Tsi10S

Tenkasi District
Second Revision Examination - 2025

Standard 10
SCIENCE
Part - I

Time: 3.00 Hours Marks: 75

Answer all the questions:

I. Choose the best answer: 12x1=12

1) Which of the following lens would you prefer to use while reading small letters found in a dictionary?
   a) A convex lens of focal length 5 cm b) A concave lens of focal length 5 cm
   c) A convex lens of focal length 10 cm d) A concave lens of focal length 10 cm
2) In a simple circuit, why does the bulb glow when you close the switch?
   a) The switch produces electricity b) closing the switch completes the circuit
   c) closing the switch breaks the circuit d) the bulb is getting charged
3) Proton-proton chain reaction is an example of _____
   a) Nuclear fission b) α-decay c) Nuclear fusion d) β-decay
4) Neon shows zero electron affinity due to _____
   a) stable arrangement of neutrons b) stable configuration of electrons
   c) reduced size d) increased density
5) Powdered $CaCO_3$ reacts more rapidly than flaky $CaCO_3$ because of _____
   a) large surface area b) high pressure
   c) high concentration d) high temperature
6) Which is formed during anaerobic respiration
   a) carbohydrate b) ethyl alcohol c) Acetyl CoA d) Pyruvate
7) Which one of the following shows correct composition of blood
   a) Plasma - Blood + Lymphocyte b) Serum - Blood + Fibrinogen
   c) Lymph - plasma + RBC + WBC d) Blood - Plasma + RBC + WBC + Platelets
8) Identify the exocrine gland
   a) pituitary gland b) adrenal gland c) salivary gland d) thyroid gland
9) Okasaki fragments are joined together by
   a) Helicase b) DNA Polymerase c) RNA primer d) DNA Ligase
10) The miracle rice which saved millions of lives and celebrated its 50th birthday is _____
   a) IR 8 b) IR 24 c) Atomica 2 d) Ponni
11) Polyphagia is a condition seen in
   a) obsity b) diabetes millitus c) Diabetes insipidus d) AIDS
12) All files are stored in the _____
   a) folder b) box c) paint d) scanner

Part - II

Answer any 7 questions (Q.No. 22 is compulsory) 7x2=14

13) State Boyle's law.
14) Define: Atomicity
15) What is aqueous and non-aqueous solution? Give an example.
16) Name the simplest ketone and give its structural formula.
17) Why are the rings of cartilages found in trachea of rabbit?
18) Define reflex arc.
19) Write the characteristics of insect pollinated flowers.
20) Why is Archeopteryx considered to be a connecting link?
21) How are e-wastes generated?
22) A sound wave has a frequency of 200 Hz and a speed of 400 ms^{-1} in a medium. Find the wavelength of the sound wave.

Part - III

Answer any 7 questions (Q.No. 32 is compulsory) **7x4=28**

23) What are the types of inertia? Give an example for each type.

24) a] Why does an empty vessel produce more sound than a filled one.

b] *Match the following:*

1) Infrasonic	-	Compressions
2) Echo	-	22 KHz
3) Ultrasonic	-	10 Hz
4) High pressure region	-	Ultra sonography

25) a] Give the function of control rods in a nuclear reactor.

b] In Japan, some of the newborn childred are having congenital diseases. Why?

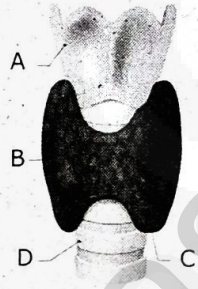
26) Differentiate soaps and detergents.

27) a] What is cohesion?

b] What is the importance of valves in the heart?

28) a] Why are thyroid hormones refered as personality hormone?

b] Identify the parts A, B, C and D in the given figure.



29) A pure tall plant (TT) is crossed with pure dwarf plant (tt) what would be the F_1 and F_2 generations? Explain.

30) Discuss the importance of biotechnology in the field of medicine.

31) What is the importance of rainwater harvesting?

32) A solution was prepared by dissolving 25 g of sugar in 100 g of water. Calculate the mass percentage of solute.

Part - IV

Answer all the questions. Draw diagrams wherever necessary. **3x7=21**

33) a) i) Explain the rules for obtaining images formed by a convex lens with the help of ray diagram.

ii) Why are traffic signals red in colour?

(OR)

b) i) State Joule's law of heating.

ii) An alloy of nickel and chromium is used as the heating element. Why?

iii) How does a fuse wire protect electrical appliances?

34) a) Derive the relationship between Relative molecular mass and vapour density.

(OR)

b) i) Differentiate reversible and irreversible reactions.

ii) A solution has a pOH of 11.76 what is the pH of this solution?

35) a) With a neat lebelled diagram describe the parts of a typical angiospermic ovule?

(OR)

b) i) Suggest measures to overcome the problems of an alcoholic.

ii) Expand the following abbreviations: (1) CHD (2) BMI

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