km and levies a fixed charge of Rs. 50. Write an algebraic expression for the above situation, if the taxi is hired for x km.
7. Sonu and Raj have to collect different kinds of leaves for science project. They go to a park where Sonu collects 12 leaves and Raj collects x leaves. After some time Sonu loses 3 leaves and Raj collects $2x$ leaves. Write an algebraic expression to find the total number of leaves collected by both of them.
8. The rate of planting the grass is Rs. x per square meter. Find the cost of planting the grass on a triangular lawn whose base is y meters and the height is z meters.
9. Simplify: $(13y^2 - 47y + 5) - (27y - 23y^2 + 2) - (17y - 3 + 2y^2)$
10. Add: $(3x^2 - 15x + 73) + (-14x^2 + 13x - 16) + (-2x^2 - 12x + 5)$

S.D.Biswas.

TGT - Maths

Sample Question Paper-1

SCIENCE (086)

Class-9

SOLVED

Time Allowed : 3 Hours

Maximum Marks : 80

General Instructions :

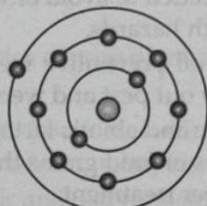
Read the following instructions carefully.

- This question paper consists of 39 questions in 5 sections.
- All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
- Section A consists of 20 objective type questions carrying 1 mark each.
- Section B consists of 6 Very Short questions carrying 2 marks each. Answers to these questions should be in the range of 30 to 50 words.
- Section C consists of 7 Short Answer type questions carrying 3 marks each. Answers to these questions should be in the range of 50 to 80 words.
- Section D consists of 3 Long Answer type questions carrying 5 marks each. Answer to these questions should be in the range of 80 to 120 words.
- Section E consists of 3 source-based/case-based units of assessment of 4 marks each with sub-parts.

Section - A

(Select and write the most appropriate option out of the four options given for each of the questions 1 - 20. There is no negative mark for incorrect response.)

1. The pictures show the arrangement of electrons in the shells of different atoms. Which two atoms have the same valency?



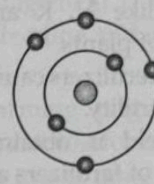
Atom 1



Atom 2



Atom 3



Atom 4

- | | | | |
|--|---------------------------------------|-----------------------------------|-----------------------------|
| (A) Atom 1 and Atom 2 | (B) Atom 2 and Atom 3 | | |
| (C) Atom 3 and Atom 4 | (D) Atom 4 and Atom 1 | | 1 |
| 2. Which of these is common for all chemical changes? | | | |
| (A) Change in shape | (B) Absorption of heat | | 1 |
| (C) Increase in volume | (D) Formation of a new substance | | |
| 3. Which of the following molecules is triatomic? | | | |
| (A) H_2 | (B) C | (C) CO | (D) H_2O |
| | | | 1 |
| 4. Which of the following atoms are isobars? | | | |
| (A) $^{12}_6C$ and $^{14}_6C$ | (B) $^{40}_{18}Ar$ and $^{40}_{20}Ca$ | (C) $^{14}_6C$ and $^{40}_{18}Ar$ | (D) 6_3Li and $^{12}_6C$ |
| | | | 1 |
| 5. What would be the valency of an element that is chemically inactive? | | | |
| (A) 0 | (B) 1 | (C) 2 | (D) 5 |
| | | | 1 |
| 6. A few substances are arranged in the increasing order of 'forces of attraction' between their particles. Which one of the following represents a correct arrangement? | | | |
| (A) Water, air, wind | (B) Air, sugar, oil | (C) Oxygen, water, sugar | (D) Salt, juice, air |
| | | | 1 |

7. On converting 25°C , 38°C and 66°C to Kelvin scale, the correct sequence of temperatures will be:
 (A) 298 K, 311 K and 339 K (B) 298 K, 300 K and 338 K
 (C) 273 K, 278 K and 543 K (D) 298 K, 310 K and 338 K
8. Why do cells of apical meristem lack vacuoles?
 (A) They store food materials (B) They have thin cell walls.
 (C) They contain dense cytoplasm. (D) They are actively dividing cells.
9. Which of these cells is the longest?
 (A) Bone cell (B) Nerve cell
 (C) Stomach cell (D) Heart muscle cell
10. *Amoeba* acquires its food through a process, termed:
 (A) Exocytosis (B) Endocytosis
 (C) Plasmolysis (D) Both exocytosis and endocytosis
11. Kitchen of the cell is:
 (A) Mitochondria (B) Endoplasmic reticulum
 (C) Chloroplast (D) Golgi apparatus
12. Flexibility in plants is due to:
 (A) Collenchyma (B) Sclerenchyma
 (C) Parenchyma (D) Chlorenchyma
13. What is the correct unit for measuring the acceleration of a moving object?
 (A) m (B) s (C) ms^{-2} (D) ms
14. Which of these involves the conversion of kinetic energy to potential energy?
 (A) A person diving into a pool of water from a board.
 (B) A person gliding in the air with the help of a parachute.
 (C) A person sliding down from the top of a water slide.
 (D) A person riding a motorbike to the top of an overbridge.
15. Which of these nutrients is required by plants in large quantities?
 (A) Iron (B) Zinc (C) Potassium (D) Manganese
16. To solve the food problem of the country, which among the following is necessary?
 (A) Increased production and storage of food grains.
 (B) Easy access of people to the food grains.
 (C) People should have money to purchase the grains.
 (D) All of the above

ASSERTION-REASON BASED QUESTIONS

Question No. 17 to 20 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.

17. Assertion (A): When heat energy is supplied to the solid, it starts melting.
 Reason (R): Solid particles take up the heat and help in melting.
18. Assertion (A): Guard cells are specialised epidermal cells.
 Reason (R): Stomata are found in the epidermis of leaves.
19. Assertion (A): Mass of an object is always zero.
 Reason (R): Mass of an object is the measure of its inertia and the substance contained by the body.
20. Assertion (A): Presence of weeds affects the crop field.
 Reason (R): Weeds compete for food, space and light.

Section - B

(Question No. 21 to 26 are very short answer questions)

21. What are polyatomic ions? List two examples.
22. List two points of differences between parenchyma and sclerenchyma.
23. What is plasmolysis? What happens to a plasmolysed cell when it is placed in water?

OR

Differentiate the following activities on the basis of voluntary (V) or involuntary (IV) muscles.

- | | |
|-----------------------|---|
| (a) Jumping of frog | (b) Pumping of the heart |
| (c) Writing with hand | (d) Movement of chocolate in your intestine |

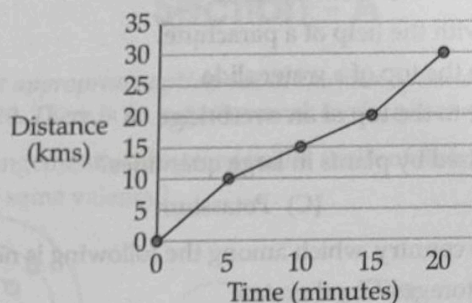
24. A man pushes four boxes of different mass.
The table shows the acceleration produced for each box during the push.

Mass of the box (kg)	Acceleration produced (m/s^2)
10	200
20	100
40	50
80	25

What amount of force does the man exert on each box? Is the force acting on each box unbalanced? Explain your answer.

25. The given graph shows how the car travelled from house to school.

Distance - time graph for the motion of a car



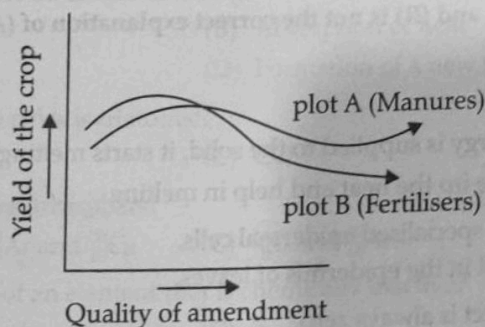
Did the car move with uniform motion from house to school? Explain your answer.

OR

While driving a vehicle how does the use of safety belts prevents accidents? To show that a body remains at rest unless acted upon by an unbalanced force, mention one situation from everyday life.

26. The graph below shows two crop yields [plot A and B] that have been treated by manures and chemical fertilisers respectively, keeping other environmental factors the same.

Answer the following questions:



- (a) Why does plot B show sudden increase and then gradual decrease in yield?
- (b) Why is the highest peak in plot A graph slightly delayed?

Section - C

(Question No. 27 to 33 are short answer questions)

27. (a) Define latent heat of vaporisation.
 (b) Give reasons for the following: You feel cold when you pour some nail polish remover on your palm.
 (c) Explain: During summer, sitting under a fan makes us comfortable. 3
28. Rahul and Manav each were given a mixture of iron filings and sulphur powder. Rahul heated the mixture strongly and a new substance was formed. Write three points of difference between the two. 3
- OR
- A teacher told three students A, B and C to prepare 25% solution (mass by volume) of KOH. Student A dissolved 25 g of KOH in 100 g of water, student B dissolved 25 g of KOH in 100 mL of water and student C dissolved 25 g KOH in water and made the volume 100 mL. Which one of them has made required 25% solution? Give your answer with reason.
29. Why are lysosomes known as suicidal bags? 3
30. Classify meristematic tissues on the basis of the region they are present. Also, mention their functions. 3
31. A particle moves over three quarters of a circle of radius r cm.
 Calculate the magnitude of:
 (a) its distance and (b) displacement. 3
32. Explain:
 (a) Universal gravitational constant (b) Free fall 3
33. In which direction do the following forces act when an object is in motion :
 (a) Frictional force (b) Gravitational force
 (c) Centripetal force 3

Section - D

(Question No. 34 to 36 are long answer questions)

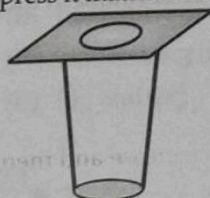
34. (a) Can a homogeneous mixture have a variable composition? Justify giving an example.
 (b) What happens when:
 (i) Dilute sulphuric acid is added to a mixture of iron filings and sulphur powder.
 (ii) Dilute sulphuric acid is added to a mixture of iron filings and sulphur powder heated to red hot followed by cooling. 5

OR

- (a) List any two properties that liquids have in common with gases.
 (b) Give two reasons to justify that an iron almira is a solid at room temperature.
 (c) What happens to the heat energy which is supplied to the solid once it starts melting?
35. On the basis of the number of cells, living organisms are classified as unicellular and multicellular.
 (a) Name two unicellular organisms.
 (b) What is meant by division of labour in multicellular organisms?
 (c) Name one prokaryotic and one eukaryotic unicellular organism.
 (d) 'Every multicellular organism has come from a single cell.' Justify this statement.
 (e) Write one common feature between an *Amoeba* and white blood cells of humans. 5

OR

- (a) Name the connective tissue which is the hardest. What makes it so hard?
 (b) List any three important functions of this tissue.
36. (a) State Newton's second Law of Motion. Express it mathematically and find the SI unit of force from it.
 (b)



In the diagram given above, if the card is flicked away with a jerk, what will you observe? Explain the reason for this observation. 5

OR

- (a) Define momentum. Write its S.I. unit.
 (b) How much momentum will an object of mass 10 kg transfer to the floor, if it falls from a height of 5 m ($g = 10 \text{ m/s}^2$).
 (c) Explain how a karate player can break a pile of tiles with a single blow of his hand?

Section - E

(Question No. 37 to 39 are case-based/ data-based questions with 2 to 3 short sub-parts.
 Internal choice is provided in one of these sub-parts.)

37. The following data represents the distribution of electrons, protons and neutrons in atoms of four elements A, B, C, D. Understand the data carefully and answer the following questions.

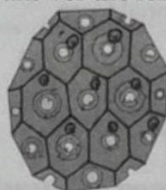
Element	Protons	Neutrons	Electrons
A	9	10	9
B	16	16	16
C	12	12	12
D	17	18	17

- (a) State the electronic configuration of element B. What will be the valency of element B?
 (b) What will be atomic number of element D?

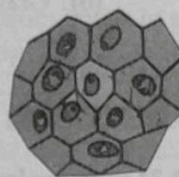
OR

Calculate the atomic mass number for element D.

38. Study the given figure and answer the following questions.



A-Cells



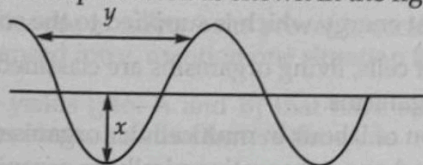
B-Cells

- (a) Identify A and B cells.
 (b) What will happen if B cells are kept in a hypotonic solution?
 (c) What is an isotonic solution?

OR

What is plasmolysis?

39. A sound wave travelling in a medium is represented as shown in the figure:



- (a) Which letter represents the amplitude of the sound wave?
 (b) Which letter represents wavelength of the wave?
 (c) What is the frequency of the source of sound if the vibrating source of sound makes 360 oscillations in two minutes?

OR

Calculate the time period of the source of sound in the above case.

Sample Question Paper-2

SCIENCE (086)

Class-9

SOLVED

Time Allowed : 3 Hours

Maximum Marks : 80

General Instructions :

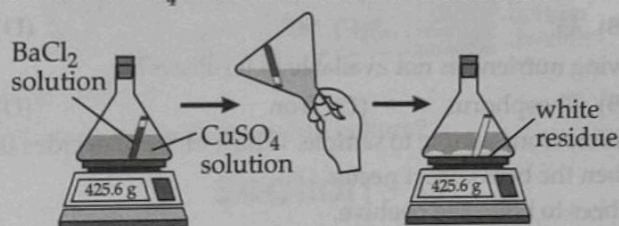
Read the following instructions carefully.

- This question paper consists of 39 questions in 5 sections.
- All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
- Section A consists of 20 objective type questions carrying 1 mark each.
- Section B consists of 6 Very Short questions carrying 2 marks each. Answers to these questions should be in the range of 30 to 50 words.
- Section C consists of 7 Short Answer type questions carrying 3 marks each. Answers to these questions should be in the range of 50 to 80 words.
- Section D consists of 3 Long Answer type questions carrying 5 marks each. Answer to these questions should be in the range of 80 to 120 words.
- Section E consists of 3 source-based/case-based units of assessment of 4 marks each with sub-parts.

Section - A

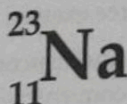
(Select and write the most appropriate option out of the four options given for each of the questions 1 - 20. There is no negative mark for incorrect response:)

1. Alia mixed BaCl_2 solution and CuSO_4 solution in a closed conical flask.



What can be concluded from the result of the experiment?

- Total mass of the chemicals remains the same.
 - Total volume of the chemicals remains the same.
 - State of matter of the chemicals remains the same.
 - Composition of the chemicals remains the same.
2. During summer, water kept in an earthen pot becomes cool because of the phenomenon of:
- (A) Diffusion (B) Transpiration (C) Osmosis (D) Evaporation
3. Which of the following are chemical changes?
- (i) Decaying of wood (ii) Burning of wood
(iii) Sawing of wood (iv) Hammering of a nail into a piece of wood
- (A) (i) and (ii) (B) (ii) and (iii) (C) (iii) and (iv) (D) (i) and (iv)
4. The picture shows the symbol for sodium.



- What can be concluded about sodium from the symbol?
- (A) It contains 11 neutrons (B) It contains 12 protons
(C) It contains 12 neutrons (D) It contains 34 electrons
5. Rutherford's alpha particles scattering experiment resulted into the discovery of: 1
(A) Electron (B) Proton (C) Nucleus in the atom (D) Atomic mass
6. Which condition out of the following will increase the evaporation of water? 1
(A) Increase in temperature of water (B) Decrease in temperature of water
(C) Less exposed surface area of water (D) Adding common salt to water
7. The boiling points of diethyl ether, acetone and n-butyl alcohol are 35°C, 56°C and 118°C, respectively. Which one of the following correctly represents their boiling points in Kelvin scale? 1
(A) 306 K, 329 K, 391 K (B) 308 K, 329 K, 392 K
(C) 308 K, 329 K, 391 K (D) 329 K, 392 K, 308 K
8. Girth of stem increases due to: 1
(A) Apical meristem (B) Lateral meristem
(C) Vertical meristem (D) Intercalary meristem
9. The undefined nuclear region of prokaryotes is also known as: 1
(A) Nucleus (B) Nucleolus (C) Nucleic acid (D) Nucleoid
10. The proteins and lipids, essential for building the cell membrane, are manufactured by: 1
(A) Endoplasmic reticulum (B) Golgi apparatus
(C) Plasma membrane (D) Mitochondria
11. Which muscles act involuntarily? 1
(i) Striated muscles (ii) Smooth muscles
(iii) Cardiac muscles (iv) Skeletal muscles
(A) (i) and (ii) (B) (ii) and (iii) (C) (iii) and (iv) (D) (i) and (iv)
12. Which of these properties qualifies *Amoeba* as eukaryote? 1
(A) It is unicellular (B) It needs food for energy
(C) It has a membrane bound nucleus (D) It is surrounded by a plasma membrane
13. Area under v-t graph represents a physical quantity, which has the unit: 1
(A) m^2 (B) m (C) ms^{-2} (D) ms^{-1}
14. In case of negative work, the angle between the force and displacement is? 1
(A) 0° (B) 45° (C) 90° (D) 180°
15. Which one of the following nutrients is not available in fertilisers? 1
(A) Nitrogen (B) Phosphorus (C) Iron (D) Potassium
16. The quality of honey differs from sample to sample. Which of these decides the quality of a honey sample? 1
(A) Time of the day when the bees collect nectar.
(B) Time taken by the bees to build the beehive.
(C) Type of flower from which the bees collect nectar.
(D) Size of the beehive from which the honey is collected.

ASSERTION-REASON BASED QUESTIONS

Question No. 17 to 20 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.
17. Assertion (A): We prefer to wear cotton clothes during summer. 1
Reason (R): Cotton clothes are good absorber of water.
18. Assertion (A): Mitochondria are semi-autonomous cell organelles. 1
Reason (R): Mitochondria generate energy.
19. Assertion (A): On Moon, humans feel lighter than on Earth. 1
Reason (R): It is due to more gravitational force exerted by Moon on man.
20. Assertion (A): Cattles are fed with roughage and concentrates. 1
Reason (R): Roughage provides fibres while concentrates provide proteins and other nutrients.

Section - B

(Question No. 21 to 26 are very short answer questions)

21. Write the chemical formula for:

(a) Zinc phosphate

(b) Lead carbonate

22. Distinguish between cell wall and cell membrane.

23. Why is the plasma membrane called a selectively permeable membrane?

OR

Differentiate between voluntary and involuntary muscles. Give one example of each type.

24. The table below shows the speed of a bus in three hours of its travel.

Time	First hour	Second hour	Third hour
Speed of the bus	35 km/h	60 km/h	40 km/h

Calculate the average speed of the bus.

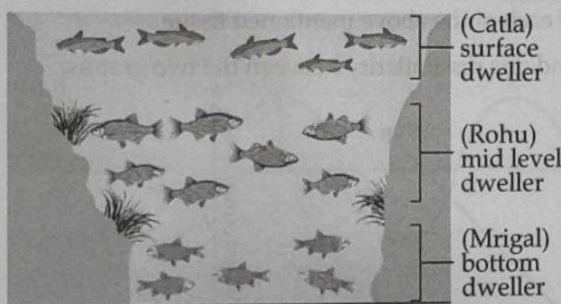
25. The following diagram shows a simple pendulum consisting of a bob of mass 100 g. Initially the bob of the pendulum is at rest at 'O'. It is then displaced to one side at A. The height of 'A' above 'O' is 5 cm.

What is the value of kinetic energy and potential energy of the bob at the position 'P' whose height above O is 2 cm?

OR

When an object is immersed in the fluid name the two forces acting on it?

26. The diagram shows a composite _ fish culture pond.



- (a) What is composite fish culture?

- (b) What is the advantage of such composite fish culture?

Section - C

(Question No. 27 to 33 are short answer questions)

27. (a) Why path of light is not visible in a solution when a beam of light is passed through it?

- (b) Classify each of following as solution, colloid or suspension:

(i) A mixture whose particles are big enough to scatter a beam of light passing through it.

(ii) A mixture whose particles settle down when it is left undisturbed.

28. What is the effect of change of pressure on physical state of matter? Explain with an example of a gas.

OR

There are two elements A_{13}^{26} and B_{14}^{26} . Find the number of sub-atomic particles in each of these elements. What is the relationship between the two elements?

29. Write three differences between prokaryotic and eukaryotic cells.

30. Explain in brief any three roles of epidermis in plants.

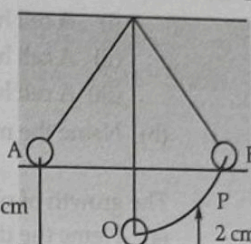
31. State the law of inertia. Why do we fall in forward direction if a moving bus stops suddenly and fall in the backward direction if it suddenly accelerates from rest?

32. Name the physical quantities denoted by :

(a) the slope of the distance-time graph

(b) the area under velocity-time graph

(c) the slope of velocity-time graph



33. In the musical instrument jal-tarang, the bowls contain different amounts of water.
- Which of the bowls produces a low pitch sound?
 - Which of the bowls produces a high pitch sound?
 - Which wave property determines the pitch?

Section - D

(Question No. 34 to 36 are long answer questions)

34. (a) State two ways by which you can change a saturated solution to unsaturated solution.
 (b) Distinguish between homogeneous and heterogeneous mixture by giving one example of each. 5 AI

OR

When a solid melts the temperature of the system does not change after the melting point is reached even when we continue to supply heat. Give reason.

Define latent heat of vaporisation. Which will cause more severe burns-boiling water or steam and why?

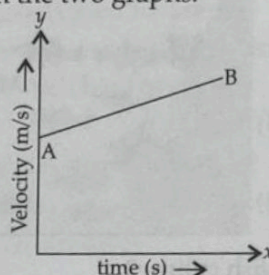
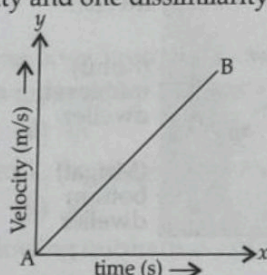
35. (a) What are the consequences of the following conditions?
- A cell having higher water concentration than the surrounding medium.
 - A cell having lower water concentration than the surrounding medium.
 - A cell having equal water concentration to its surrounding medium.
- (b) Name the materials of which the cell membrane and cell wall are composed of. 5 AI

OR

The growth of plant occurs only in specific regions:

- Name the tissue which is responsible for this growth.
- State the different types of this tissue.
- Write one function of each of the above mentioned tissue.

36. (a) Give one similarity and one dissimilarity between the two graphs.



- (b) What do you understand by the term acceleration? What is meant by its being positive or negative? Explain with example. Write its SI units. 5

OR

- Write the formula to find the magnitude of gravitational force between the Earth and an object on the Earth's surface.
- Derive how does the value of gravitational force 'F' change between two objects when the :
 - distance between them is reduced to half, and
 - mass of one object is increased four times.

Section - E

(Question No. 37 to 39 are case-based/ data-based questions with 2 to 3 short sub-parts.)

Internal choice is provided in one of these sub-parts.)

37. In the following table the mass number and the atomic number of certain elements are given. Study the given data and answer the following questions:

Elements	Mass No.	Atomic No.
A	1	1
B	7	3
C	14	7
D	40	18
E	40	20

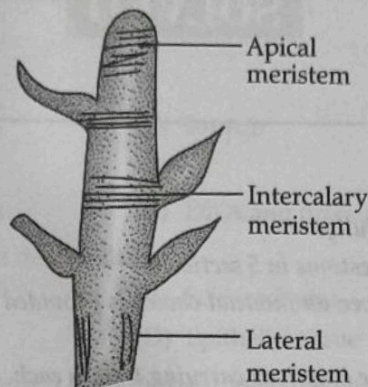
- (a) Which of the elements A, B, C, D will tend to form a cation?
 (b) Which of the above elements is a noble gas?
 (c) Which of the elements A, B, C, D will tend to form an anion?

OR

Which two elements are isobars of each other?

4

38. Observe the following diagram which shows some localised tissues and answer the questions:



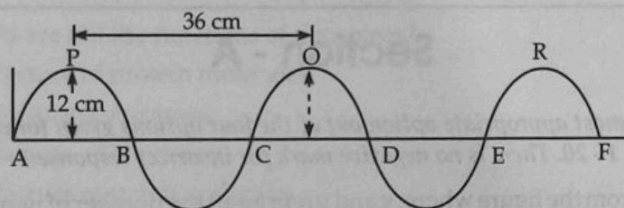
- (a) Identify the diagram.
 (b) What is apical meristem? Where do we find it?
 (c) Which type of meristem, is found at the base of leaves and internodes?

OR

Which part helps in growth and development of plant's girth?

4

39. Waves of frequency 200 Hz are produced in a string as shown in the figure. Answer the following questions as given:



- (a) Find amplitude of the wave.
 (b) Find velocity of the wave.
 (c) Find wavelength of the wave.

OR

What is the frequency of a sound wave?

4

□□

◆Holidays Homework For Winter Break 2023-24◆

Class- VII Subject English

1 Complete the written work in your notebook of the chapters taught till date.

Also learn and revise

Write 2 new words daily. Find out their meanings and make sentence on your own.

2. LETTER WRITING

i) Write a letter to the Mayor of your city seeking a solution to the problem of waterlogging in your area. You are Raj / Rani of Dharma Colony, Ramgarh.

ii) Write an application to the Principal of your school requesting her, to grant you two days' leave to attend your brother's marriage.

iii) Write a letter to your friend inviting him to your birthday party.

3) PARAGRAPH WRITING

i) HOW TO KEEP FIT AND FINE

ii) WHAT I ENJOY DOING MOST IN MY LEISURE TIME

Do reading practice daily, underline important words and learn spellings

◆HOLIDAYS HOMEWORK ◆ (Winter Break 2023-24)

 **CLASS - VIII** **SUBJECT ENGLISH** 

1 Complete the written work in your notebook of the chapters taught till date

Also learn and revise

Write 2 new words daily. Find out their meanings and make sentence on your own.

2 STORY WRITING

Complete the story by using the given outlines;

A farmer had five sons _____ were strong and _____ always quarrelled _____ the farmer wanted _____ to stop quarrelling _____ wanted to live in peace _____ words of advice _____ not have much effect _____ called all his sons _____ bundle of sticks _____ break these sticks without separating _____ Each of the tried one by one _____ used their full strength _____ the old man separated the sticks They could break the sticks easily _____ farmer said _____ strong as long as it is tied up _____ will be weak if you are divided.

3 LETTER WRITING (Letter to the Editor)

Write a letter to the Editor regarding the problem of waterlogging in your area.

You are Raj / Rani of Dharma colony, Ramgarh.

4. DIARY ENTRY

You went to receive your uncle and aunts from the Bangalore railway station. Write a diary where you share your experience of the journey from home to the railway station.

4 Write an article on

Topic- The Purpose Of Education

5. Do two unseen reading passages in your notebook

Do reading practice daily, underline important words and learn spellings

KENDRIYA VIDYALAYA AFS KUMBHIRGRAM WINTER HOLIDAY HOMEWORK 2023

Class IX

1. Who was the propaganda minister of Hitler?
2. What was the impact of the Great Depression on the US?
3. Write a brief note on the eleven-year-old Helmuth's experiences of Germany.
4. What were the steps taken by Hitler to strengthen the Nazi youth and children?
5. Hitler considered men and women two different worlds. Explain
6. How does the latitude affect India's climate?
7. India lies in which climatic region? Explain.
8. In spite of abundant rainfall, India is a water-thirsty land. Why is it so?
9. Describe the regional variations in the climatic conditions of India with the help of suitable examples.
10. When does tropical cyclone occur in India?
11. Give the main feature of Rural Employment Generation Programme.
12. Give an account of the inter-state disparities in poverty in India.
13. "The proportion of poor people is not the same in every state." Justify the statement.
14. State how social exclusion can be used in understanding poverty in India?
15. What is India's most compelling challenge in context of poverty?
16. What is an election petition?
17. Election are considered essential for any representative democracy. Why?
18. What does the term rigging mean?
19. Write about the slogan "Garibi Hatao".
20. Explain the electoral system of India?

KENDRIYA VIDYALAYA AFS KUMBHIRGRAM

SST Holiday home work 2023-24

Class -6

All the questions are compulsory

1. What were the problems that Ashoka wanted to solve by introducing Dhamma?
2. Why did Bhakti become very popular?
3. Define lithosphere, Atmosphere, Hydrosphere, and Biosphere.
4. What do you understand by global warming? how it is caused?
5. Locate the seven Continents on the world map.
6. What is erosion and deposition?
7. What is the main work of Patwari?
8. Who are Tehsildars? What are the functions of a Tehsildars?
9. Locate the following on the outline map of India.
 - a) The Himalayan range
 - b) aravali range
 - c) Deccan plateau

◆ Holidays Homework ◆

 Class - IX Subject English 

1. DESCRIPTIVE PARAGRAPH

i) You recently visited the Children's Park, a favourite place for all children, in your city. Write a description of the park in 100-150 words.

ii) One of your friends, Raman, is very gentle and polite to you. You regard him as your best friend. Describe him in 100-150 words.

2. STORY WRITING

Write a short story with the help of the cues given below. Give a suitable title to the story.

I) You encountered two strange people. They were different from normal human beings but they were quite interesting and exciting. As Amit/Manisha, using your ideas, write a story in about 150-200 words narrating your experience with them.

II)

Going to Mumbai by train to attend marriage of a friend got stuck in a traffic jam reached the railway station late boarded a wrong train realised after two hours now you

3. Do two unseen comprehension reading passages in notebook

4. Do one exercise for the following topics

I. Subject verb arrangement

II Editing

III Reported speech

5 .Revise all the chapters and prepare for your PT -2

Focus on Important characters and main points of the story

◆ **HOLIDAY HOMEWORK (Winter Break 2023- 2024)** ◆

 **Class VI** **Subject** **English** 

1 Complete the written work in your notebook of the chapters taught till date.

Also learn and revise.

2. Write 2 new words daily. Find out their meanings and make sentence on your own.

3. NOTICE WRITING (Lost and Found)

a) You are Shyam Verma of class VI of Bal Bharti Public School, Dehradun. You have lost your library book which was issued to you, in the playground. Draft a notice for the school notice board, informing the student about it.

b) While coming to school, you get a black colour geometry box in the school campus. Write a 50-word notice to put up on the noticeboard to inform all your school students about the geometry box and how the owner can receive it from you. You are Karan/ Kajal, of Janta public school, Sikkim.

4. Write a story

Topic- Honesty is the best policy

5. Write an application to the Principal of your school requesting her, to grant you two days leave to attend your brother's marriage

Do reading practice daily, underline important words and learn spellings

शीतकालीनावकाश गृहकार्य 2023-24

कक्षा-10

विषय- संस्कृत

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प्रश्न 1. पाठ्यक्रम में निर्धारित समय लेखन के कोई 20 उदाहरण लिखें।

प्रश्न 2. पाठ्यक्रम में निर्धारित सभी संधियों के कम से कम 5-5 उदाहरण लिखो एवं सीखो।

प्रश्न 3. पाठ्यक्रम में निर्धारित सभी प्रत्ययों से 5-5 उदाहरण लिखें।

प्रश्न 4. पाठ्यक्रम में निर्धारित पत्र लेखन का अभ्यास करें।

प्रश्न 5. दी हुई पुस्तिका के किन्हीं 3 वाक्य निर्माण संबंधी प्रश्नों को हल करें।

परियोजना कार्य/प्रोजेक्ट कार्य— संस्कृत में वाक्य निर्माण के 5 नियम एवं उनके 5-5 उदाहरण एक फाईल में तैयार करें।

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पीएम श्री केन्द्रीय विद्यालय वायुसेना स्थल कुम्भीरग्राम

शीतकालीनावकाश गृहकार्य 2023-24

कक्षा-8

विषय- संस्कृत

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प्रश्न 1. अस्मद्, युष्मद् के शब्दरूप दो दो बार लिखें एवं सीखें।

प्रश्न 2. पाठ 10 नीतिनवनीतम् के सभी श्लोकों को लिखकर उनका अर्थ भी लिखें।

प्रश्न 3. पाठ 12 कः रक्षति कः रक्षितः की सुलेख एवं अर्थ लिखें।

परियोजना कार्य/प्रोजेक्ट कार्य— चार्ट पेपर पर संस्कृत के महान कवियों (एक या एक से अधिक) के चित्र बनाकर उनकी जीवनी लिखो।

नोट— यह प्रोजेक्ट कार्य सिर्फ उन्हीं बच्चों के लिए है जिन्होंने पिछली बार **autumn break** में यह जमा नहीं करवाया था।

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पीएम श्री केन्द्रीय विद्यालय वायुसेना स्थल कुम्भीरग्राम

विषयाध्यापक- पुष्पेन्द्र बेनीवाल

पीएम श्री केन्द्रीय विद्यालय वायुसेना स्थल कुम्भीरग्राम

शीतकालीनावकाश गृहकार्य 2023-24

कक्षा-6

विषय- संस्कृत

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प्रश्न 1. पाठ 9 क्रीडास्पर्धा के सभी प्रश्नोत्तरों को एक बार लिखें व सीखें।

प्रश्न 2. संस्कृत वर्णमाला को दो बार लिखें एवं सीखें।

प्रश्न 3. पाठ 10 कृषिकाः कर्मवीराः के सभी श्लोकों का अर्थ लिखें।

परियोजना कार्य/प्रोजेक्ट कार्य— चार्ट पेपर पर कोई 10 चित्र बनाकर उनके संस्कृत में नाम लिखें एवं सीखें।

नोट— यह प्रोजेक्ट कार्य सिर्फ उन्हीं बच्चों के लिए है जिन्होंने पिछली बार **autumn break** में यह जमा नहीं करवाया था।

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पीएम श्री केन्द्रीय विद्यालय वायुसेना स्थल कुम्भीरग्राम

शीतकालीनावकाश गृहकार्य 2023-24

कक्षा-7

विषय- संस्कृत

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प्रश्न 1. पुस्तक के अंत में दी हुई संस्कृत की वर्णमाला को दो बार लिखें एवं सीखें।

प्रश्न 2. पाठ 12 के श्लोकों एवं उनका अर्थ लिखें एवं सीखें।

प्रश्न 3. पुस्तक के अंत में दिए हुए संख्यावाचक (संख्यावाचकशब्दाः) शब्दों 51 से 100 तक संख्या एवं संख्यावाचक शब्द लिखें।

प्रश्न 4. संस्कृत में अपना परिचय लिखें।

परियोजना कार्य/प्रोजेक्ट कार्य— चार्ट पेपर पर चित्र बनाकर संस्कृत में कहानी लिखो।

नोट— यह प्रोजेक्ट कार्य सिर्फ उन्हीं बच्चों के लिए है जिन्होंने पिछली बार **autumn break** में यह जमा नहीं करवाया था।

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विषयाध्यापक- पुष्पेन्द्र बेनीवाल

KENDRIYA VIDYALAYA AFS KUMBHIRGRAM
WINTER HOLIDAY HOMEWORK 2023

Class 10

- 1-Suggest any one way to make political parties more responsive to the people's needs and demand.
2. Which organisation does recognize 'Political Parties' In India?
3. Name any six 'regional political parties' of the four southern states of India.
4. Why did India adopt a multi-party system?
5. "Political parties are a necessary condition for a democracy". Analyse the statement with examples.
6. Explain any three features of multi-party system.
7. Who was Marco Polo? What was his contribution to print culture?
8. How did Gutenberg personalise the printed books? Explain.
9. Print created the possibility of wide circulation of ideas and introduced a new world of debate and discussion. Analyse the statement in the context of religion in Europe.
10. Write the name of any two women writers of India in the 19th century and highlight their contribution who wrote about the different experiences of the women.
11. Why were the printed books popular even among illiterate people?
12. What facts would you use to explain the role of credit for the development?
13. Why do you think that the share of formal sector credit is higher for the richer households compared to the poorer households?
14. Explain features each of formal sector loans and informal sector loans.
15. Define Credit. Give examples of formal and informal sources of credit in India. State the advantages of formal sources of credit.
16. Why are transactions made in money? Explain.
17. Why is energy required for all activities? How can energy be generated?
18. India is fairly rich in mineral resources; however, its distribution is uneven. Comment.
19. "Natural gas is considered an environment-friendly fuel." Explain the statement in two points.
20. What are the major sources of energy in rural households of India? Identify the major problems faced due to these sources. Give suggestions to solve these problems.

COMPUTER SCIENCE:

Project completion and solving last 5 year CBSE Board papers

INFORMATICS PRACTICES

Project completion and solving last 5 year CBSE Board papers

ACCOUNTANCY

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BUSINESS STUDIES

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