ARIYALUR DISTRICT

Reg:No: | 1 | 0 | 3 | 0 | 1 |

THIRD REVISION EXAMINATION - 2025
SCIENCE

Marks : 75

CLASS : 10

Time : 3.00 Hrs.

Instructions: (1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.

(2) Use Black or Blue ink to write and underline and pencil to draw diagrams

Note : This question paper contains four parts

PART – I

Note : (i) Answer all the questions

(ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer

12x1=12

1. To project rockets which principle(s) is / are required?
   a. Newton's third law of motion
   b. Newton's law of gravitation
   c. Law of conservation of linear momentum
   d. Both a & c

2. 20 bulbs are connected in series. If one bulb is fused and the remaining 19 bulbs are joined in series and connected to the same power supply, the light in the room will be
   a. increased
   b. decreased
   c. remain the same
   d. decreased much

3. _____ isotope is used in the treatment of cancer
   a. Radio Iodine
   b. Radio Carbon
   c. Radio Cobalt
   d. Radio Nickel

4. _____ group contains the member of halogen family
   a. 17th
   b. 15th
   c. 18th
   d. 16th

5. Deliquescence is due to _____
   a. Strong affinity to water
   b. Less affinity to water
   c. Strong hatred to water
   d. Inertness to water

6. Boiling point of Ethanol is _____
   a. 381 K
   b. 361 K
   c. 351 K
   d. 341 K.

7. Which is formed during anaerobic respiration?
   a. Carbohydrate
   b. Ethyl alcohol
   c. Acetyl co. A
   d. Pyruvate

8. Which is called 'Heart of heart'?
   a. SA node
   b. AV node
   c. Purkinje fibre
   d. Bundle of His

9. 'Richmond lang effect' is due to _____
   a. Gibberellins
   b. Cytokinins
   c. Abscisic acid
   d. Ethylene

10. Polyphagia is a condition seen in _____
    a. Obesity
    b. Diabetes mellitus
    c. Diabetes insipidus
    d. AIDS

11. Which of the following is / are fossil fuel?
    i) Tar
    ii) Coal
    iii) petroleum
    a. i only
    b. i and ii
    c. i and iii
    d. i, ii and iii

12. An object is placed 25 cm from a convex lens whose focal length is 10 cm. The image distance is _____
    a. 50 cm
    b. 16.66 cm
    c. 6.66 cm
    d. 10 cm

PART – II

Note : (i) Answer all the questions. Question number 22 is compulsory.

7x2=14

13. Define inertia. Give its classifications

14. Mention two cases in which there is no Doppler effect in sound

15. Write any two features of natural and artificial radioactivity

16. What is rust? Give the equation for the formation of rust.

17. **State whether the statement is true or false. If false correct the statement**
    a. Solutions which contain three components are called binary solution.
    b. The molecular formula of green vitriol is $MgSO_4.7H_2O$

18. What is amalgam? Give an example

19. Draw and label the structure of oxysomes.

20. **Fill in the blanks**
    a. Normal blood pressure is _____
    b. The part of human brain which acts as _____

21. What are the various routes by which transmission of human immuno deficiency virus takes place?

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22. Two bodies have a mass ratio of 3:4 The force applied on the bigger mass produces anacceleration of 12 ms⁻².What could be the acceleration of the other body, if the same force acts on it.

PART – III

Note : (i) Answer all the questions. Question number32 is compulsory.   7x4 =28

23. a) State Boyle's law
    b) The acceleration due to gravity on the surface of the earth will be maximum at ___1·10ᵏ___ and minimum at ___32 kk___

24. a) What is meant by ultrasonic vibrations?
    b) State any three uses of ultrasonic vibrations

25. a) What are the uses of nuclear reactor?
    b) What is nuclear fusion reaction?

26. a) Give an example each
       i) gas in liquid   ii) solid in liquid   iii) solid in solid   iv) gas in gas
    b) Define combination reaction

27. a) What is an alloy?
    b) What are the reasons for alloying?

28. List out the parasitic adaptations of leech

29. a) What is the importance of valves in heart?
    b) Match the following

Column A	Column B
1. Nissil's granules	a. Forebrain
2. Hypothalamus	b. Peripheral nervous system
3. Cerebellum	c. Cyton
4. Schwann cell	d. Hindbrain

30. i) Identify the parts A, B, C and D

    ii) Name two organisms which reproduces through budding.

31. a) How can you determine the age of the fossils?
    b) State the applications of DNA fingerprinting technique

32. An organic compound 'A' is widely used as a preservative and has the molecular formula $C_2H_4O_2$. This compound reacts with ethanol to form a sweet smelling compound 'B'
    a. Identify the compound 'A'
    b. Write the chemical equation for its reaction with ethanol to form a sweet smelling compound 'B'
    c. Name the process

PART – IV

Note : (i) Answer all the questions. Draw diagrams wherever necessary   3x7=21

33. i) a. State Snell's law.
       b. Explain the construction and working of a 'Compound microscope'   (or)
    ii) a. With the help of a circuit diagram derive the formula for the resultant resistance of three resistances connected   a) in series and   b) in parallel.
       b. State Ohm's law.

34. i) a. Define atomicity
       b. Derive the relationship between Relative molecular mass and Vapour density.   (or)
    ii) a. How is ethanol manufactured from sugarcane?
       b. Mention the IUPAC name of this compound
            $CH_3 - CH - CH_2 - OH$
                     $|$
                    CH_3

35. i) a. Name the parts of the hind brain
       b. With a neat labelled diagram explain the structure of a neuron.   (or)
    ii) a. What are the advantages of using biogas?
       b. Name two maize hybrids rich in amino acid lysine

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