Time: 2 Hour                                                        Total Marks: 75

**Class : IX**
**Subject : Science**

## MCQ SINGLE CORRECT

1. 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)

2. A mixture of sulphur and carbon disulphide is

   **(a)** heterogeneous and shows Tyndall effect          **(b)** homogeneous and shows Tyndall effect

   **(c)** heterogeneous and does not shows Tyndall effect     **(d)** homogeneous and does not shows Tyndall effect

3. Which of the following are physical changes ?
   (i) Melting of iron metal
   (ii) Rusting of iron
   (iii) Bending of an iron rod
   (iv) Drawing a wire of iron metal

   **(a)** (i), (ii) and (iii)             **(b)** (i), (ii) and (iv)

   **(c)** (i), (iii) and (iv)             **(d)** (ii), (iii) and (iii)

4. Which of the following statements are true for pure substances ?
   (i) Pure substance contain only one kind of particles
   (ii) Pure substances may be compounds or mixtures
   (iii) Pure substances have the same composition throughout
   (iv) Pure substances can be exemplified by all elements other than nickel

   **(a)** (i) and (ii)                    **(b)** (i) and (iii)

   **(c)** (iii) and (iv)                  **(d)** (ii) and (iii)

5. Two substances, A and B were made to react to form a third substance, $A_2B$ according to the following reaction

   $2A + B \longrightarrow A_2B$

   Which of the following statements concerning this reaction are incorrect ?
   (i) The product $A_2B$ shows the properties of substances A and B
   (ii) The product will always have a fixed composition
   (iii) The product so formed cannot be classified as a compound
   (iv) The product so formed is an element

                                                        All The Best!!!

**(a)** (i), (ii) and (iii)  **(b)** (ii), (iii) and (iv)

**(c)** (i), (iii) and (iv)  **(d)** (ii), (iii) and (iv)

## TRUE/FALSE

6. Starting from Class, Species comes before the Genus.

   **(a)** True  **(b)** False

7. All prokaryotes are classified under Monera.

   **(a)** True  **(b)** False

8. Seeds contain embryo.

   **(a)** True  **(b)** False

9. Bryophytes have conducting tissue.

   **(a)** True  **(b)** False

10. Gymnosperms differ from Angiosperms in having covered seed.

   **(a)** True  **(b)** False

## FILL IN THE BLANKS

11. _____ are called as amphibians of the plant kingdom.
12. Causal organism of any disease is called as _____ .
13. Cork cells possesses _____ on their walls that makes it impervious to gases and water.
14. Wheat, gram, pea, mustard are _____ crops.
15. Husk of coconut is made of _____ tissue.

## VERY SHORT DESC

16. Endoskeleton of fishes are made up of cartilage and bone; classify the following fishes as cartilagenous or bony
    Torpedo, Sting ray, Dog fish,
    Rohu, Angler fish, Exocoetus.

17. Label a,b,c and d. given in Fig. Give the function of (b)
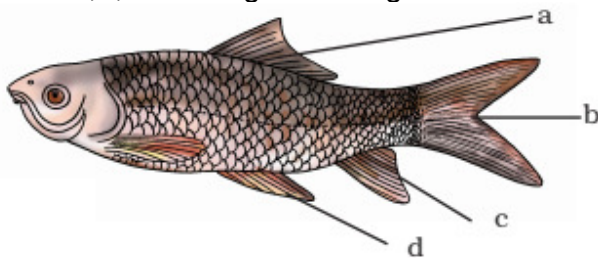


18. Classify the following based on number of chambers in their heart.
    Rohu, Scoliodon, Frog, Salamander, Flying lizard, King Cobra,
    Crocodile, Ostrich, Pigeon, Bat, Whale

19. Give examples for the following
    (a) Bilateral, dorsiventral symmetry is found in_____.
    (b) Worms causing disease elephantiasis is_____.
    (c) Open circulatory system is found in_____where coelomic cavity is filled with blood.
    (d) _____are known to have pseudocoelom.

20. Classify the following organisms based on the absence/presence of true
    coelom (i.e., acoelomate, pseudocoelomate and coelomate)
    Spongilla, Sea anemone, Planaria, Liver fluke
    Wuchereria, Ascaris, Nereis, Earthworm,
    Scorpion, Birds, Fishes, Horse.

## SHORT DESC - 25 WORDS

21. What is green house effect ?

22. A cricket ball of mass 70 g, moving with a velocity of 0.5 $ms^{-1}$ is stopped by a player in 0.5 s. What is the force applied by the player to stop the ball?

23. Ammonia and hydrogen chloride gases are both pungent smelling in nature. These are released from the two opposite corners in a room. Which gas will reach first a person sitting in the centre of the room ?

24. Two bodies of equal masses move with the uniform velocities v and 3v respectively. Find the ratio of their kinetic energies.

25. If you apply 1 joule of energy to lift a book of 0.5 kg, how high will it rise? (Take g = 10 $ms^{-2}$)

## MED DESC - 50 WORDS

26. What are the characteristics of the particles of matter?

27. Calculate the masses of cane sugar and water required to prepare 250 g of 25% solution of cane sugar.

28. Calculate the strength of a solution containing 5 g of glucose in 200 ml of the solution.

29. A sprinter in a 100 m race covers 4 m in first second, 30 m in next 4s , 52 m in another 4s and finishes the race in 10 s.
    a) Calculate the average velocity of the sprinter.
    b) What is the peak velocity attained by the sprinter?
    c) During which time-interval is the acceleration highest?
    d) Plot the distance time and velocity time graph for the race.
    e) Show in the graph the velocity of the sprinter at the end of 5 s?

30. Write a note on how forests influence the quality of our air, soil and water resources.

## LONG DESC - 100 WORDS

31. How do you differentiate amongst capture fishing, mariculture and aquaculture.

32. Design an experiment to show that ammonium chloride undergoes sublimation.

33. What is chromatography? What are its various applications and underline the basic principle involved?

34. What is crystallization? Where is it used? Why is this better than simple evaporation technique?

35. What are the advantages of inter cropping and crop rotation?

## **MATCH THE PAIRS**

36. Match the columns

| | Column I | | Column II |
|---|---|---|---|
| (i) | Jaundice | (1) | Infectious diseases |
| (ii) | Encephalitis | (2) | Malaria |
| (iii) | Immune system | (3) | Water borne disease |
| (iv) | Liver | (4) | Penicillin |
| (v) | Immunisation | (5) | Mosquito bite |
| | | (6) | HIV |

**(a)** (i) (3), (ii) (5), (iii) (6), (iv) (2), (v) (1)     **(b)** (i) (5), (ii) (6), (iii) (3), (iv) (2), (v) (1)

**(c)** (i) (1), (ii) (2), (iii) (5), (iv) (6), (v) (3)     **(d)** (i) (3), (ii) (5), (iii) (1), (iv) (6), (v) (2)

37. Match the physical quantities given in column A to their S I units given in column B :

| | A | | B |
|---|---|---|---|
| (a) | Pressure | (i) | cubic metre |
| (b) | Temperature | (ii) | kilogram |
| (c) | Density | (iii) | pascal |
| (d) | Mass | (iv) | kelvin |
| (e) | Volume | (v) | kilogram per cubic metre |

**(a)** (a) — (iii),(b) — (iv),(c) — (v),(d) — (ii),(e) — (i)     **(b)** (a) — (ii),(b) — (v),(c) — (iv),(d) — (ii),(e) — (i)

**(c)** (a) — (i),(b) — (iii),(c) — (v),(d) — (iv),(e) — (ii)     **(d)** None of these

38. Match the pairs

| | Columnn I | | Column II |
|---|---|---|---|
| (i) | Wingless insect | (A) | Kiwi |
| (ii) | Flightless bird | (B) | Silver fish |
| (iii) | Limbless reptile | (C) | Turtle |
| (iv) | Lungless animal | (D) | Snake |

|  |  | (E) | Fish |
|---|---|---|---|

**(a)** (i) (B), (ii) (A), (iii) (D), (iv) (E)　　**(b)** (i) (B), (ii) (C), (iii) (A), (iv) (D)

**(c)** (i) (A), (ii) (B), (iii) (C), (iv) (E)　　**(d)** (i) (A), (ii) (C), (iii) (B), (iv) (E)

39. Match the column (A) with the column (B)

|  | (A) |  | (B) |
|---|---|---|---|
| (a) | Fluid connective tissue | (i) | Subcutaneous layer |
| (b) | Filling of space inside the organs | (ii) | Cartilage |
| (c) | Striated muscle | (iii) | Skeletal muscle |
| (d) | Adipose tissue | (iv) | Areolar tissue |
| (e) | Surface of joints | (v) | Blood |
| (f) | Stratified squamous epithelium | (vi) | Skin |

**(a)** a—v; b—iv; c—iii; d—i; e—ii; f—vi;　　**(b)** a—iv; b—v; c—ii; d—i; e—iii; f—vi;

**(c)** a—vi; b—iv; c—iii; d—i; e—ii; f—v;　　**(d)** None of these

40. The non S I and S I units of some physical quantities are given in column A and column B respectively. Match the units belonging to the same physical quantity:

|  | (A) |  | (B) |
|---|---|---|---|
| (a) | degree celsius | (i) | kilogram |
| (b) | centimetre | (ii) | pascal |
| (c) | gram per centimetre cube | (iii) | metre |
| (d) | bar | (iv) | kelvin |
| (e) | milligram | (v) | kilogram per metre cube |

**(a)** (a) — (iv),(b) — (iii),(c) — (v),(d) — (ii),(e) — (i)　　**(b)** ((a) — (v),(b) — (ii),(c) — (iv),(d) — (iii),(e) — (i)

**(c)** (a) — (ii),(b) — (i),(c) — (v),(d) — (iii),(e) — (iv)　　**(d)** None of these