

**Standard 10****SCIENCE****Part - I**

Time: 3.00 Hours

Marks: 75

Answer all the questions**12×1=12****I. Choose the correct answer:**

- 1) To project the rockets which of the following principle(s) is/(are) 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) If a substance is heated or cooled, the change in mass of that substance is
a) positive
b) negative
c) zero
d) none of the above
- 3) isotope is used for the treatment of cancer.
a) Radio Iodine b) Radio carbon c) Radio cobalt d) Radio Nickel
- 4) group contains the number of halogen family
a) 17th b) 15th c) 18th d) 16th
- 5) Solubility is the amount of solute that dissolves in the solvent
a) 50g b) 100g c) 40g d) 200g
- 6) 'Heart of heart' is called
a) SA node b) AV node c) Purkinje fibres d) Bundle of his
- 7) Which hormone is called as 'Life saving Hormone';
a) Insulin b) Oxytocin c) Thyroxin d) Cortisol
- 8) Syngamy results in the formation of
a) Zoospores b) Conidia
c) Zygote d) Chlamydospores
- 9) The 'use and disuse theory' was proposed by
a) Charles Darwin b) Ernst Haeckel
c) Jean Baptiste Lamarck d) Gregor mendel
- 10) Pusa Komal is a disease resistant variety of
a) Sugarcane b) rice c) cow pea d) maize
- 11) World 'No Tobacco Day' is observed on
a) May 31 b) June 6 c) April 22 d) October 2
- 12) What is used to edit programs?
a) Inkscape b) Script editor c) Stage d) Sprite

Part - II**II. Answer any 7 questions. (Compulsory Q.No.22)****7×2=14**

- 13) Define one roentgen?
- 14) What is rust? Give the equation for formation of rust
- 15) Name the simplest ketone and give its structural formula
- 16) Write a short note on mesophyll
- 17) What is the important of valves in the heart?

- 18) Why are thyroid hormones referred as personality hormone?
 19) Identify the parts A, B, C, D



- 20) Why is Archaeopteryx considered to be a connecting link?
 21) Define genetic engineering
 22) The work done in moving a charge of 10C across two points in a circuit is 100J. What is the potential difference between the points.

Part - III

7×4=28

III. Answer any 7 questions. (Compulsory Q.No.32)

- 23) State and prove the law of conservation of linear momentum.
 24) a) Explain why, the ceilings of concert halls are curved.
 b) Mention two cases in which there is no Doppler effect in sound?
 25) The electronic configuration of metal A is 2, 8, 18, 1. The metal A when exposed to air and moisture forms B a green layered compound. A with con. H_2SO_4 forms C and D along with water. D is a gaseous compound. Find A, B, C, D
 26) Explain the types of double displacement reactions with examples
 27) Explain the male reproductive system of rabbit with a labelled diagram
 28) Classify neurons based on its structure
 29) a) What are the effects of hybrid vigour in animals
 b) Differentiate between outbreeding and inbreeding.
 30) What are the various routes by which transmission of human immunodeficiency virus takes place?
 31) Define Ethnobotany and write its importance
 32) a) Calculate the number of moles in 27g of Al
 b) Calculate % of S in H_2SO_4

Part - IV

3×7=21

IV. Answer in detail.

- 33) a) Explain the construction and working of a 'Compound microscope'
 b) List the merits of LED bulb
 (OR)
 a) Compare the properties of alpha, beta, gamma radiation.
 b) State Soddy and Fajan's displacement law
 34) a) In what way hygroscopic substances differ from deliquescent substances
 b) Write down the applications of Avogadro's law
 (OR)
 a) How is ethanol manufactured from sugarcane?
 b) Write about combustion of ethanol. Give chemical equation.
 35) Write the events involved in the sexual reproduction of a flowering plant
 a) Discuss the first event and write the types
 b) Mention the advantages and disadvantages of that event
 (OR)
 a) Enumerate the importance of forest
 b) How are e-wastes generated.
