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Roll No. :

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Total : 100 Questions

Time : 2 Hours

CLASS

7

ENGLISH MEDIUM

- ◆ The paper consists of Four sections

MATHS : Section A : (20 Questions), Section B : (5 Questions)

CHEMISTRY : Section A : (20 Questions), Section B : (5 Questions)

BIOLOGY : Section A : (20 Questions), Section B : (5 Questions)

PHYSICS : Section A : (20 Questions), Section B : (5 Questions)

- ◆ Each question carries 1 mark. For each correct response, the candidate will get 1 marks. For each incorrect response, 0.25 marks will be deducted from the total scores.
- ◆ All questions are compulsory.
- ◆ Use of calculator is not permitted. Write your Name, Roll No. and Class clearly on the OMR SHEET and do not forget to sign it.
- ◆ To mark your choice of answers by darkening the circles in the OMR SHEET, use an HB Pencil or a Blue / Black ball point pen only.
E.g. 11. (A) (B) (C) (D)
- ◆ Rough work should be done in the blank space provided in the booklet.
- ◆ Return the OMR SHEET to the invigilator at the end of the exam.
- ◆ Write your Roll No. on the Question Paper too and take it home for future reference.

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MATHS**SECTION A**

1. Find the value of the given expression:
 $(2^2 + 2^3 + 2^{-2} + 2^{-3})$
 (a) $\frac{95}{8}$ (b) $\frac{97}{8}$
 (c) $\frac{99}{8}$ (d) $\frac{98}{8}$
2. A rectangular field has length and breadth in the ratio of 16 : 9. If its perimeter is 750 cm, what is its area?
 (a) 75000 cm² (b) 32400 cm²
 (c) 14400 cm² (d) 14000 cm²
3. When Sarvesh travelled 33 km he found that $\frac{2}{3}$ rd of the entire journey was still left. The length of the total journey is
 (a) 66 km (b) 132 km
 (c) 99 km (d) 100 km
4. If $\frac{9}{5}$ of a number is 45, what is $\frac{1}{5}$ of the same number?
 (a) 5 (b) 25
 (c) 30 (d) 81
5. The descending order of the given fractions is _____.
 (a) $\frac{7}{10} > \frac{4}{7} > \frac{4}{3}$
 (b) $\frac{4}{7} > \frac{4}{3} > \frac{7}{10}$
 (c) $\frac{4}{3} > \frac{7}{10} > \frac{4}{7}$
 (d) $\frac{4}{3} > \frac{4}{7} > \frac{7}{10}$
6. A milkman sells 42 litres of milk at Rs.19.75 per litre to a hostel. How much money should he get from the hostel?
 (a) Rs. 1892 (b) Rs. 829.50
 (c) Rs. 165.85 (d) Rs. 122.50
7. The circumference of the tyre of Radha's bicycle is 2.5 m. She took part in a bicycle race of 1 km. When she had covered 700 m, the tyre burst. If she had to finish the race, how many more times the wheel must go round?
 (a) 24 (b) 120
 (c) 125 (d) 30
8. The melting point of mercury is -39°C . The freezing point of alcohol is -98°C . How much more is the melting point of mercury as compared to the freezing point of alcohol?
 (a) -137°C (b) 137°C
 (c) -59°C (d) 59°C
9. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?
 (a) 14 times (b) 18 times
 (c) 16 times (d) 15 times
10. The value of $\frac{((243)^{1/5})^4}{((32)^{1/5})^4} = ?$
 (a) $\frac{3}{2}$ (b) $\left(\frac{3}{2}\right)^{-4}$
 (c) $\frac{1}{2^{-4} \times 3^{-4}}$ (d) $\frac{1}{2^4 \times 3^{-4}}$
11. A man travelled two fifth of his journey by train, one third by bus, one-fourth by car and the remaining 3 km on foot. What is the length of his journey travelled by train?
 (a) 75 km (b) 72 km
 (c) 80 km (d) 85 km
12. The number of toffees in 30 gift packs are given as follows:
 5, 6, 4, 5, 3, 4, 4, 2, 5, 4, 1, 2, 11, 9, 2, 5, 4, 8, 7, 6, 5, 1, 2, 5, 7, 8, 1, 9, 7, 8
 Find the average number of toffees in gift packs.
 (a) 4 (b) 5
 (c) 6 (d) 7
13. **Statement I:** Value of $(-85) \times 43 + 43 \times (-15)$
 $= (-85 + (-15)) \times 43 = 4300$
Statement II: If $\times$ is a multiply operation for integers p, q and r , then we have
 $p (q + r) = (p \times q) + (p \times r)$
 (a) Statement I is true, Statement II is false.
 (b) Statement I is false, Statement II is true.
 (c) Both Statement I and Statement II are true.
 (d) Both Statement I and Statement II are false.

14. **Assertion:** The additive inverse of a positive integer is negative.

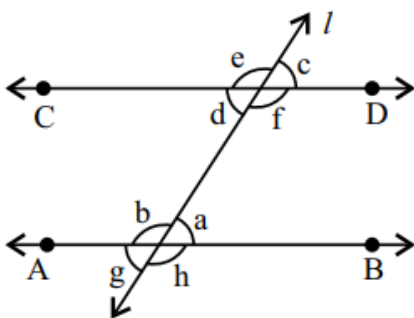
Reason: The additive identity of a number is 1.

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false but reason is true.

15. Match the Column.

	Column I		Column II
P.	$(-a) \div (-b)$	1.	Additive identity
Q.	0	2.	-1
R.	1	3.	$a \div b$
S.	$a \div (-a)$	4.	Multiplicative identity

- (a) $P \rightarrow 1, Q \rightarrow 2, R \rightarrow 4, S \rightarrow 3$
- (b) $P \rightarrow 3, Q \rightarrow 2, R \rightarrow 4, S \rightarrow 1$
- (c) $P \rightarrow 3, Q \rightarrow 1, R \rightarrow 4, S \rightarrow 2$
- (d) $P \rightarrow 2, Q \rightarrow 3, R \rightarrow 4, S \rightarrow 1$
16. Which of the following statements is/are not correct? Here, $AB \parallel CD$.



- (A) e and h are supplementary angles.
- (B) c and g are equal angles.
- (C) a and d are equal angles.
- (D) a and f are supplementary angles.
- (a) A, B and C
- (b) B and C
- (c) B, C and D
- (d) A, B, C and D

17. Which of the following statements is / are not correct?

- (A) If four quantities a, b, c and d are such that the ratio $a : b$ is equal to the ratio $c : d$, then we say a, b, c and d are in ratio and $a:b:c:d$.
- (B) If $a : b = 5 : 9$ and $b : c = 4 : 7$, then $a : b : c = 20 : 36 : 63$.
- (C) If $a:b = 12:15$ then $b:a = 5:3$
- (D) The ratio of 45 minutes to an hour is 3:4
- (a) A, B and D (b) A and C
- (c) B and D (d) A, C and D

18. Which of the following statements is / are not correct?

- (A) The successor of $0 \times (-52)$ is $1 \times (-52)$.
- (B) Integers are closed under division.
- (C) $(-20) \times (5 - 3) = (-20) \times (-2)$
- (D) $(-2) + (-9)$ is less than $(-9) - (-2)$.
- (a) Only A (b) Both A and D
- (c) Only D (d) Both A and C

19. Which of the following statements is/are correct?

- (A) The reciprocal of a proper fraction is a proper fraction.
- (B) The product of two improper fractions is less than both the fractions.
- (C) To multiply a decimal number by 1000, we move the decimal in the number to the right by three places.
- (D) Product of two fractions =

$$\frac{\text{Product of their denominators}}{\text{Product of their numerators}}$$

- (a) A, B and C (b) B and C
- (c) B, C and D (d) Only C

20. Which of the following steps is INCORRECT while constructing a $\triangle ABC$, given that $AB = 5$ cm, $BC = 6$ cm and $AC = 7$ cm.

- (A) Draw a line segment BC of length 6 cm
- (B) With B as centre, draw an arc of radius 5 cm.
- (C) With C as centre, draw an arc of radius 6 cm.
- (D) Mark the point of intersection of arcs as A. Join AB and AC.
- (a) Only A (b) Only C
- (c) Both A and C (d) Both B and D

SECTION B

21. **Statement I:** 0.02 is greater than 0.2.

Statement II: $\frac{3}{10} < \frac{4}{7} < \frac{3}{5} < \frac{4}{5}$ are arranged in ascending order.

- (a) Statement I is true, Statement II is false.
 (b) Statement I is false, Statement II is true.
 (c) Both Statement I and Statement II are true.
 (d) Both Statement I and Statement II are false.

22. **Assertion (A):** The power of a number says how many times to use the number in a multiplication.

Reason (R): $(-7)^3 = -243$

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
 (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
 (c) Assertion is true but reason is false.
 (d) Assertion is false but reason is true.

23. **Assertion (A):** The perimeter of the rectangular sheet is 200 cm if length is 40 cm and breadth is 60 cm.

Reason (R): Perimeter of a rectangle = $2(l + b)$.

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
 (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
 (c) Assertion is true but reason is false.
 (d) Assertion is false but reason is true.

24. Match the column I with column II and select the Correct answer by choosing an appropriate option.

	Column I		Column II
P.	$\frac{2a}{b} \div \frac{c}{3d}$	1.	-1
Q.	$\left(\frac{a}{b}\right) \times \left(\frac{c}{d}\right)^{-1}$	2.	$\frac{-6ad}{bc}$
R.	$\frac{3a}{b} \div \left(-\frac{c}{2d}\right)$	3.	$\frac{bc}{3ad}$

S.	$\frac{a}{b} \div \frac{-a}{b}$	4.	$\frac{6ad}{bc}$
T.	$\frac{b}{6a} \div \left(\frac{d}{2c}\right)$	5.	$\frac{ad}{bc}$

- (a) $P \rightarrow 5, Q \rightarrow 4, R \rightarrow 2, S \rightarrow 1, T \rightarrow 3$
 (b) $P \rightarrow 4, Q \rightarrow 5, R \rightarrow 2, S \rightarrow 1, T \rightarrow 3$
 (c) $P \rightarrow 1, Q \rightarrow 2, R \rightarrow 3, S \rightarrow 4, T \rightarrow 5$
 (d) $P \rightarrow 4, Q \rightarrow 2, R \rightarrow 5, S \rightarrow 3, T \rightarrow 1$

25. Which of the following statements is/are incorrect with respect to integers?

- (A) Integers are closed under both addition and subtraction.
 (B) Commutative property holds in addition as well as in subtraction.
 (C) Associative property holds both in addition and subtraction.
 (D) 0 is the additive identity of integers.
 (a) A and D (b) B and C
 (c) C and D (d) A, C and D

SCIENCE BIOLOGY**SECTION A**

26. Most of the chloroplast are present in

- (a) Vascular bulk (b) Epidermis
 (c) Palisade cell (d) Spongy cell

27. Parasitic plant produce special structure to absorb food is called Haustoria

- (a) Tendrils (b) Mast cell
 (c) Root hair (d) haustoria

28. A digestive enzyme functional only in infants

- (a) Lipase (b) Rennin
 (c) Saliva (d) gastric juice

29. Opening of pharynx to larynx is guarded by

- (a) Adam's apple (b) Epiglottis
 (c) Alveoli (d) trachea

30. Blood from lungs enters the heart through the

- (a) Pulmonary artery
 (b) Aorta
 (c) Pulmonary vein
 (d) Venacava

31. The animal that reproduces by binary fission:

- (a) Hydra (b) Paramecium
 (c) Sponge (d) Star fish

32. Ferns reproduce through
(a) Spore formation (b) budding
(c) layering (d) Flowers
33. Onion is propagated through its
(a) Seeds (b) Rhizomes
(c) Bulbs (d) Tubers.
34. The leaves are arranged in different Ways in different plants to get maximum exposure of sunlight. This arrangement is called _____
(a) Venation (b) Phyllotaxy
(c) Geotropism (d) Phototropism
35. The Importance of ecosystem lies in
(a) Flow of energy (b) cycling of material
(c) both of the above (d) None of the above
36. Which plant is suggested for purification of sewage pond water?
(a) Waste water plant (b) Eucalyptus
(c) Urena Plant (d) None of there
37. How many molecules of oxygen are carried by one molecule of haemoglobin?
(a) 2 (b) 4
(c) 8 (d) 6
38. **Statement I:** Breathing rate may increase during fever, illness or other medical conditions.
Statement II: Infant and young children have higher breathing rate, compared to adults.
(a) Statement I is true and Statement II is false.
(b) Statement I is false and Statement II is true.
(c) Both Statement I and Statement II are true.
(d) Both Statement I and Statement II are false.
39. **Assertion:** Scavengers are the microorganisms such as bacteria and fungi which consume dead animals.
Reason: Secondary consumers are animals which in directly depend on plants for their food.
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Assertion is false but reason is true.

40. Match the common names of animals given in Column A with their biological names given in Column B and choose the appropriate option.

	Column I		Column II
P.	Rose	1.	Tuber
Q.	Potato	2.	Fragmentation
R.	Yeast	3.	Budding
S.	Spirogyra	4.	Cutting

- (a) P → 4, Q → 1, R → 2, S → 3
(b) P → 4, Q → 1, R → 3, S → 2
(c) P → 1, Q → 3, R → 4, S → 2
(d) P → 3, Q → 2, R → 1, S → 4

41. Which of the following statements (s) is or are false?

- (A) Stomata give root, the ability to convert sun's energy into food.
(B) Rhizobium cannot make its own food.
(C) Saprotrophs are green in colour due to presence of chlorophyll.
(D) Fungal spore germinate and grow when they land on wet and warm surfaces.

- (a) Only A and B
(b) Only B
(c) Only A and D
(d) Only A and C

42. Which of the following statements (s) is / are true?

- (A) A method of propagating plants under sterile conditions is known as tissue culture.
(B) The plant reproduce by vegetative propagation are not exactly the same as original plant.
(C) The Plants reproduced by vegetative propagation take more time to grow than the ones produced by seeds.
(D) The Plants reproduced by vegetative propagation need less attention compared to the plants grown by other types of reproduction

- (a) Only A and B
(b) Only B
(c) Only A and D
(d) Only A and C

43. Which of the following statements (s) is / are false?
- (A) Partial breakdown of glucose produces lactic acid.
- (B) Complete breakdown of glucose produced lactic acid
- (C) Energy released during aerobic respiration is much more than anaerobic respiration.
- (D) Inhaled air contains more oxygen than that of exhaled air.

- (a) Only A and B (b) Only B
- (c) Only A and D (d) Only A and C

44. Which of the following statement (s) is / are true?

- (A) A food web is a complex feeding system which contains several food chains.
- (B) Carnivores obtain their food indirectly from plants and are called as primary consumers.
- (C) Decomposers help to maintain the balance of nutrient in soil.
- (D) In an understorey layer of forest, there is only one layer of vegetation, i.e., shrubs.

- (a) Only A and B (b) Only B
- (c) Only A and D (d) Only A and C

SECTION B

45. Which of the following statement (s) is / are false?
- (A) By-products of wastewater treatment are aerobic and anaerobic bacteria.
- (B) Treatment plants reduce pollutants in waster water to a level where nature can take care of it.
- (C) Open drains are perfect breeding place for flies, mosquitoes and other disease causing microbes.
- (D) Activated sludge is about 97% solid and 3% water.

- (a) Only A and B (b) Only B
- (c) Only A and D (d) Only A and C

46. **Statement I:** Cutting, layering, grafting, and tissue culture are the natural methods of vegetative propagation.

Statement II: New plant cannot be grown form roots.

- (a) Statement I is true and Statement II is false.
- (b) Statement I is false and Statement II is true.
- (c) Both Statement I and Statement II are true.
- (d) Both Statement I and Statement II are false.

47. **Assertion:** Oxygen – rich blood and carbon dioxide – rich blood are never mixed up in human heart.

Reason: The left side and right side of the heart are separated from each other by a muscular septum.

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false but reason is true.

48. **Assertion:** Animals like Sponge and Hydra which are found in water possess a well developed circulatory system.

Reason: These organisms possess gills which help in the transport of materials through out their bodies.

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false but reason is true.

49. Match the Column:

	Column I		Column II
P	Butterfly	1	lungs
Q	Earth worms	2	Gills
R	Sparrow	3	Spiracles
S	Fish	s	Skin

- (a) P → 3, Q → 4, R → 1, S → 2
- (b) P → 2, Q → 1, R → 3, S → 4
- (c) P → 1, Q → 4, R → 2, S → 3
- (d) P → 3, Q → 1, R → 4, S → 2

50. Which of the following statement (s) is / are true?
- (a) Rhizome is the main underground stems that bear bud.
- (b) Bulbs are found in onion, garlic etc.
- (c) Individual produced with large amount of variation is produced through vegetative propagation.
- (d) Only one parent is involved in sexual reproduction.
- (a) Only A and B (b) Only B
- (c) Only A and D (d) Only A and C

SCIENCE CHEMISTRY

SECTION A

51. Which of the following is a mineral acid?
- (a) Lactic acid (b) Formic acid
- (c) Tartaric acid (d) Nitric acid
52. The main source of oxalic acid is
- (a) Curd (b) Spinach
- (c) Lemon (d) Orange
53. Process of respiration is
- (a) An oxidation reaction which is endothermic
- (b) A reduction reaction which is exothermic
- (c) A combination reaction which is endothermic
- (d) An oxidation reaction which is exothermic
54. The common window cleaner contains
- (a) Calcium hydroxide
- (b) Magnesium hydroxide
- (c) Sodium hydroxide
- (d) Ammonium hydroxide
55. When an iron nail is dipped in copper sulphate solution, the colour of copper sulphate changes to
- (a) Green (b) Blue
- (c) Pink (d) Colourless
56. Aqueous solution of sodium chloride turns
- (a) Turns red litmus blue
- (b) Turns blue litmus red
- (c) Turns red litmus orange
- (d) Does not change the colour of either red or blue litmus.
57. Add few drops of China rose indicator in soap solution. What do you observe?
- (a) It turns green (b) It turns magenta
- (c) It turns yellow (d) It turns red
58. Add few drops of methyl orange in common salt solution. What do you observe?
- (a) It turns yellow (b) It turns red
- (c) It turns orange (d) It turns colourless
59. $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{a gas}$
- If we bring a burning splinter near the gas produced in the given reaction, it burns with a pop sound. The gas is
- (a) O_2 (b) N_2
- (c) H_2 (d) CO_2
60. Calcium hydroxide (slacked lime) is used in:
- (a) Plastics and dyes
- (b) Fertilizers
- (c) Antacids
- (d) White washing
61. What kind of change is undergone by expansion of railway tracks during summer?
- (a) Irreversible physical
- (b) Reversible physical
- (c) Irreversible chemical
- (d) Reversible chemical
62. What is the scientific name of mulberry tree?
- (a) Magnifera Indica (b) Morus alba
- (c) Demodium girence (d) None of these
63. **Statement I:** Iron nails rust when left exposed to moisture.
- Statement II:** Rusting of iron occurs due to the chemical reaction of iron with oxygen and water.
- (a) Statement I is true, Statement II is false.
- (b) Statement I is false, Statement II is true.
- (c) Both Statement I and Statement II are true.
- (d) Both Statement I and Statement II are false.
64. **Assertion (A):** Lemon juice tastes sour.
- Reason (R):** Lemon juice contains citric acid.
- (a) Both assertion and reason are true, and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true, but reason is not the correct explanation of assertion.
- (c) Assertion is true, but reason is false.
- (d) Assertion is false, but reason is true.

65. Match the column.

	Column I		Column II
P.	Oxygen	1.	Physical change
Q.	Burning of paper	2.	Mixture
R.	Salt and water	3.	Chemical change
S.	Sand and iron filing	4.	Element
		5.	Compound

- (a) $P \rightarrow 4, Q \rightarrow 3, R \rightarrow 5, S \rightarrow 2$
 (b) $P \rightarrow 4, Q \rightarrow 1, R \rightarrow 3, S \rightarrow 2$
 (c) $P \rightarrow 1, Q \rightarrow 3, R \rightarrow 4, S \rightarrow 2$
 (d) $P \rightarrow 3, Q \rightarrow 2, R \rightarrow 1, S \rightarrow 4$

66. Choose the correct statement.

- (A) Carbon dioxide gas turns lime water milky.
 (B) Vinegar is a mixture of acetic acid and water.
 (C) Boiling of water is a chemical change.
 (D) Hydrogen is a non metal.
 (a) Only A and B
 (b) Only A, B and D
 (c) Only A and D
 (d) Only A and C

67. Which of the following statement(s) is/are correct?

- (A) Sodium bicarbonate is used in preparing bakery products.
 (B) Methyl orange is yellow in colour while Phenolphthalein is pink.
 (C) PH of acetic acid is less than 7.
 (D) Antacids neutralise the excess of base present in the stomach.
 (a) Only A and B (b) Only B
 (c) Only A and D (d) Only A and C

68. Which of the following statement(s) is/are correct?

- (A) Water pipes are galvanised to prevent rusting.
 (B) Addition of sodium hydroxide flakes to water result in endothermic reaction.
 (C) Absorption of heat occurs in exothermic reaction.
 (D) Formation of dew is a physical change.
 (a) Only A and B (b) Only B
 (c) Only A and D (d) Only A and C

69. Which of the following statement(s) is/are correct?

- (A) A chemical change may bring evolution of gas.
 (B) Calcium carbonate is decomposed to form calcium oxide and carbondioxide.
 (C) Stainless steel is made by mixing aluminium with carbon.
 (D) Magnesium burns in air without flame.
 (a) Only A and B (b) Only B
 (c) Only A and D (d) Only A and C

70. Which of the following statement(s) is/are incorrect?

- (A) Acidic substances changes china rose indicator into dark pink or magenta.
 (B) Substances which change the colour of china rose indicator are neutral in nature.
 (C) A basic substances turns China rose indicator into green.
 (D) Substances which do not change the colour of china rose indicator are neutral in nature.
 (a) Only A and B (b) Only B
 (c) Only A and D (d) Only A and C

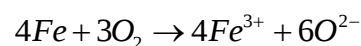
SECTION B

71. **Statement I:** Calamine solution contains sodium carbonate.

Statement II: Common window cleaner contains calcium hydroxide.

- (a) Statement I is true, Statement II is false.
 (b) Statement I is false, Statement II is true.
 (c) Both Statement I and Statement II are true.
 (d) Both Statement I and Statement II are false.

72. **Assertion:** Following reaction describes the rusting of iron and is a redox reaction,



Reason: The metallic iron is oxidised to Fe^{3+} .

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
 (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
 (c) Assertion is true but reason is false.
 (d) Assertion is false but reason is true

73. Assertion: Salt dissolving in water is a physical change.

Reason: In this process, salt molecules break apart and disperse evenly throughout the water molecules.

- (a) Both Assertion and Reason are correct, and Reason is the correct explanation for Assertion.
- (b) Both Assertion and Reason are correct, and Reason is not the correct explanation for Assertion.
- (c) Assertion is true but Reason is false.
- (d) Both Assertion and Reason are false.

74. Match the following.

	List 1		List 2
P.	Magnesium Reacting with dilute sulphuric acid	1.	Change in temperature
Q.	Potassium Iodide reacts with lead nitrate	2.	Evolution of gas
R.	Sulphur dioxide gas reacting with acidified potassium	3.	Formation of precipitate
S.	Zinc granules reacting with dilute sulphuric acid	4.	Change in colour

- (a) $P \rightarrow 2, Q \rightarrow 1, R \rightarrow 4, S \rightarrow 3$
- (b) $P \rightarrow 4, Q \rightarrow 3, R \rightarrow 2, S \rightarrow 1$
- (c) $P \rightarrow 1, Q \rightarrow 4, R \rightarrow 3, S \rightarrow 2$
- (d) $P \rightarrow 3, Q \rightarrow 2, R \rightarrow 1, S \rightarrow 4$

75. Which of the following statement(s) is/are true?

- (A) A chemical change may be accompanied by evolution of gas and change in colour.
- (B) Photosynthesis and digestion are chemical changes.
- (C) Clotting of blood is a physical change.
- (D) Burning of a paper is a physical change.
- (a) Only A and B
- (b) Only B
- (c) Only A and D
- (d) Only A and C

Science PHYSICS

SECTION A

- 76.** A thermometer works on the principle of
- (a) Linear expansion of solid
 - (b) Cubical expansion of solid
 - (c) Uniform expansion of volume of liquid or gas with temperature
 - (d) both (b) and (c)
- 77.** Why a digital thermometer is widely used for the measurement of the temperature?
- (a) Analog scale
 - (b) Mercury
 - (c) High accuracy
 - (d) Low accuracy
- 78.** A jet is moving with a speed of 180 km/h. What is its speed in m/s?
- (a) 10 m/s
 - (b) 50 m/s
 - (c) 200 m/s
 - (d) 500 m/s
- 79.** The bus decreases its speed from 80 km/h to 60 km/h in 5 seconds. The acceleration of bus is:
- (a) 0.1 m/s^2
 - (b) -1.11 m/s^2
 - (c) -2.1 m/s^2
 - (d) Zero
- 80.** The period of a simple pendulum depends on
- (a) Weight
 - (b) Length of pendulum
 - (c) Both (a) and (b)
 - (d) Neither (a) or (b)
- 81.** An athlete completes one round of a circular track of radius R in 40 seconds. The distance covered at the end of 2 minutes 20 seconds will be
- (a) Zero
 - (b) 2 R
 - (c) πR
 - (d) $7 \pi R$
- 82.** If you place a compass near a current carrying wire, it will
- (a) get deflected
 - (b) get charged
 - (c) get hot
 - (d) glow brightly
- 83.** A current carrying coil of an insulated wire wrapped around a piece of soft iron becomes
- (a) filament
 - (b) an electro magnet
 - (c) a fuse
 - (d) a conductor
- 84.** Which one of the following is the best conductor of electricity?
- (a) Silver
 - (b) Copper
 - (c) Aluminium
 - (d) Iron
- 85.** The mirror used in telescopes to reflect light is:
- (a) concave
 - (b) convex
 - (c) plane
 - (d) none of these

86. Which one shows lateral inversion?
 (a) Plane mirror (b) Concave mirror
 (c) Convex mirror (d) None of these
87. The angle between an incident ray and the plane mirror is 35° . The total angle between the incident ray and reflected ray will be
 (a) 35° (b) 70°
 (c) 105° (d) 110°
88. **Statements I:** An electric bulb works on the principle of heating effect of electric current.
Statement II: In a bulb filament is broken when small current is passed through it.
 (a) Statement I is true, Statement II is false.
 (b) Statement I is false, Statement II is true.
 (c) Both Statement I and Statement II are true.
 (d) Both Statement I and Statement II are false.
89. **Assertion (A):** A plane mirror produces virtual, erect image for any position of the object.
Reason (R): Lateral inversion is an important property of image formed by a plane mirror.
 (a) Both assertion and reason are true and reason is the correct explanation of assertion.
 (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
 (c) Assertion is true but reason is false.
 (d) Assertion is false but reason is true.
90. Match the column.
- | | Column I | | Column II |
|----|---------------|----|--|
| P. | Real image | 1. | It is an optical device which produces reflection. |
| Q. | Virtual image | 2. | Separates Seven colours of white light |
| R. | Mirror | 3. | It cannot be taken on a screen |
| S. | Prism | 4. | It can be taken on a screen |
- (a) $P \rightarrow 4, Q \rightarrow 3, R \rightarrow 1, S \rightarrow 2$
 (b) $P \rightarrow 1, Q \rightarrow 2, R \rightarrow 3, S \rightarrow 4$
 (c) $P \rightarrow 1, Q \rightarrow 3, R \rightarrow 2, S \rightarrow 4$
 (d) $P \rightarrow 4, Q \rightarrow 1, R \rightarrow 3, S \rightarrow 2$
91. Which of the following statement(s) is/are true?
 (A) Small gaps are provided while constructing bridges called as expansion joints
 (B) Metals and concrete expand during heating.
 (C) In liquids, generally heat is transferred by conduction.
 (D) Heat energy is received by us from the sun by the process of conduction.
 (a) Only A and B (b) Only B
 (c) Only A and D (d) Only A and C
92. Which of the given statement(s) is/are true?
 (A) The temperature of every person may not be 37°C .
 (B) The range of a laboratory thermometer is from 0°C to 110°C .
 (C) Air is good conductor and water is poor conductor of heat.
 (D) The constant movement of water while heating is called convection current.
 (a) Only A and B (b) Only B
 (c) Only A and D (d) Only A and C
93. Which of the following statement(s) is/ are correct?
 (A) Displacement is the shortest path between two points.
 (B) Distance is the total path length travelled by the object.
 (C) Displacement can never be zero.
 (D) Distance travelled from one point to other can be zero.
 (a) Only A and B (b) Only B
 (c) Only A and D (d) Only A and C
94. Which of the following statement(s) is/are incorrect?
 (A) Convex lens is used in spectacles to correct far sightedness.
 (B) Concave lens is used in spectacles to correct near sightedness.
 (C) Convex lens is used in spectacles to correct near sightedness.
 (D) Concave lens is used to correct far sightedness.
 (a) Only A and B (b) Only B
 (c) A and D (d) A and C

95. Which of the following statement(s) is/are are correct?
- (A) If electric current is passed through metal body then it behaves as magnet.
- (B) The element of electric iron is made of tungsten.
- (C) The key or switch can be placed anywhere in the circuit.
- (D) An electro magnet does not attract a piece of iron.
- (a) Only A and B (b) Only B
- (c) Only A and D (d) Only A and C

SECTION B

96. **Statements I:** Image formed by convex mirror is erect, virtual and smaller in size than the object.
Statement II: Convex mirrors are used as shaving and make up mirrors.
- (a) Statement I is true, Statement II is false.
- (b) Statement I is false, Statement II is true.
- (c) Both Statement I and Statement II are true.
- (d) Both Statement I and Statement II are false.
97. **Assertion (A):** Electromagnets are made of soft iron
Reason (R): The strength of an electromagnet is increased by increasing the current flowing through the solenoid coil.
- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false but reason is true.

98. **Assertion (A):** Displacement of a body may be zero when distance travelled by it is not zero.
Reason (R): The displacement is the longest distance between initial and final position.
- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false but reason is true.

99. Match the column.

	Column I		Column II
P.	Actual movement of molecules	1.	Conduction
Q.	Rubber, cork, plastic wood	2.	Measurement of hotness or coldness
R.	Temperature	3.	Occurs in absence of any medium
S.	Radiation	4.	Insulators

- (a) $P \rightarrow 1, Q \rightarrow 4, R \rightarrow 2, S \rightarrow 3$
- (b) $P \rightarrow 4, Q \rightarrow 2, R \rightarrow 1, S \rightarrow 3$
- (c) $P \rightarrow 1, Q \rightarrow 2, R \rightarrow 3, S \rightarrow 4$
- (d) $P \rightarrow 3, Q \rightarrow 1, R \rightarrow 4, S \rightarrow 2$
100. Which of the following statements is/are incorrect?
- (A) During day, land loses heat faster than water and becomes cooler.
- (B) The transfer of heat by radiation does not require any medium.
- (C) On, heating the density of the substance always decreases.
- (D) The birds glide effortlessly in the air with the help of convection current of air.
- (a) Only A and B (b) Only B
- (c) Only A and D (d) Only A and C

ANSWER KEY

Q	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans	c	b	c	a	c	b	b	c	c	d	b	b	b	c	c	d	c	c	d	b
Q	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans	b	c	a	b	b	c	d	b	b	c	b	a	c	b	c	b	b	c	d	b
Q	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans	d	c	b	d	c	d	a	d	a	a	d	b	d	d	a	d	a	a	c	d
Q	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Ans	b	b	b	b	a	b	d	c	a	b	d	a	c	c	a	c	c	b	b	b
Q	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Ans	d	a	b	a	a	a	d	a	b	a	a	c	a	a	d	a	b	c	a	a



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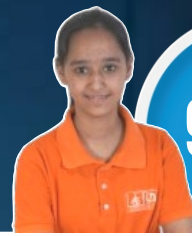


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1 YEAR
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VADODARA
RANK



KAVYA SHAH

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CLASS - 9



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CLASS - 9



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CLASS - 8



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CLASS - 9



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644



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637



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637



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634



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SANKALP

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ZOOLOGY
180
180



RUSHI
PATEL

630

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ZOOLOGY
180
180



MEET
VYAS

614

PERFECT SCORE IN
ZOOLOGY
180
180



NITYA
SHAH

610

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ZOOLOGY
180
180



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