Standard : X
S303

SCIENCE

Reg. No. | | | | | | |

Time : 3 Hrs

Marks : 75

Model Test - 3

PART - A

12 x 1 = 12

Choose the correct answer.

1. **SI unit of resitance is _____.**
   a) Mho
   b) Joule
   c) Ohm
   d) Watt

2. **Where should an object be placed so that a real and inverted image of same size is obtained by a convex lens?**
   a) f
   b) Infinity
   c) 2f
   d) between f and 2f

3. **The number of components in a binary solution is _____.**
   a) 5
   b) 4
   c) 3
   d) 2

4. **Unit of radioactivity is _____.**
   a) Roentgen
   b) Curie
   c) Becquerel
   d) All of the above

5. $C_2H_5OH + 3O_2 \rightarrow 2CO_2 + 3H_2O$ _____.
   a) reduction of ethanol
   b) combustion of ethanol
   c) oxidation of ethanoic acid
   d) oxidation of ethanol

6. **Identify the non - aqueous solution.**
   a) Sodium chloride in water
   b) Glucose in water
   c) Copper sulphate in water
   d) Sulphur in carbon di sulphide

7. **Who is regarded as the "Father of Modern Physiology"?**
   a) His - Atrio
   b) William Harvey
   c) Karl Landsteiner
   d) Edward C.Kendal

8. **We can cut the DNA with the help of _____.**
   a) Scissors
   b) Restricttion enzymes
   c) Knife
   d) DNA ligases

9. **Synagamy results in the formation of _____.**
   a) Zoospores
   b) Conidia
   c) Zygote
   d) Chlamydospores

10. **Pusa Komal is a disease resistant variety of** _____.
    a) Sugar cane b) Rice
    c) Cow pea d) Maize

11. **Which one is referred as "Master Gland"?**
    a) Pineal gland b) Pituitary gland
    c) Thyroid gland d) Adrenal gland

12. **The endarch condition is the characteristic feature of** _____.
    a) root b) stem
    c) leaves d) flowers

PART - B

Note: i) Answer any 7 questions. **7 x 2 = 14**
ii) Question no: 22 is compulsory.

13. a) What is audible range of frequency?
    b) What is the minimum distance needed for an echo?
14. Write short notes on genes.
15. Mention two cases in which there is no doppler effect in sound.
16. What is the importance of rain water harvesting?
17. Identify the parts A, B, C, D in the given figure:

18. Why fossil fuels are to be conserved?
19. Why is the colour of the blood red?
20. Name the two maize hybrids rich in amino acid lysine.
21. What is evolution? Who proposed the theories of evolution?
22. A person with myopia can see objects placed at a distance of 4 m. If he wants to see objects at a distance of 20 m, what should be the focal length and power of the concave lens he must wear?

PART - C

Note: i) Answer any 7 questions. **7 x 4 = 28**

ii) Question no: 32 is compulsory.

23. Differenciate Mass and Weight.

24. Describe rocket propulsion.

25. What happens when the salt $MgSO_4 . 7H_2O$ is heated? Write the equation.

26. a) What is an alloy?

    b) Give the reasons for alloying?

27. What are the uses of simple microscope?

28. Differentiate between monocot root and dicot root.

29. Draw the external structure of human heart and label the parts.

30. a) Discuss the method of plant breeding for disease resistance.

    b) How does developing embryo gets its nourishment inside the mother's body?

31. What are synthetic auxins? Give example.

32. a) Draw the ray diagram of image formation in simple microscope?

    b) Find the position and write its nature and size of image formed by simple microscope?

PART - D

Note: 1. Answer all the questions.

2. Each question carries seven marks.

3. Draw the diagram wherever necessary. **3 x 7 = 21**

33. a) i) Shock absorbers are used in luxury buses? Why?

    ii) A weight of a man is 686 N on the surface of the earth. Calculate the weight of the same person on moon. [g value of a moon is 1.625 ms^{-2}]

    iii) Name the law of motion used in flying birds give another example for its same law.

(OR)

    b) i) Give any three difference between the sound and light waves.

    ii) Draw the picture of seven segment display for any one alpha numeri number.