

SRTJ

## THIRD-REVISION TEST - 2024

10 - STD

SCIENCE

Marks : 75

TIME: 3.00 Hrs

V.T. VIKAS

12 x 1 = 12

## I Choose the Correct answer.

- Power of lens is -4D, then its focal length is  
a) 4m                      b) -40m                      c) -0.25 m                      d) -2.5m
- A horsepower is equal to ..... watt.  
a) 586                      b) 756                      c) 746                      d) 674
- ..... aprons are used to protect us from gamma radiations.  
a) Lead oxide                      b) Iron                      c) Lead                      d) Aluminium
- Which of the following have inert gases 2 electrons in the outermost shell  
a) He                      b) Ne                      c) Ar                      d) Kr
- TFM in soaps represents ..... content in soap.  
a) mineral                      b) vitamin                      c) fatty acid                      d) carbohydroate
- A reaction between Carbon and Oxygen is represented by  
 $C(s) + O_2(g) \rightarrow CO_2(g) + \text{Heat}$ . In which of the type(s), the above reaction can be classified?  
(i) Combination Reaction                      (ii) Combustion Reaction  
(iii) Decomposition Reaction                      (iv) Irreversible Reaction  
a. i and ii                      b. i and iv                      c. i, ii and iii                      d. i, ii and iv
- Pharyngeal ganglion in leech is a part of  
a) Excretory system                      b) Nervous system  
c) Reproductive system                      d) Respiratory system
- Male gametes in angiosperms are formed by the division of \_\_\_\_\_  
a) Generative cell                      b) Vegetative cell  
c) Microspore mother cell                      d) Microspore
- The number of chromosomes found in human beings are \_\_\_\_\_  
a) 22 pairs of autosomes and 1 pair of allosomes.  
b) 22 autosomes and 1 allosome  
c) 46 autosomes                      d) 46 pairs autosomes and 1 pair of allosomes.
- The 'use and disuse theory' was proposed by \_\_\_\_\_.  
a. Charles Darwin                      b. Ernst Haeckel  
c. Jean Baptiste Lamarck                      d. Gregor Mendel
- Which type of cancer affects lymph nodes and spleen?  
a) Carcinoma                      b) Sarcoma  
c) Leukemia                      d) Lymphoma
- Green house effect refers to  
a) Cooling of earth                      b) Trapping of UV rays  
c) Cultivation of plants                      d) Warming of earth

SRTJ 10 அறிவியல் Page - 1

7 x 2 = 14

**II Answer any 7 of the following. Q.No. 22 is compulsory**

13. What is co-efficient of real expansion?
14. State Boyle's law.
15. Write two applications of Avogadro's hypothesis.
16. What is amalgam? Give examples.
17. Write the overall reaction of photosynthesis.
18. Differentiate between systole and diastole.
19. Draw and label the structure of Thyroid gland.
20. **Match the following.**

|                   |   |                           |
|-------------------|---|---------------------------|
| Nissil's granules | - | Forebrain                 |
| Hypothalamus      | - | Peripheral Nervous system |
| Cerebellum        | - | Cyton                     |
| Schwann cell      | - | Hindbrain                 |

21. What is stage?
22. Two bodies have a mass ratio of 3:4 The force applied on the bigger mass produces an acceleration of  $12 \text{ ms}^{-2}$ . What could be the acceleration of the other body, if the same force acts on it.

**III Answer any 7 of the following. Q.No. 32 is compulsory.**

7 x 4 = 28

23. State Newton's laws of motion?
24. Explain the construction and working of a compound microscope.
25. Describe rocket propulsion.
26. Derive the relationship between Relative molecular mass and vapour density.
27. Write notes on various factors affecting solubility.
28. Write a short note on mesophyll.
29. Why did Mendel select pea plant for his experiments?
30. How do you differentiate homologous organs from analogous organs?
31. Changes in lifestyle is a risk factor for occurrence of cardiovascular disease? Can it be modified? If yes, suggest measures for prevention.
32. Calculate the % of each element in Calcium Carbonate.  
(Atomic mass: C = 12, O = 16, Cu = 40)

**II Answer any 7 of the following.**

3 x 7 = 21

33. (a) (i) Deduce the equation of a force using Newton's second law of motion.  
(ii) Classify the types of force based on their application. (OR)  
(b) (i) What are the factors that affect the speed of sound in gases?  
(ii) Explain why, the ceilings of concert halls are curved.
34. a) How does pH play an important role in everyday life? (OR)  
b) How is ethanol manufactured from sugarcane?
35. a) i) With a neat labelled diagram, Describe the parts of a typical angiospermic ovule. ii) What will you do to prevent leaf fall and fruit drop in plants? (OR)  
i) What precautions can be taken for preventing heart disease?  
ii) State the applications of DNA fingerprinting technique.