Std.: IX

Dear parents,

Summer Vacation for the session 2025-26 is going to commence on 26ᵗʰ May. The school will reopen on 26ᵗʰ June as its usual time.

The holiday home work has been uploaded in school Website. The points are to note.

The home work has been arranged as the latest update of the curriculum This is not just for a formality but very much needful for a student to mug up each subject from the grass root level.

Guidelines of submission of Holiday Homework.

- **All the answers will be written neatly in A4 size paper.**
- **Stick file is recommend for each subject.**
- **Students are requested to send the PPt of the chapters in**
- **miaprincipalteachers@gmail.com**
- **Last date of submission of holiday is 30ᵗʰ June, 2025.**

Students are requested to adhere the deadline strictly.

English

Choose the correct options.

1. Lost Child by Mulk Raj Anand

1. **What is the main theme of the story "Lost Child"?**
   a) Childhood innocence
   b) Adventure and mystery
   c) The bond between parents and children
   d) Fear and survival

2. **What does the child desire when he sees the toys at the fair?**
   a) He wants to have them all
   b) A balloon
   c) A dog
   d) A sweets stall

3. **Why does the child get lost in the fair?**
   a) He is distracted by the sights and sounds
   b) He is pushed by the crowd
   c) He runs away from his parents
   d) He gets lingered and fascinated

4. **What is the reaction of the child when he realizes he is lost?**
   a) He starts playing with the toys
   b) He cries and looks for his parents
   c) He tries to escape the fair
   d) He talks to a stranger

5. **What does the child feel when he is approached by a stranger in the fair?**
   a) He feels comforted
   b) He feels scared and calls out for his parents
   c) He feels curious
   d) He feels indifferent
6. **How would the father react when the child is lost in the fair?**
   a) He is calm and collects the child
   b) He scolds the child
   c) He runs in all directions calling the child's name
   d) He gets angry at the child

   2. The Fun They Had by Isaac Asimov
7. **What is the setting of "The Fun They Had"?**
   a) A classroom in the 22nd century
   b) A school in the 21st century
   c) A remote village school
   d) A school on a different planet
8. **What is the central theme of "The Fun They Had"?**
   a) The role of technology in education
   b) The significance of traditional schooling
   c) The fun of learning through play
   d) The isolation of students
9. **What do Margie and Tommy think of the school system in their time?**
   a) They love the mechanical teaching system
   b) They wish they had traditional schools
   c) They are indifferent to the system
   d) They are curious about traditional schools
10. **What does Margie find in the book about old schools?**
    a) That students learned from a machine
    b) That students attended school in large groups
    c) That students had to read a lot of books
    d) That teachers were robots
11. **How does Tommy feel about the old-fashioned schools?**
    a) He finds them boring
    b) He is fascinated by them
    c) He finds them better than his school
    d) He dislikes them
12. **What is Margie's reaction when she learns about traditional schools?**
    a) She feels happy that she doesn't go to such schools
    b) She is eager to join a traditional school
    c) She feels sad and nostalgic
    d) She has no opinion about it

    3. The Road Not Taken by Robert Frost
13. **What is the main theme of the poem "The Road Not Taken"?**
    a) The consequences of choices
    b) The beauty of nature
    c) The simplicity of life
    d) The importance of destiny
14. **What does the speaker regret in the poem "The Road Not Taken"?**
    a) Not following the path that was less traveled
    b) Not making the right choice
    c) Not taking the road more frequently used
    d) Not having more options

15. **What does the speaker mean by "I took the one less traveled by"?**
    a) He chose the more common path
    b) He chose the less conventional route
    c) He regrets his decision
    d) He was forced to take the less traveled path
16. **What is the tone of the poem "The Road Not Taken"?**
    a) Optimistic and celebratory
    b) Regretful and reflective
    c) Cheerful and light-hearted
    d) Angry and frustrated
17. **What does the poet mean by "And that has made all the difference"?**
    a) The choice of road was insignificant
    b) The decision to take one road over another led to a major life change
    c) The choice was purely random
    d) The road chosen had no impact on his life
18. **What decision does the speaker have to make in the poem?**
    a) Whether to follow his dreams
    b) Which road to take in a forest
    c) Whether to stay in a city or move to the countryside
    d) Whether to take a job offer
    4. The Sound of Music by Deborah Cowley
19. **Who was Evelyn in the story "The Sound of Music"?**
    a) A famous singer
    b) A nun who became a governess
    c) A concert percussionist
    d) A teacher in a school
20. **What role did the Ron Forbes play in the story?**
    a) They were famous musicians who performed across Europe
    b) They were a group of children who performed to raise funds
    c) They were a family of talented musicians who escaped Nazi-controlled Austria
    d) He spotted the potential in Evelyn
    2.Answer the following question in short.
    1. What does the speaker predict about his future when looking back at the choice?
    2. What is the significance of the child's longing for his parents in the story?
    3. What does Margie find in the old book Tommy shows her?
    4. What is the symbolic meaning of the "two roads" in the poem?
    5. What is the setting of the story "The Fun They Had"?
    3.Answer the following question in detail.
    1. Describe the emotional journey of the child in the story "Lost Child" from the moment he enters the fair to when he is reunited with his parents. How does the author convey the child's feelings of loss and longing?
    2. In "Lost Child," the child is tempted by the many attractions at the fair, but his true desire is to stay with his parents. Discuss how the story emphasizes the theme of childhood innocence and attachment to parents.
    3. In "The Fun They Had," the story is set in a futuristic world where education is completely mechanized. Discuss the differences between traditional schools and the system described in the story. What do Margie and Tommy think about the old-fashioned education system?

4. Explain how the speaker in "The Road Not Taken" expresses a sense of indecision and the complexity of making choices. Discuss how the poem explores the theme of uncertainty and the impact of decisions on our lives.
5. In "The Road Not Taken," the speaker acknowledges the difficulty of making a choice and the uncertainty of its outcome. Discuss how the poem uses the metaphor of the "two roads" to comment on the complexities of life and human decision-making.

4.Topics for making ppt.

Groups of students	Topics
Group1	**The Lost Child**
Group2	**The Adventure of Toto**
Group3	**The Fun They Had**
Group4	**The Road Not Taken**
Group5	**The Sound of Music Part1**
Group6	**The Sound of Music Part 2**
Group7	**Determiners**
Group8	**Modals**
Group9	**Tenses**
Group10	**Application writing**

Hindi

1. 'दुख का अधिकार' तथा 'रैदास के पद' पर आधारित 10-10 बहुवैकल्पिक प्रश्नोत्तर अपनी कॉपी में तैयार करें।
2. 'धूल' तथा ' दुख का अधिकार' पाठ से दो-दो लघुउत्तरीय प्रश्नोत्तर या 'रहीम के पद' पाठ से एक लघुउत्तरीय प्रश्नोत्तर अपनी कॉपी में तैयार करें।
3. पाठ्यपुस्तक 'संचयन' के 'गिल्लू' तथा 'स्मृति' पाठ से एक-एक दीर्घ उत्तरीय प्रश्नोत्तर अपनी कॉपी में तैयार करें।
4. हिन्दी व्याकरण में 'शब्द और पद' पर आधारित सचित्र पी. पी. टी. तैयार करें।
5. कथन और कारण पर आधारित 'दुख का अधिकार' तथा ' गिल्लू' पाठ से पाँच प्रश्नोत्तर अपनी कॉपी में लिखें।
6. 'रैदास के पद' संख्या – 2 से पठित पद्यांश पर आधारित पाँच बहुवैकल्पिक प्रश्नोत्तर अपनी कॉपी में लिखें।

Maths
MCQ

1.) Consider two irrational numbers a and b. Which of the following is **not necessarily** true?
  a) a+b is irrational.   b) a−b is irrational.   c) ab is irrational.   d) a/b is irrational.

2.) If x= $\frac{1}{3-\sqrt{8}}$, what is the value of $x^2 + \frac{1}{x^2}$?
  a) 34   b) 32   c) 30   d) 28

3.) Consider the set S={$\sqrt{2}$, 2, 32, 0.7, π, 3.14159,$\sqrt{9}$}. How many irrational numbers are in this set?
  a) 1   b) 2   c) 3   d) 4

4.) Which of the following statements is **true**?
a) The product of two irrational numbers is always irrational.
b) Every real number is either rational or irrational, but not both.

c) There are no irrational numbers between 0 and 1.
d) The decimal expansion of a rational number can only be terminating.

5.) If x and y are two distinct positive irrational numbers, can x+y be rational?
  a) Yes, always.   b) No, never.   c) Yes, sometimes.   d)
Only if x and y are conjugates.

6.) If $x=0.\overline{23}$ then x can be expressed in the form $\frac{p}{q}$ where p and q are integers and $q\neq0$. What is
the value of p+q in its simplest form?
  a) 23   b) 99   c) 122   d) 121

7.) If a and b are rational numbers, which of the following must also be rational?
  a) $\sqrt{ab}$ b) a^b c) $a + \sqrt{b}$ (assuming $\sqrt{b}$ is irrational)
  d) $\frac{a-b}{a+b}$(Assuming $a + b \neq 0$)

8.) Which of the following polynomials has factors (x+1) and (x−2)?
  a) x^2-x-2 b) x^2+x-2 c) x^2-2x-1 d) x^2+2x-1

9.) If $a^3+b^3+c^3=3abc$, then which of the following is necessarily true?
  a) a+b+c=0   b) a=b=c   c) Either a+b+c=0 or a=b=c   d)
ab+bc+ca=0

10.) If the polynomial x^3+ax^2+bx+c is exactly divisible by (x−1), (x−2), and (x−3), then the
  values of a, b, and c are respectively: a) a $=-$ 6, b $=11$, c $=-6$ b) a $= 6$, b $=-$ 11, c $= 6$
                                        c) a $= -11$, b $= 6$, c $=-$ 6   d) a $=11$,b $=-$ 6, c $= 6$

11.) If $x^2+y^2+z^2=xy+yz+zx$, then the value of $(x+y-z)^3+(y+z-x)^3+(z+x-y)^3$ is:
  a) 0   b) 24xyz   c) 8xyz   d) 3xyz

12.) The graph of the linear equation ax+by =c is a straight line. If a=0 and b≠0, the line is:

  a) Parallel to the x-axis.   b) Parallel to the y-axis.

  c) Passing through the origin.   d) Inclined at 45° to the x-axis.

13.) The solution of the equation $\sqrt{x + 5} = 3$

  a) x=2   b) x=4   c) x=9   d) x=14

14.) The cost of apples is ₹ 50 per kg and the cost of oranges is ₹ 30 per kg. A person buys

  apples and oranges for a total of ₹ 210. If x kg of apples and y kg of oranges are bought, which

  equation represents this situation?

  a) 50x+30y=210   b) 80(x+y)=210   c) 20xy=210   d) 50y+30x=210

15.) For the equation x+y=25, how many pairs of positive integer solutions (x,y) exist?

  a) 23   b) 24   c) 25   d) Infinite
16.) A number y is 5 more than twice another number x. Which linear equation in two variables
  represents this relationship?
  a) y=2x−5   b) y=5−2x   c) y=2x+5   d) x=2y+5

17.) If three points (k,2), (−2,−3), and (4,−1) are collinear, what is the value of k?

  a) −3   b) 3   c) 0   d) 1

18.) A line segment is drawn joining the midpoints of two sides of a triangle. If the vertices of the triangle are A(−4,6), B(8,−2), and C(2,−8), what are the coordinates of the midpoint of the line segment joining the midpoints?

  a) (2,−1)   b) (3,−5)   c) (1,−3)   d) (0,−2)

19.) The reflection of the point (−3,4) in the x-axis is:

  a) (3,4)   b) (−3,−4)   c) (4,−3)   d) (−4,3)

20.) The distance of a point (h, k) from the y-axis is:

  a) h   b) k   c) |h| d) |k|

Short Answer Questions

21.) Insert five rational numbers between $\sqrt{5}$ and $\sqrt{6}$.

22.) If $\sqrt{8}+\sqrt{32}-\sqrt{2}=a\sqrt{2}$, find the value of a.

23.) If (x+a) is a factor of $x^3+ax^2-2x+a+2$, find the value of a.

24.) What is the remainder when $x^{100}-2x^{51}+1$ is divided by x+1?

25.) For what value of c does the equation 2x+cy=8 have the solution (2,1)?

Long Answer Questions

26.) Represent $\sqrt{8}$ on the number line using geometric constructions. Clearly show the steps of your construction

27.) State whether the following statements are true or false. Justify your answers with examples.

i) Every irrational number is a real number.
ii) Every real number is either rational or irrational.
iii) The product of two irrational numbers is always irrational.

28.) If $z=0.1\overline{23}$, find the rational form of 3z−1.

29.) Factorize the expression: $(x^2+3x+2)(x^2+7x+12)-120$

30.) A polynomial P(x) when divided by (x−2) leaves a remainder of 5, and when divided by (x+3) leaves a remainder of -5. Find the remainder when P(x) is divided by (x−2)(x+3).

31.) The volume of a cuboid is given by the polynomial $V(x)=x^3+ax^2+bx-6$. If the dimensions of the cuboid are given by (x−1), (x−2), and (x+3), find the values of a and b.

32.) The perimeter of a rectangle is 56 cm. If the length is increased by 4 cm and the breadth is decreased by 2 cm, the area remains the same. Find the dimensions of the rectangle.

**33.)** The linear equation 2x−y=7 represents a straight line.

(a) Find three different points that lie on this line.

(b) If a point (k,2k−1) lies on this line, find the value of k.

(c) Find a point on this line whose y-coordinate is twice its x-coordinate.

34.) See figure and write the following:

1. The coordinates of B.

2. The coordinates of C.

3. The point identified by the coordinates (–3, –5).

4. The point identified by the coordinates (2, – 4).

5. The abscissa of the point D.

6. The ordinate of the point H.

7. The coordinates of the point L.

8. The coordinates of the point M.
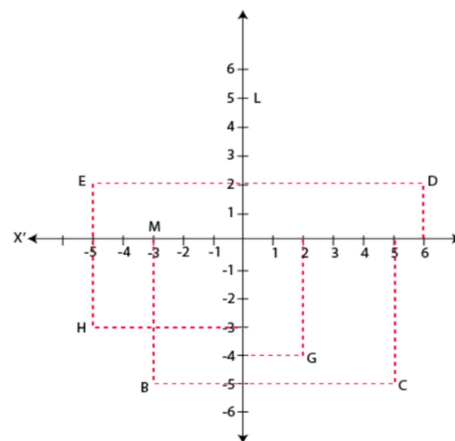
35.) Solve 2x + 5y = 19, by graphical method.

Assertion & Reason Type Questions

Instructions: For each of the following questions, two statements are given- one is Assertion (A) and the other is Reason (R). Select the correct answer from the options given below:

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

36.) Assertion (A): There exists a rational number between any two distinct irrational numbers.
Reason (R): Between any two distinct real numbers, there exist infinitely many rational and irrational numbers.

37.) Assertion (A): $\sqrt{5} + \sqrt{3}$ is an irrational number.
Reason (R): The sum of two irrational numbers is always an irrational number.

38.) Assertion (A): The decimal expansion of 13/125 is terminating.
Reason (R): If the denominator of a rational number in its simplest form has prime factors only 2 and 5, then its decimal expansion is terminating.

39.) Assertion (A): If x+y+z=0, then $x^3+y^3+z^3=3xyz$.
Reason (R): The algebraic identity $x^3+y^3+z^3−3xyz=(x+y+z)(x^2+y^2+z^2−xy−yz−zx)$ holds true for all real numbers x,y,z.

40.) Assertion (A): The degree of the product of two polynomials is equal to the sum of their degrees.
Reason (R): When multiplying polynomials, we multiply the terms, and the highest power of the variable in the product is obtained by multiplying the terms with the highest powers in the original polynomials.

41.) Assertion (A): The linear equation 2x+3=2x−5 has no solution.
Reason (R): If, upon simplification, a linear equation in one variable reduces to a contradiction (e.g., a false statement like 3=−5), then the equation has no solution.

42.) Assertion (A): Any value of x is a solution to the linear equation 3(x+2)−5=3x+1.
Reason (R): If, upon simplification, a linear equation in one variable reduces to an identity (e.g., a true statement like 6=6), then the equation has infinitely many solutions.

43.) Assertion (A): The points (1,2), (3,4), and (5,6) are collinear.
Reason (R): If three points are collinear, the distance between the first and the third point is equal to the sum of the distances between the first and the second point, and the second and the third point.

44.) Assertion (A): The origin (0,0) is equidistant from the points (3,4) and (−4,3).
Reason (R): If a point is equidistant from two other points, its distance from both points is the same.

45.) Assertion (A): When the polynomial x^3+3x^2+3x+1 is divided by (x+1), the remainder is 0.
Reason (R): If a polynomial P(x) is divided by (x−a) and the remainder is 0, then (x−a) is a factor of P(x).

Case Based Questions

46.) Case Study 1: The Number Line Journey

Imagine a student, Rohan, is exploring the number line. He starts at 0 and takes several jumps.

- Jump 1: He jumps to a point that represents a natural number.
- Jump 2: From there, he jumps to a point that represents a whole number (could be the same as his previous position).
- Jump 3: Next, he lands on a point that is an integer.
- Jump 4: His fourth jump takes him to a point that represents a rational number, which is not an integer.
- Jump 5: Finally, he makes a jump to a point that is an irrational number.

Based on this journey, answer the following questions:

(i)   Can Rohan's first landing point be -5? Why or why not?
(ii)   If Rohan's second landing point was 0, what can you say about his first landing point?
(iii)   Give a possible rational number that Rohan could have landed on in his fourth jump. Explain why it's a rational number but not an integer.
(iv)   Give a possible irrational number that Rohan could have landed on in his fifth jump. What are the key characteristics of such numbers?
(v)   Can the set of numbers Rohan landed on in his first three jumps be the same? Justify your answer.

47.) Case Study 2: The Mystery of π and 22/7

A Mathematics teacher wrote two numbers on the board: π and 22/7. She asked the students to compare them and classify them.
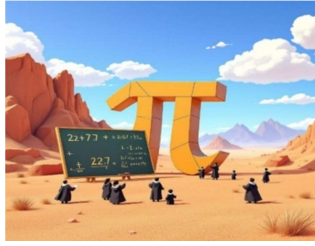
i) Classify π as rational or irrational. What are the defining characteristics of this type of number?
ii) Classify 22/7 as rational or irrational. Explain your reasoning based on its form.
iii) Are π and 22/7 equal? Explain why or why not, even though 22/7 is often used as an approximation for π.
iv) Can we find a rational number that is exactly equal to π? Justify your answer
v) Between π and 22/7, which one is greater? (You might need to recall the approximate value of π).

48.) Case Study 3: The Rectangular Garden

The dimensions of a rectangular garden are given by the expressions $(x+3)$ meters and $(2x-1)$ meters. The area of the garden is represented by the polynomial $A(x)=2x^2+5x-3$.

i) Verify if the given area polynomial $A(x)$ is indeed the product of the given dimensions.

ii) If the perimeter of the garden is $P(x)$, find the polynomial expression for $P(x)$.

iii) If the gardener decides to increase each dimension by 1 meter, what will be the new area of the garden in terms of x?

iv) If $x=4$ meters, find the original area and the original perimeter of the garden.

v) Can the dimension $(2x-1)$ ever be zero or negative for a physically possible garden? What condition on x must be satisfied for the dimensions to be positive?

49.) Case Study 4: Community Garden

A school's gardening club decides to create a rectangular vegetable garden in the school backyard. The area of the garden is represented by the polynomial $A(x) = 2x^2 + 7x - 15$ square units.
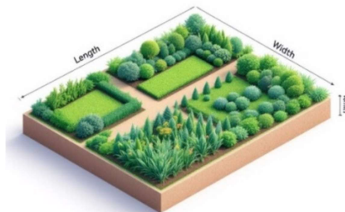
Based on the above information, answer the following questions:

i) Find the expressions for the possible length and breadth of the rectangular garden.

ii) If the value of x is decided to be 3 units, find the actual area of the garden.

iii) What are the dimensions (length and breadth) of the garden if x = 3 units?

iv) If the club wants to fence the garden and the cost of fencing is ₹50 per unit, what would be the total cost if x = 3 units?

50.) Case Study 5: <u>The Toy Blocks</u>

Rohan is playing with cubic toy blocks. He has a large cubic block with a volume represented by the polynomial $V\_1(a) = a^3 + 6a^2 + 12a + 8$ cubic units. He also has smaller cubic blocks, each with a volume of $V\_2(a) = (a+2)$ cubic units.

Based on the above information, answer the following questions:

i) Factorise the polynomial representing the volume of the large cubic block, $V\_1(a)$. What does this factorisation tell you about the side length of the large block?

ii) What is the side length of one of the smaller cubic blocks?

iii) If a = 2 units, what is the volume of the large block and one small block?

iv) How many small blocks would Rohan need to have the same total volume as the large block, assuming a = 2 units?

Science
Section:A_Physics

MCQ

1. Which of the following distance time graphs represent uniformly accelerated motion?
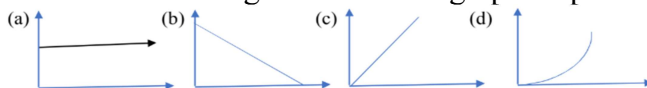
2. Which of the following can sometimes be 'zero' for a moving body?
i. Average velocity   ii. Distance travelled   iii. Average speed   iv. Displacement
(a) Only (i)   (b) (i) and (ii)   (c) (i) and (iv)   (d) Only (iv)

3. When a car driver travelling at a speed of 10 m/s applies brakes and brings the car to rest in 20 s, then the retardation will be:
(a) $+ 2 \text{ m/s}^2$ (b) $- 2 \text{ m/s}^2$ (c) 0.5m/s^2 (d) $+ 0.5 \text{ m/s}^2$

4. In which of the following cases of motions, the distance moved and the magnitude of the displacement are equal?
(a) If the car is moving on a straight road (b) If the car is moving in circular path (c) The pendulum is moving to and fro (d) The earth is moving around the sun
5. An object travels 40m in 5 sec and then another 80m in 5 sec. What is the average speed of the object?
(a) 12 m/s (b) 6 m/s (c) 2 m/s (d) 0 m/s
6. Which physical quantity is expressed in the unit m/s^2 ?
(a) Velocity (b) acceleration (c) speed (d) displacement

Short Answer Question

7. How does uniform linear motion differ from uniform circular motion? Give two points of differences.

8. A girl moves with the speed of 6 km/h for 2h and with the speed of 4km/h for the next 3h. Find the average speed of the girl and the total distance moved.
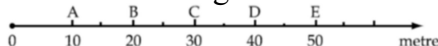
PYQ

9. Derive the equation $v^2-u^2= 2as$ graphically.
10. A train accelerates uniformly from 36km/hr to 54km/hr in 10 seconds. Find
(a) the acceleration (b) the distance travelled by the car during this interval of time.
11. Look at the figure below.

An object starts its journey from point O. A, B, C, D and E represent
position of the object at different instants. The objects moves through A, B,
C, D and E and then moves back to point C. Calculate:
(a) The distance travelled by the object
(b) The displacement of the object
(c) Name the reference point in the diagram

Assertion Reason Type Questions

Choose the appropriate response from the given options:
A. Both A and R are true and R is the correct explanation of A
B. Both A and R are true but R is not the correct explanation of A
C. A is true but R is false
D. A is false but R is true

12. **Assertion (A):** A body moving with uniform speed can have a variable velocity.
Reason (R): Uniform speed means equal distance covered in equal intervals of time.
13. **Assertion (A):** Displacement can be zero even if distance is not zero.
Reason (R): Displacement is a vector quantity, and distance is a scalar quantity.
14. Assertion (A): The slope of a distance-time graph gives acceleration.
Reason (R): The slope of a speed-time graph gives acceleration.
15. Assertion (A): Negative acceleration means the object is slowing down.
Reason (R): When final velocity is less than initial velocity, acceleration is negative.

Case Based Questions

16. We know that the circumference of a circle of radius r is given by $2\pi r$. If the body takes t seconds to go once around the circular path of radius r, the speed v is given by $v = 2\pi r/t$. When an object moves in a circular path with uniform speed, its motion is called uniform circular motion.

Refer the paragraph and answer the following questions

(i) What happens when a body is moving with constant speed?

(ii) Cyclist on circular track with constant speed is example of which type of motion?

(iii) Which of the following changes when body performs uniform circular motion?

(iv) Define uniform circular motion. Give 2 examples of uniform circular motion

(v) Name the device used for measurement of speed of rotation

17. Suppose the boy first runs a distance of 100 m in 50 seconds in going from his home to the shop in the East direction and then runs a distance of 100 m again in 50 seconds in the reverse direction from the shop to reach back home from where he started.
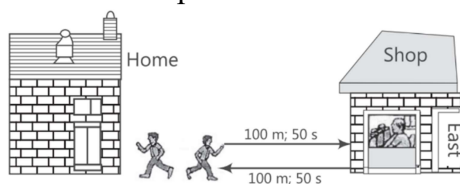
(i) Find the speed of the boy.
(ii) Find the velocity of the boy.
(iii) If the initial velocity of an object is equal to final velocity, then find the acceleration.
(iv) If the boy is running from West to East at an average speed of 120 km/h, then how far does this boy run in 6 s?

Section:B_Chemistry

MCQ

1. Which one of the following sets of phenomena would show an increase on increasing the temperature?
(a) Diffusion, evaporation, compression of gases
(b) Evaporation, compression of gases, solubility
(c) Evaporation, diffusion, expansion of gases
(d) Evaporation, solubility, diffusion, compression of gases

2. Seema visited a Natural Gas Compressing Unit. She found that a gas can be liquefied under specific conditions of temperature and pressure. While sharing her experience with her friends, she got confused. Can you help her to identify the correct set of conditions?
(a) Low temperature and low pressure   (b) High temperature and low pressure
(c) Low temperature and high pressure   (d) High temperature and high pressure

3. Fluids have a unique property of flowing. Which of the following statements is correct in this respect?
(a) Only gases behave like fluids.   (b) Gases and solids - both behave like fluids.
(c) Gases and liquids – both behave like fluids. (d) Only liquids are fluids.

4. During summers, water kept in an earthen pot becomes cooler after some time. Which phenomenon leads to the cooling of water in an earthen pot?
(a) Diffusion   (b) Transpiration   (c) Osmosis   (d) Evaporation

5. Identify the condition that will increase the evaporation of water?
(a) Increase in the temperature of water.   (b) Decrease in the temperature of water.
(c) Less exposed surface area of water   (d) Adding common salt to water.

6. Choose the correct statement for change of states of matter :-
(a) Conversion of solid into vapours without passing through the liquid state is called vaporization.
(b) Conversion of vapours into solid without passing through the liquid state is called sublimation.
(c) Conversion of vapours into solid without passing through the liquid state is called freezing.
(d) Conversion of solid into liquid is called sublimation.

Short Answer Question

7. Water as ice has a cooling effect, whereas water as steam may cause severe burns. Explain these observations.

8. Alka was making tea in a kettle. Suddenly she felt intense heat from the puff of steam gushing out of the spout of the kettle. She wondered whether the temperature of the steam was higher than that of the water boiling in the kettle. Comment.

PYQ

9. It is a hot summer day, Priyanshi and Ali are wearing cotton and nylon clothes respectively. Who do you think would be more comfortable and why?

10. Why does the temperature of a substance remain constant during its melting point or boiling point?

11. You want to wear your favorite shirt to a party, but the problem is that it is still wet after a wash. What steps would you take to dry it faster?

Assertion Reason Type Questions

Choose the appropriate response from the given options:

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

12. **Assertion** : A gas can easily be compressed by applying pressure.
   Reason : Since the inter-particle spaces between gases are very large, they can decrease by applying pressure.

13. **Assertion** : Gases exert pressure on the walls of the container.
   Reason : The intermolecular force of attraction is very strong in gases.
14. **Assertion** : It is easier to cook food at sea level as compared to higher altitudes.
   Reason : The boiling point of water increases at high altitudes.
15. **Assertion** : When a solid melts, its temperature remains the same.
   Reason : The heat gets used up in changing the state by overcoming the forces of attraction between the particles.

Case Based Questions

16. The phenomenon of change of a liquid into vapours at any temperature below its boiling point is called evaporation. In the case of liquids, a small fraction of particles at the surface, having higher kinetic energy, is able to break away from the forces of attraction of other particles and gets converted into vapour. If the amount of water in the air is already high, the rate of evaporation decreases. In an open vessel, the liquid keeps on evaporating. The particles of liquid absorb energy from the surrounding to regain the energy lost during evaporation. After a hot sunny day, people sprinkle water on the roof or open ground because the large latent heat of vaporisation of water helps to cool the hot surface. And we prefer cotton clothes.

i) What happens with the evaporation if the surface area is increases?
ii) Why clothes dry faster on a windy day?
iii) Which of the following phenomena always results in the cooling effect?
iv) Why should we wear cotton clothes in summer?
v) What happens when acetone is poured on palm?

17. All the materials we see in our daily life are made up of matter. Matter can be classified into different states such as solid, liquid and gas on the basis of intermolecular forces and the arrangement of particles. In a solid, particles are tightly packed together and have very low kinetic energy. They have a definite shape and a certain volume. In a liquid, particles are loosely packed than in a solid and are able to flow around each other, giving the liquid an indefinite shape. In a gas, the particles have a great deal of space between them and have high kinetic energy. A gas has neither definite shape nor volume.

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Solid   Liquid   Gas
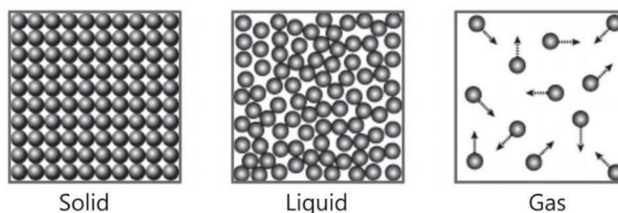
i) In which state of the matter the forces of attraction between the particles of matter are maximum?
ii) The substance with least interparticle space is _____.
iii) Which of the following indicates the relative randomness of particles in the three states of matter?

iv) Which of the following statements does not go with the liquid state?

MCQ

1. Nucleus is separated from cytoplasm by

(a) nuclear membrane   (b) nucleoplasm   (c) organs   (d) cell membrane

2. Cells present in living organism differ in

(a) numbers   (b) shape   (c) size   (d) all of these

3. Tissues combine to form

(a)nucleus   (b)cells   (c) organism   (d)organs

4. The control centre of all the activities of a cell is-

(a) nucleus   (b) nucleoplasm   (c) cytoplasm   (d) organelles

5. The coloured organelles which are found in plants only are

(a) chlorophyll   (b) plastids   (c) vacuoles   (d) WBC

6. Genes are located in

(a) chromosomes   (b) plastids   (c) cytoplasm   (d) lysosome

7. A group of similar cells combine to form

(a) tissue   (b) organ   (c) organisms   (d) organelles

8. The other name of cell membrane is

(a) plasma membrane   (b) cell wall   (c) nuclear membrane   (d) none of these

Short Answer Question

9. 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?

PYQ

10. 2.Microscopes have been around since the end of the 16th century. Their invention allowed us to see single-celled organisms for the first Time and also understand that multicellular organisms are made from Single cells.
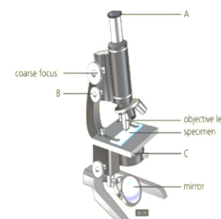
i) Complete the labels on the parts of the diagram of a light microscope.

ii) Choose the part of the microscope that light first passes through:

(a) Mirror   (b) Lens   (c) Eye piece   (d) Specimen

11. How do substances like CO_2 and water move in and out of the cell? Discuss.

12. How does an Amoeba obtain its food?

13. Do you agree "A cell is a building unit of an organism". If yes, explain why?

Assertion Reason Type Questions

Choose the appropriate response from the given options:

A. Both A and R are true and R is the correct explanation of A

B. Both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. A is false but R is true

14. **Assertion (A):** Plant cells have a large central vacuole.
   Reason (R): The vacuole helps in storage and maintaining turgidity of the cell.
15. **Assertion (A):** Bacterial cells lack a true nucleus.
   Reason (R): Bacterial DNA is enclosed within a nuclear membrane.

Case Based Questions

16. Leeuwenhoek discovered the free-living cells in pond water for the first time. Robert Brown discovered the nucleus in the cell. A single cell may constitute a whole organism as in Amoeba. These organisms are called unicellular organisms. On the other hand, many cells group together in a single body and assume different functions in it to form various body parts in multicellular organisms. The shape and size of cells are related to the specific function they perform. Each living cell has the capacity to perform certain basic functions that are characteristic of all living forms. Each kind of cell organelle performs a special function, such as making new material in the cell, clearing up the waste material from the cell and so on.

   i) Cells were first discovered by:
   ii) Which of the following is a unicellular organism?
   iii) Who suggested that all cells arise from pre-existing cells?
   iv) Which of the following is an incorrect statement?
      a) Each living cell has the capacity to perform certain basic functions
      b) There is a division of labour in multicellular organisms
      c) Each kind of cell organelle performs a special function
      d) All activities inside the cell do not interact with the environment.
   i) (a) and (b)   ii) (b) and (c)   iii) (c) and (d)   iv) Only (d)

Social Science

MCQs:- Choose the correct answer:

1)   The easternmost longitude of India is
       a) 97°25'E   b) 68°7'E   c) 77°6'E   d) 82°30'E
2)   A narrow channel of Sea which separates two land masses is known as
       a) Mound   b) Pass   c) Strait   d) Valley
3)   Which of the following has reduced India's distance from Europe by 700km
       a) Suez Canal   b) Panama Canal
       c) Indira Gandhi Canal   d) Buckingham Canal
4)   The highest peak in Eastern Ghats is
        a) Anai Mudi   b) Kanchenjunga   c) Mahendragiri   d) Khasi
5)   Which is the largest salt water lake in India?
       a) Chilika Lake   b) Wular Lake   c) Dal Lake   d) Tikartal Lake
6)   The drawbacks of democracy is
       a) Instability and delay   b) Corruption and Hypocrisy
       c) Politicians fighting among- themselves   d) All of the above

7) Who Passed the "Legal Framework order"
   a) ZANU   b) Robert Mugade   c) General Musharaff   d) None of these

8) Which of the following countries is not a democracy?
   a) Great Britain   b) Canada   c) Mynamar   d) India

9) Which of the following sentences is correct?
   a) All Countries that have Constitutions are necessarily democratic.
   b) All Countries that are democratic necessarily have Constitutions.
   c) Both (a) and (b)
   d) None of the above

10) Who among the following was not the member of the Constituent Assembly but his vision was followed by the members?
   a) Baldev Singh   b) Rajendra Prasad   c) Pandit Nehru   d) Mahatma Gandhi

11) What is the basic Constraint in raising farm production?
   a) Capital is Scarce   b) Land is fixed
   c) Agricultural workers are not willing to work   d) Irrigation is not well developed.

12) The Green Revolution introduced the farmers to cultivate
   a) wheat and rice   b) green vegetables   c) sugar cane   d) forests

13) Working capital stands for:-
   a) tools, machines and buildings   b) raw materials and money in hand
   c) total share capital   d) fixed deposits in financial institutions

14) The main reason why farmers are able to grow two or three crops in a year is due to :-
   a) Persian wheels   b) well developed system of irrigation
   c) HYV Seeds   d) Expansion of Land area

15) Multiple Cropping refers to
   a) cultivation of wheat and rice
   b) Cultivation of two crops in alternate raws
   c) Cultivating more than one crop on the same field each year
   d) Cultivation crops and rearing animals on the same farm.

16) Where is Seasonal unemployment found?
   a) In urban areas   b) In rural areas   c) In remote areas   d) Both (a) and (b)

17) PHC stands for:-
   a) Public Health Centre
   b) Private Health Centre
   c) Primary Health Centre
   d) Personal Health Centre

18) Which age group of Children does the Sarva Shiksha Abhiyan aim to promote education?
   a) 6-14 Years   b) 6-15 Years   c) 8-14 Years   d) 8-15 Years

19) In which of the following fields is disguised unemployment found?
   a) Fisheries   b) Agriculture   c) Industries   d) Mining

20) The...................... of a person helps to realize his/her potential and the ability to fight illness.
   a) Earnings   b) Salary   c) Education   d) Health.

* **Very Short Type Questions:**
21) What is the aim of National Health Policy of India?
22) What do the medium and large farmers do with the surplus from farm production?
23) Why has 82°30'E been selected as the standard meridian of India?
24) What is direct democracy?
25) How did apartheid end in South Africa?

* **Short Answer Type Questions:**
26) How does democracy improve the quality of decision making?
27) Mention three sectors of economic activities with examples.
28) Justify the naming of Indian Ocean after India?
29) What can be done to increase the non-farm activities in the Indian Villages?
30) Mention divisions of Northern plains marked by rivers?

* **Long Answer Type Questions:**
31) Describe how the geographical features of India have fostered unity and homogenity in the Indian Society?
32) What are the characteristics of a non-democratic government?
33) Explain five factors which contributed to the making of our Constitution?
34) Describe different types of unemployment found in India?
35) What is the aim of production ?State any four requirements for production?

* **Assertion and Reasoning Questions:- Common Instructions:**

(a)Assertion (A) and Reason (R) are true are R is the correct explanation of A.
(b)Assertion (A) and Reason (R) are true but R is not the correct explanation of A.

(c)Assertion (A) is true but Reason (R) is false.

(d)Assertion (A) is false but Reason (R) is true.

36) Assertion (A) Farmers in Palampur are able to grow three different crops in a year? Reason (R) Land area under cultivation is practically fixed.
37) Assertion (A) For many decades in India, a large population has been considered an asset rather than a liability.
Reason (R) A large population need not be a burden for the economy. It can be turned into productive asset by investment in human capital.
38) Assertion (A) Green Revolution is associated with the loss of soil fertility.
Reason (R) In Green Revolution, there is increased use of chemical fertilizers.
39) Assertion (A) A minority is allowed to take decisions on behalf of all the people. Reason (R) The majority of people rule through their elected representatives.
40) Assertion (A) Representative government consider the most common form of democracy.
Reason (R) People in democracy can sit together and take decisions collectively.

41) Assertion (A) the Constitution is the supreme law of the country. Reason (R) It states the rights and duties of the citizens.

42) Assertion (A) We need to make amendments to our Constitution. Reason (R) It is necessary to keep it updated.

43) Assertion (A) The making of the constitution for huge and diverse country like India was not an easy affair.

   Reason (R) The country was born through a partition on the basis of religious differences.

44) Assertion (A) The Latitudinal extent influences the duration of day and night.

   Reason (R) 82° 20'E has been selected as the standard meridian of India.

45) Assertion (A) The sun rises two hours earlier in Gujrat as compared to Arunachal Pradesh in the west but the watches show the same time.
   Reason (R) The Time along the Standard Meridian of India, is taken as the standard time for the whole country.

46) Assertion (A) Deccan trap is the black soil area, is one of the distinct features of Peninsular Plateau.
   Reason (R) It covers parts of Maharashtra, Madhya Pradesh and Gujrat.

47) Assertion (A) Shivaliks are more prone to landslides.

   Reason (R) They are made of unconsolidated mud, sediments and rocks.

* **Case Based Questions:-**
48) **Read the given passage and answer the questions that follows:-**
   The land mass of India has an area of 3.28 million sq.km. India's total area accounts for about
   2.4 percent of the total geographical area of the world. India is the seventh largest country of the world. India ha a land boundry of about 15,200 km and the total length of the coastline of the mainland, including Andaman and Nicobar and Lakshadweep is 7,516.6 km. India is bounded by the young fold mountains in the north-west, north and north-east.
   a) What does the data 7,516.6 km signigy?
   b) Which is the second most populations country in the world?
   c) What do you know by the term Landmass?

49) Democracy is not a magical solution for all the problems. It has not ended poverty in our country and in other parts of the world.
   Democracy as a form of government only ensures that people take their own decisions. This does not guarantee that their decisions will be good. People can make mistakes. Involving the people in these decisions does lead to delay in decision making. It is also true that democracy leads to frequent changes in leadership. Sometimes this can set back big decisions and affect the government's efficiency.
   a) State the advantages of democracy   b) State the disadvantages of Democracy
   b) What are other forms of Government

50)   On an outline map of India show the following:-
        (a) The Karakoram Range (b) Kanchenjunga   (c) Jaintia   (d) Chota Nagpur Plateau

        (e) Anai Mudi   (f) Cardamom Hills   (g) Aravali Range   (h) Vindhya Range
        (i) Malwa Plateau   (j) Zaskar Range

*   **Project Work:-**
        Prepare One PPT Presentation on the given topic (Group
        Activity) :- French Revolution.

                                    Urdu

۱۔ نظم ہندو مسلمان اور مضمون بہادر شاہ کا ہاتھی سے دس۔ دس متبادل سوالات (MCQ) اپنی کاپی پر تحریر کریں۔

۲۔ کہانی ''نادان دوست'' اور نظم ''اوس'' سے پانچ۔ پانچ مختصر سوالات اپنی کاپی پر تحریر کریں۔

۳۔ ایک دیہاتی لڑکی کا گیت اور چڑیا گھر کی سیر سے پانچ تفصیل سوالات اپنی کاپی پر تحریر کریں۔

۴۔ اردو قواعد سے اسم، ضمیر اور واحد و جمع کا مع تصاویر پیشکش (P.P.T) بنائیں۔

۵۔ تلوک چند محروم اور منشی پریم چند کی سوانح عمری (Biography) اپنی کاپی پر تحریر کریں