

STJ

X - Std

Time : 3.00 Hrs

SECOND REVISION TEST - 2023

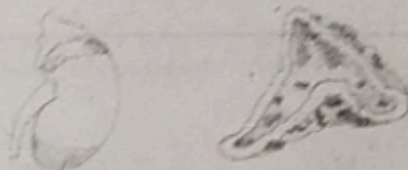
SCIENCE

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Marks : 75

- I Answer the following questions by choosing the least answer.** 12 X 1 = 12
1. If $M = \frac{gR^2}{G}$ then $g = ?$
 - a) $\frac{GM}{R^2}$
 - b) $\frac{MR^2}{G}$
 - c) $\frac{GMm}{R^2}$
 - d) $\frac{1}{R^2M}$
 2. The value of Boltzmann constant is JK⁻¹
 - a) 0.38×10^{-23}
 - b) 1.38×10^{-23}
 - c) 3.18×10^{-23}
 - d) 6.023×10^{23}
 3. The energy released in a nuclear fission process is MeV
 - a) 100
 - b) 300
 - c) 200
 - d) 230
 4. The gram molecular mass of Oxygen molecule is
 - a) 16 g
 - b) 18 g
 - c) 17 g
 - d) 32 g
 5. An element which is an essential constituent of all organic compounds belongs to group
 - a) 14
 - b) 15
 - c) 17
 - d) 18
 6. Which of the following are used as Anaesthetics?
 - a) Carboxylic acids
 - b) Ethers
 - c) Esters
 - d) Aldehydes
 7. The PH of a solution is 3, its (OH⁻) concentration is
 - a) 1×10^{-3}
 - b) 3 M
 - c) 1×10^{-11} M
 - d) 11 M
 8. The endarch condition is the characteristic feature of
 - a) Root
 - b) Stem
 - c) Leaves
 - d) Flower
 9. The train of leech lies above the
 - a) Mouth
 - b) Buccal cavity
 - c) Pharynx
 - d) Crop
 10. Which one of the following is an IUCD?
 - a) Copper - T
 - b) Oral Pills
 - c) Diaphragm
 - d) Tubectomy
 11. World 'No Tobacco Day' is observed on?
 - a) June 6
 - b) May 31
 - c) April 22
 - d) October 20
 12. All files are stored in the
 - a) Box
 - b) Pai
 - c) Folder
 - d) Scanner
- II Answer any seven of the following questions in brief. Question 22 is compulsory.** 7 X 2 = 14
13. State Newton's 2nd law of motion.
 14. What is refraction of light?
 15. Write the law of volume?
 16. Write and explain mass energy relation.
 17. What is the audible range of frequency?
 18. What are called isotopes?

19. Give an example for aqueous and non aqueous solution.
20. The walls of the right ventricle are thicker than the right auricles - give scientific reason.
21. What are allosomes?
22. Draw any one of the following diagram and label its parts.



III Answer any seven of the following. Question 32 is compulsory.

7 X 4 = 28

23. Differentiate mass and weight.
24. Write any 4 properties of light?
25. What are the conditions for no Doppla effect?
26. Write any three features of natural and artificial radio activity?
27. Write the IUPAC name, molecular formula and structural formula of ethyl alcohol.
28. How is diastema formed in rabbit.
29. Differentiate Artery and vein.
30. Why are the human testes located outside the abdominal cavity and name the pouch in which they are present.
31. Draw and label the structure of Neuron.
32. Two resistors when connected in parallel give the resultant resistance of Z ohms, but when connected in series the effiective resistance become 9 Ohms. Calculate the resistance of each resistor.

IV Answer the following questions.

3 X 7 = 21

33. i) What is meant by electric current?
ii) Name and define the unit of electric current.
iii) Which instrument is used to measure the electric current? How should it the connected in a circuit?

(OR)

What is a nuclear reactor? With a neat and labelled diagram explain the components.

34. i) State any 2 points of differences between atoms and molecules.
ii) Calculate the % of each in $Al_2(SO_4)_3$, (given - Al-27, O-16, S-32)

(OR)

Tabulate all the comparison between soap and detergents.

35. 1. Name the scientist who discovered Human insulin.
2. What is its use?
3. Draw a neat and labelled diagram of Human Pancreas.

(OR)

- i) What does it mean Auxin.
ii) What are the types of Auxins.
iii) Write down the physiological effects of auxins.

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