

**Standard 10****SCIENCE**

Time: 1.30 Hrs.

Marks: 50

I. Choose the correct answer:**8×1=8**

- 1) To project the rockets which of the following principle is required?
 - a) Newton's third law of motion
 - b) Newton's law of gravitation
 - c) law of conservation of linear momentum
 - d) both a and c
- 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) 2f
 - c) infinity
 - d) between f and 2f
- 3) Which of the following is a triatomic molecule?
 - a) Glucose
 - b) Helium
 - c) Carbon di oxide
 - d) Hydrogen
- 4) _____ is an important metal to form amalgam.
 - a) Ag
 - b) Hg
 - c) Mg
 - d) Al
- 5) Casparian strips are present in the _____ of the root.
 - a) Cortex
 - b) Pith
 - c) Peri cycle
 - d) Endodermis
- 6) The segments of leech are known as _____.
 - a) Metameres (somites)
 - b) Proglottids
 - c) Strobila
 - d) All the above
- 7) Which of the following process require's energy?
 - a) active transport
 - b) diffusion
 - c) osmosis
 - d) all of them
- 8) "Heart of heart" is called
 - a) SA node
 - b) Av node
 - c) Purkinje fibres
 - d) Bundle of His

II. Answer ANY SIX in briefly: [Qn. no. 17 is compulsory]**6×2=12**

- 9) Differentiate mass and weight.
- 10) Why does the sky appear in blue colour?
- 11) Define Atomicity.
- 12) What is rust? Give the equation for formation of rust.
- 13) Draw and label the structure of Oxysomes.
- 14) List out the paralitic adaptations in leech.
- 15) What is the importance of valves in the heart?
- 16) Which acts as a link between the Nervous system and Endocrine system?
- 17) Metal A belongs to period 3 and group 13. A in red hot condition reacts with steam to form B. A with strong alkali forms C. Find A, B, C with reactions.

III. Answer any four questions: [Qn.no. 23 is compulsory]**4×4=16**

- 18) List any five properties of light.
- 19) Give the salient features of modern atomic theory.
- 20) Differentiate the following:
 - a) Monocot root and Dicot root
 - b) Aerobic and Anaerobic respiration
- 21) Explain the male reproductive system of rabbit with a labelled diagram.
- 22) Enumerate the functions of blood.
- 23) An object is placed at a distance 20 cm from a convex lens of focal length 10 cm. Find the image distance and nature of the image.

IV. Give the answer in detail:**2×7=14**

- 24) a) What are types of Inertia? Give an example for each.
b) State Snell's Law. **(OR)**
 - a) Derive the relationship between Relative molecular mass and Vapour density.
- 25) a) How does the light dependent reaction differ from the light independent reaction? What are the end products and reactants in each? Where does each reaction occur with in the chloroplast?
b) Write the reaction of photosynthesis.
(OR)
 - a) Why are leucocytes classified as granulocytes and agranulocytes? Name each cell and mention its function.
 - b) What are the structure involved in the protection of brain?
