V10S

Virudhunagar District
Common First Revision Test - January 2024

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Standard 10
SCIENCE

Time: 3.00 Hrs.   Maximum Marks: 75

PART - I

Choose the correct answer: 12×1=12

1) The unit of 'g' is ms^{-2}, It can be also expressed as
   a) Cms^{-1} b) NKg^{-1} c) Nm^{2}Kg   d) Cm^{2}S^{-2}

2) Kilowatt hour is the unit of
   a) resistivity   b) Conductivity
   c) Electrical energy   d) Electrical power

3) Velocity of sound in the atmosphere of a planet is 500 ms^{-1}. The minimum distance between the sources of sound and the obstacle to hear the echo, should be
   a) 17m   b) 20m   c) 25m   d) 50m

4) The gram molecular mass of oxygen molecule is
   a) 16g   b) 18g   c) 32g   d) 17g

5) Which of the following is the universal solvent?
   a) Acetone   b) Benzene   c) Water   d) Alcohol

6) The secondary suffix used in IUPAC nomenclature of an aldehyde is
   a) -Ol   b) -Olc. acid   c) - al   d) -one

7) Kreb's cycle lakes place in
   a) Chloroplast   b) Mitochondria Matrix
   c) Stomata   d) inner Mitochondrial Membrane

8) A patient with blood group O was injured in an accident and has blood loss. Which group of blood should be used by doctor for transfusion?
   a) O group   b) AB group
   c) A or B group   d) all blood group

9) LH is secreted by
   a) Adrenal gland   b) Thyroid gland   c) Anterior pituitary   d) Hypothalamus

10) 9 : 3 : 3 : 1 ratio is due to
    a) Segregation   b) Crossing over
    c) independent assortment   d) recessiveness

11) Enzyme used to cut DNA is _____.
    a) Scissors   b) Restriction endonuclease   c) Knife   d) RNA enzymes

12) All files are stored in the _____.
    a) Folder   b) box   c) Pai   d) Scanner

PART - II

Answer any 7 questions: [Q.No. 22 is compulsory]   7×2=14

13) State Newton's Second law.

14) Differentiate convex lens and concave lens.

15) Define atomicity.

16) A is a silver white metal. A combines with O_2 to form B at 800ºC, the alloy of A is used in making the air craft. Find A and B.

17) Differentiate reversible and irreversible reactions.

18) Name the three basic tissue systems inflowering plants.

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19) List out the parasitic adaptations in leech.
20) What are synthetic auxins? Give examples.
21) What is Metastasis?
22) Calculate the amount of energy released when a radioactive substance undergoes fusion and results in a mass defect of 1kg.

PART - III

Answer any 7 questions: [Q.No. 32 is compulsory]   **7×4=28**

23) Differentiate the eye defects. Myopia and Hypermetropia.
24) a) What is meant by electric current.
    b) Name and define its unit.
    c) Which instrument is used to measure the electric current? How should it be connected in a circuit?
25) What is nuclear reactor? Explain its essential parts with their functions.
26) How does pH play an important role in everyday life?
27) a) What happens when $MgSO_4.7H_2O$ is heated? Write the appropriate equation?
    b) Define solubility?
28) How is the circulatory system designed in leech to compensate the heart structure?
29) Enumerate the functions of blood.
30) With a neat labelled diagram describe the parts of a typical angiospermic ovule.
31) The sex of a new born child is a matter of chance and neither of the parents may be considered responsible for it. What would be the possible Fussion of gametes to determine the sex of the child.
32) Calculate the number of water molecules present in one drop of water weighs 0.18g.

PART - IV

Answer ALL the questions. Each question carries seven marks: **3×7=21**
[Draw diagram wherever necessary]

33) a) State the universal law of gravitation.
              (OR)
    i) a) What is an echo?
       b) State two conditions necessary for hearing an echo.
       c) What are the medical applications of echo?
       d) How can you calculate the speed of sound using echo?
    ii) Write any three features of natural and artificial radioactivity.
34) a) What is molar volume of a gas?
    b) Derive the relationship between Relative molecular mass and vapour Density.
              (OR)
    a) Differentiate Soaps and Detergents.
    b) What is called homologous series? Give any three of its characteristics?
35) Describe and name three stages of cellular respiration that aerobic organisms use to obtain energy from glucose.
              (OR)
    a) How does rainwater harvesting sructures recharge ground water?
    b) How will you prevent soil erosion?