Standard : X   **SCIENCE**   Reg. No.

S302

Time : 3 Hrs   *Model Test - 2*   Marks : 75

PART - A

12 x 1 = 12

Choose the correct answer.

1. _____ aprons are used to protect us from gamma radiation.
   a) Lead oxide   b) Iron
   c) Lead   d) Aluminium

2. The co-efficent of linear expansion depends on _____
   a) original length   b) increasing temperature
   c) Nature of material   d) (a) and (b)

3. The elements having atomic number is _____ undergo spontaneous radio activity.
   a) more then 83   b) less then 83
   c) less then 73   d) equal to 83

4. Nichrome is used as heating element in electric heater because it has _____.
   a) high resistivity
   b) high melting point
   c) not easily oxidied
   d) all the above

5. 25 percent (25%) ethanol solution means _____.
   a) 25 ml ethanol in 100 ml of water
   b) 25 ml ethanol in 25 ml of water
   c) 25 ml ethanol in 75 ml of water
   d) 75 ml ethanol in 25 ml of water

6. Deliquescence is due to _____.
   a) strong affinity of water   b) weak affinity to water
   c) strong hatered to water   d) inertness to water

7. In a chemical equilibrium, the concentrations of reaction and products are _____.
   a) remain different   b) remain same
   c) cannot be predicted   d) are not equal

8. The nervous band connects the two cerebral hemispheres of brain is _____.

  a) thalamus
  b) hypothalamus
  c) corpus callosum
  d) pons

9. Which of the following is / are fossil fuel?

  1. Tar   2. Coal   3. Petroleum

  a) (1) only
  b) (1) and(2)
  c) (2) and (3)
  d) (1),(2) and (3)

10. Root hairs are _____.

  a) cortical cell
  b) projection of epidermal cell
  c) unicellular
  d) both (b) and (c)

11. Blood cancer is called _____.

  a) leukaemia
  b) sarcoma
  c) carcinoma
  d) limpoma

12. In computer _____ is used to collect the notes.

  a) Notepad
  b) Paint
  c) Scanner
  d) Scratch

PART - B

Note: i)   Answer any 7 questions.

  ii)   Question no: 22 is compulsory.   7 x 2 = 14

13. Why are traffic signals used in red colour?

14. Define the unit of electrical energy consumption.

15. Match the following :

  a)   fuel   -   lead
  b)   coolant   -   heavy water
  c)   shield   -   uranium
  d)   moderator   -   helium

16. Calculate the pH value of 1×10^{-5} M KOH solution.

17. Write a reaction which is used for the identification of alcohol.

18. Name the three types of neurons and find its location.

19. What is "stage" in scratch editor?

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20. What is meant by transgenic organisms?

21. What are the contributing factors for obesity?

22. A strong ultrasonic sound signal is sent from a ship towards the bottom of the sea. It is received by the receiver after 2s. Calculate the depth of sea? The speed of sound in water 1450 ms⁻¹.

PART - C

Note: i)   Answer any 7 questions.

ii)   Question no: 32 is compulsory.   7 x 4 = 28

23. i) Use the analogy to fill the blanks:

     a) Opening a door : Moment of force; opening a water tap: _____.

     b) Pushing a bus by a group of people : Like parallel forces; Tug of war : _____.

ii) The power of a lens is -2D. Find the focal length of a lens.

24. i) Convert 80° F temperature into kelvin scale.

ii) Write any two advantages of LED TV over the normal TV.

25. i) What do you understand by the term 'Ultrasonic Waves'?

ii) What are the medical applications of echo?

26. What are the methods of preventing corrosion?

27. Define Ethno botany and write its importance.

28. Explain the structure of chromosome.

29. Name the gaseous plant hormone. Mention any three of its physiological effects in plants.

30. i) Draw and label the parts of process of transpiration.

ii) Draw the picture of granulocytes.

31. Discuss the importance of bio-technology in the field of medicine.

32. A is a blue crystalline salt. On heating it loses blue colour and gives B. When water is added 'B' gives back 'A'. Identify 'A' and ' B' write the equation.

PART - D

Note: 1. Answer all the questions.
  2. Each question carries seven marks.
  3. Draw the diagram wherever necessary. $3 \times 7 = 21$

33. a) i) Who discovered natural radioactivity?

  ii) Write any three features of natural and artificial ratioactivity.

  lii) Give any three uses of radio isotopes in the field agricultural?

  (OR)

  b) i) Define inertia.

  ii) Explain the types of inertia with examples.

34. a) i) Calculate the mass of 1.51×10^{23} molecule of H_2O.

  ii) Calculate the moles of 46 g sodium.

  iii) Calculate the number of molecules present in the 36 g water.

  (OR)

  b) i) Define relative Atomic mass.

  ii) Define Atomicity.

  iii) Give any two examples for hetrodiatomic molecules.

35. a) i) List the functions of blood.

  ii) Give the importance of transpiration?

  (OR)

  b) i) What is the biological significance of DNA?

  ii) What precautions can be taken for prevent heart diseases?

  iii) Mention any two approaches for protection of an abused child.

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