Tsi10S

Tenkasi District
Common Quarterly Examination - September 2025

Standard 10

Time: 3.00 Hrs.   **SCIENCE**   Marks: 75
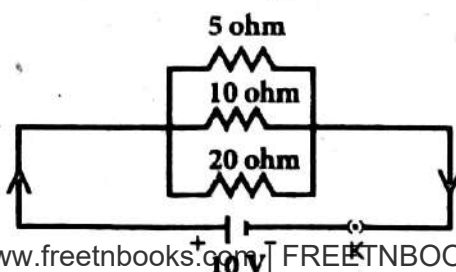
I. Choose the correct answer: 12×1=12

1) One kilogram force equals to _____
   a) 9.8 dyne   b) 9.8×10^4 N   c) 98×10^4 dyne   d) 980 dyne

2) The eye defect 'presbyopia' can be corrected by _____
   a) convex lens   b) concave lens   c) convex mirror   d) bi focal lenses

3) Unit of electrical conductivity is _____
   a) mho.   b) ohm   c) ohm^{-1} $metre^{-1}$ d) mho^{-1} $metre^{-1}$

4) Mass of 1 mole of nitrogen atom is _____
   a) 28 a mu   b) 14 amu   c) 28 g   d) 14 g

5) Molecular formula for Epsom salt is _____
   a) $CuSO_4.5H_2O$ b) $MgSO_4.7H_2O$ c) $CaSO_4.2H_2O$ d) $FeSO_4.7H_2O$

6) _____ group contains the memeber of halogen family
   a) 17th   b) 15th   c) 18th   d) 16th

7) Mammals are _____ animals
   a) cold blooded   b) warm blooded   c) poikilothermic   d) all the above

8) During transpination there is loss of _____
   a) carbon dioxide   b) oxygen   c) water   d) none of the above

9) Which nervous band connects the two cerebral hemispheres of brain
   a) thalamus   b) hypothalamus   c) pons   d) corpus callosum

10) _____ causes stomatal closure
    a) auxin   b) ethylene   c) abscisic acid   d) cytokinin

11) Syngamy results in the formation of _____
    a) zoospores   b) conidia   d) zygote   d) chlamydospores

12) Okasaki fragments are joined together by _____
    a) DNA Ligase   b) Helicase   c) DNA polymerase   d) RNA Primer

II. Answer any seven questions. Q.No. 22 compulsory: 7×2=14

13) Why are traffic signals red in colour?

14) State Charles Law.

15) State True or False if false give the correct statement:
    a] Noble gases are Diatomic   b] Molar mass of CO_2 is 42 g

16) The aquatic animals live move in cold region. Why?

17) Write the reaction for photosynthesis.

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

19) What is bolting? How can it be induced artificially?

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

21) What are Okazaki Fragments?

22) Find the effective resistance of the given circuit.

5 ohm
10 ohm
20 ohm

10 V

III. Answer any 7 questions. Q.No. 32 compulsory: 7×4=28

23) a] While catching a cricket ball the fielder lowers his hands backwards. Why?

b] State Shell's Law.

24) List the merits of LED bulb.

25) a] State Ohms Law.

b] Distinguish between Ideal gas and Real gas.

26) a] Define: Atomicity

b[Write about the uses of Aluminium.

27) Differentiate Aerobic and Anaerobic respiration.

28) a] Who discovered Rh factor? Why was it named so?

b] Define reflex arc.

29) Write the differences between endocrine and exocrine gland.

30) a] **Match the following:**

   i)   Fission   -   Spirogyra
   ii) Budding   -   Hydra
   iii) Fragmentation   -   Amoeba
   iv) Regeneration   -   Yeast

b] Define triple fusion.

31) Draw the chromosomes based on the position of centromere.

32) 3.5 litres of ethanol is present in 15 litres of aqueous solution of ethanol. Calculate volume percent of ethanol solution.

IV. Answer all the questions: 3×7=21

33) a) State Newton's Second Law.

b) Differentiate the eye defects. Myopia and hypermetropia.

(OR)

a) Why is tungsten metal used in bulbs, but not in fuse wires?

b) Derive the ideal gas equation.

34) a) Differentiate atoms and molecules.

b) Derive the relationship between relative molecular mass and vapour density.

(OR)

a) What is amalgam?

b) In what way hygroscopic substances differ from delignescent substances?

35) a) What is respiratory quotient?

b) Illustrate the structure and funcitons of brain.

(OR)

a) Why are thyroid hormones referred as personality hormone?

b) With a neat labelled diagram describe the parts of a typical angiospermic ovule.

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