

Ts10S

Tenkasi District Common Examinations
Common First Revision Examination - January 2023



27-01-2023

Standard 10

Time: 3.00 Hours

SCIENCE

Marks: 75

PART - I**I. Answer all the questions.****12 × 1 = 12**

Choose the most suitable answer and write the code with the corresponding answer.

- 1) Impulse is equals to
 - a) rate of change of momentum
 - b) rate of change of force and time
 - c) change of momentum
 - d) rate of change of mass
- 2) Power of a lens is $-4D$, then its focal length is
 - a) 4 m
 - b) -40 m
 - c) -0.25 m
 - d) -2.5 m
- 3) Proton - proton chain reaction is an example of
 - a) Nuclear fission
 - b) Nuclear fusion
 - c) α -decay
 - d) β -decay
- 4) In the alumino thermic process the role of Al is
 - a) oxidizing agent
 - b) reducing agent
 - c) hydrogenating agent
 - d) Sulphurising agent
- 5) Which of the following is hygroscopic in nature?
 - a) ferric chloride
 - b) copper sulphate penta hydrate
 - c) Silica gel
 - d) None of the above
- 6) 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
- 7) Oxygen is produced at what point during photosynthesis.
 - a) When ATP is converted to ADP
 - b) When CO_2 is fixed
 - c) When H_2O is splitted
 - d) All of these
- 8) Bipolar neurons are found in
 - a) retina of eye
 - b) Cerebral cortex
 - c) embryo
 - d) respiratory epithelium
- 9) Which organ act as both exocrine as well as endocrine gland?
 - a) Pancreas
 - b) Kidney
 - c) Liver
 - d) Lungs
- 10) Anemophilous flowers have
 - a) Sessile stigma
 - b) Small smooth stigma
 - c) Coloured flower
 - d) Large feathery stigma
- 11) The miracle rice which saved millions of lives and celebrated its 50th birthday is
 - a) IR 8
 - b) IR 24
 - c) Atonita 2
 - d) Ponni
- 12) All files are stored in the
 - a) Folder
 - b) box
 - c) Pai
 - d) scanner

PART - II**II. Answer any 7 questions. Q.No. 22 is compulsory.****7 × 2 = 14**

- 13) Define moment of a couple
- 14) Why are traffic signals red in colour?
- 15) Why is tungsten metal used in bulbs, but not in fuse wires?
- 16) Define the term : Solution
- 17) Differentiate reversible and irreversible reactions?
- 18) Write the dental formula of rabbit.

Ts10S

2

19) Match the following

Column I

Column II

- | | | |
|---------------------|---|------------------------------|
| 1. Nisslis granules | - | a. Forebrain |
| 2. Hypothalamus | - | b. Peripheral nervous system |
| 3. Cerebellum | - | c. cyton |
| 4. Schwann cell | - | d. Hind brain |

20) Draw the structure of gynoecium and label its parts.

21) Define genetic engineering

22) The work done in moving a charge of 10C across two points in a circuit is 100 J. What is the potential difference between the points.

PART - III

III. Answer any 7 questions. Q.No. 32 is compulsory.

7 × 4 = 28

23) Describe rocket propulsion.

24) i. Distinguish between ideal gas and real gas

ii. Name any two devices, which are working on the heating effect of electric current.

25) i. Mention the two cases in which there is no Doppler effect in sound?

ii. How are e-wastes generated?

26) In what way hygroscopic substances differ from deliquescent substances.

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) Write a short note on mesophyll.

29) How are arteries and veins structurally different from one another?

30) i) Define triple fusion

ii) What are Okazaki fragments?

31) What are the various routes by which transmission of human immunodeficiency virus takes place?

32) Calculate the number of water molecules present in one drop of water which weighs 0.18g.

PART - IV

IV. Answer All the questions. Each question carries seven marks.

Draw diagram wherever necessary.

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3 × 7 = 21

33) a) Derive the ideal gas equation.

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b) What are the factors that affect the speed of sound in gases.

34) a) i) Give the salient features of "Modern atomic theory".

ii) What is molar volume of a gas.

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(OR)

b) i) What happens when $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ is heated write the appropriate equation.

ii) Define solubility.

iii) Name the simplest ketone and give its structural formula.

35) a) i) Who discovered R_h factor? Why was it named so?

ii) What is bolting? How can it be induced artificially.

iii) The degenerated wing of a kiwi is an acquired character. Why is it an acquired character?

(OR)

b) Explain the male reproductive system of rabbit with a labelled diagram.
