

V10S

Virudhunagar District



Common Second Revision Test - February 2025

## Standard 10

## SCIENCE

Time: 3.00 Hrs.

Marks: 75

## Part - I

## I. Answer all questions. Choose the correct answer:

12×1=12

- 1) Inertia of a body depends on
  - a) weight of the object
  - b) acceleration due to gravity of the planet
  - c) mass of the object
  - d) both a and b
- 2) Kilowatt hour is the unit of
  - a) resistivity
  - b) conductivity
  - c) electrical energy
  - d) electrical power
- 3) In which of the following reaction, the mass number decreases by four of the daughter nucleus?
  - a)  $\alpha$  decay
  - b)  $\beta$  decay
  - c)  $\gamma$  decay
  - d) neutron decay
- 4) 1 mole of any substance contains \_\_\_\_\_ molecules.
  - a)  $6.023 \times 10^{23}$
  - b)  $6.023 \times 10^{-23}$
  - c)  $3.0115 \times 10^{23}$
  - d)  $12.046 \times 10^{23}$
- 5) Alloy used in the manufacturing of pressure cooker is \_\_\_\_\_.
  - a) Brass
  - b) Bronze
  - c) Magnalium
  - d) Duralumin
- 6)  $C_2H_5OH + 3O_2 \rightarrow 2CO_2 + 3H_2O$  is a
  - a) Reduction of Ethanol
  - b) Combustion of Ethanol
  - c) Oxidation of ethanoic acid
  - d) Oxidation of Ethanal
- 7) Casparian strips are present in the \_\_\_\_\_ of the root.
  - a) Cortex
  - b) Pith
  - c) Pericycle
  - d) Endodermis
- 8) Who is regarded as the "Father of Modern Physiology"?
  - a) His-Atrio
  - b) William Harvey
  - c) Karl Landsteiner
  - d) Edward C. Kendal
- 9) \_\_\_\_\_ is found abundantly in liquid endosperm of coconut.
  - a) Auxin
  - b) Cytokinin
  - c) Gibberelline
  - d) Ethylene
- 10) \_\_\_\_\_ is a rice variety produced by mutation breeding that grows well in saline soil.
  - a) Sharbati Sonora
  - b) Atomita 2
  - c) Pusa Gaurav
  - d) Himgiri
- 11) Match the following:
 

1. Sarcoma	-	i) Excessive hunger
2. Carcinoma	-	ii) Excessive thirst
3. Polydipsia	-	iii) Connective tissue cancer
4. Polyphagia	-	iv) Stomach cancer

  - a) (1)-(iii), (2)-(iv), (3)-(ii), (4)-(i)
  - b) (1)-(iv), (2)-(iii), (3)-(i), (4)-(ii)
  - c) (1)-(i), (2)-(iii), (3)-(iv), (4)-(ii)
  - d) (1)-(iv), (2)-(i), (3)-(ii), (4)-(iii)
- 12) \_\_\_\_\_ refers to the soft finely stratified sedimentary rock that is formed from the compaction of small old rocks containing mud and minerals.
  - a) Shale
  - b) Petroleum
  - c) Methane
  - d) Coal

## Part - II

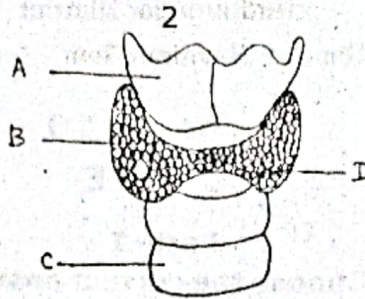
## II. Answer any 7 questions: [Compulsory Q.No. 22]

7×2=14

- 13) Why does the sky appear in blue colour?
- 14) State Boyle's law.
- 15) a) What is the audible range of frequency?  
b) What is the minimum distance needed for an echo?
- 16) Define: Atomicity
- 17) Why is the colour of the blood red?
- 18) What are the structures involved in the protection of brain?

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- 19) Identify the parts A, B, C and D in the given diagram.



- 20) Name two maize hybrids rich in amino acid lysine.  
 21) What is scratch?  
 22) A charge of 12 coulomb flows through a bulb in 5 second. What is the current through the bulb?

### Part - III

#### III. Answer any 7 questions: [Q.No. 32 is compulsory]

7×4=28

- 23) Describe rocket propulsion.  
 24) Differentiate the eye defects Myopia and Hypermetropia.  
 25) i) What is an echo?  
 ii) State two conditions necessary for hearing an echo.  
 iii) What are the medical applications of echo?  
 26) i) A is a silvery white metal. A combines with  $O_2$  to form B at  $800^\circ C$ , the alloy of A is used in making the aircraft. Find A and B.  
 ii) State two conditions necessary for rusting of iron.  
 27) Classify the following compounds based on the pattern of carbon chain and give their structural formula.  
 (i) Propane (ii) Benzene (iii) Cyclobutane (iv) Furan  
 28) i) Differentiate Aerobic and Anaerobic respiration.  
 ii) How is diastema formed in rabbit?  
 29) i) What is the importance of valves in the heart?  
 ii) Who discovered Rh factor? Why was it named so?  
 30) State the applications of DNA finger printing technique.  
 31) How does rainwater harvesting structures recharge ground water?  
 32) i) Calculate the gram molecular mass of  $CO_2$ .  
 ii) If the pH of a solution is 4.5, what is its pOH?

### Part - IV

#### IV. Answer in detail:

3×7=21

- 33) 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?  
 (OR)  
 i) Who discovered natural radioactivity?  
 ii) Write any three features of natural and artificial radioactivity.  
 iii) Give any two uses of radio isotopes in the field of agriculture.  
 34) i) Give the salient features of "Modern Atomic Theory".  
 ii) Write any two uses of copper.  
 iii) What is mean by binary solution?  
 (OR)  
 i) How does pH play an important role in everyday life?  
 ii) Differentiate reversible and irreversible reactions.  
 35) i) How is structure of DNA organised?  
 ii) What is the biological significance of DNA?  
 (OR)  
 i) Suggest measures to overcome the problems of an alcoholic.  
 ii) What is metastasis?  
 iii) Who coined the term Ethnobotany?