

## SECOND REVISION EXAMINATION - 2023

STD - X

### SCIENCE

MARKS : 75

TIME : 3.00 Hrs

#### SECTION - A

12 x 1 = 12

I. Choose the correct answer :

1. Magnification of a convex lens is  
a) Positive                      b) Negative                      c) either positive or negative      d) zero
2. .... is used in thermometer.  
a) lead                      b) silver                      c) mercury                      d) Iron
3. SI unit of resistance is  
a) mho                      b) joule                      c) ohm                      d) ohm meter
4. Kamini reactor is located at  
a) Kalpakkam                      b) Koodankulam                      c) Mumbai                      d) Rajasthan
5. Chemical formula of rust is  
a)  $\text{FeO} \cdot x \text{H}_2\text{O}$                       b)  $\text{FeO}_4 \cdot x \text{H}_2\text{O}$                       c)  $\text{Fe}_2\text{O}_3 \cdot x \text{H}_2\text{O}$                       d)  $\text{FeO}$
6. Which of the following is the universal solvent?  
a) Acetone                      b) benzene                      c) Water                      d) Alcohol
7. Hydrocarbons in which carbon atoms are linked through single bonds only are called as  
a) alkynes                      b) alkanes                      c) aldehydes                      d) alkenes
8. Powdered  $\text{CaCO}_3$  reacts more rapidly than flaky  $\text{CaCO}_3$  because of .....  
a) large surface area      b) high pressure                      c) high concentration      d) high temperature
9. Mammals are ..... animals.  
a) Cold blooded                      b) water blooded                      c) poikilothermic                      d) All the above
10. Okasaki fragments are joined together by  
a) Helicase                      b) DNA polymerase                      c) RNA primer                      d) DNA ligase
11. Cancer is derived from latin word  
a) Scorpion                      b) Crab                      c) Mosquito                      d) Protozoa
12. Which is used to edit programs?  
a) Inkscape                      b) Script editor                      c) Stage                      d) Spuite

#### SECTION - B

II. Answer any seven Questions. Q.No. 22 is compulsory

7 x 2 = 14

13. Why are traffic signals red in colour?
14. Why is tungsten metal used in bulbs, but not in fuse wires?
15. State whether the following statements are true or false, if false explain why?
  - a) According to Charle's law, at constant pressure, the temperature is inversely proportional to volume.
  - b) Waves created by earth quake are Infrasonic.
16. What is stellar energy?
17. The aquatic animals live more in cold region. Why?
18. Match the following :
 

a) Ethanol	-	Disinfectant
b) Formaldehyde	-	Stain remover
c) Propanone	-	Anaesthetic
d) Diethyl ether	-	Antiseptic

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19. Differentiate Inbreeding and outbreeding.
20. Draw a neat labelled diagram of neuron.
21. Why did Mendel select pea plant for his experiments?
22. A force of 5N applied on a body produces an acceleration of 5 cm/s<sup>2</sup>. Calculate the mass of the body.

### SECTION - C

Answer any seven Questions. Q.No. 32 is compulsory

7 x 4 = 28

23. State Newton's laws of motion.
24. a) Define magnification of light.  
b) Distinguish between ideal gas and real gas.
25. Compare the properties of alpha, beta and gamma radiation.
26. a) State Modern periodic law.  
b) What happens when MgSO<sub>4</sub>.7 H<sub>2</sub>O is heated? Write the appropriate equation.
27. a) Write any two applications of "Avogadro's law"?  
b) Write any 2 uses of ethanol.
28. Give the balanced chemical equation of the following reactions.
  - i) Neutralization of NaOH with ethanoic acid.
  - ii) Evaluation of CO<sub>2</sub> by the action of ethanoic acid with NaHCO<sub>3</sub>
  - iii) Oxidation of ethanol by acidified potassium dichromate.
  - iv) Combustion of ethanol.
29. List out the parasitic adaptations in leech.
30. a) Write the difference between endocrine and exocrine glands.  
b) What is colostrum? How is milk production hormonally regulated?
31. How will you prevent soil erosion?
32. Calculate the number of moles in i) 27g of Al    ii) 1.51 x 10<sup>23</sup> molecules of NH<sub>4</sub>Cl.

### SECTION - D

3 x 7 = 21

Answer all the Questions in detail.

33. a) (i) List any five properties of light (5)  
(ii) State Boyle's law. (2) (OR)  
b) (i) Mention two cases in which there is no Doppler effect in sound? (2)  
(ii) Why does sound travel faster on a rainy day than on a dry day? (2)  
(iii) X-rays should not be taken often. Give the reason. (3)
34. a) (i) Which is the chief ore of Aluminium? (1)  
(ii) What is rust? Give the equation for formation of rust? (2)  
(iii) State two conditions necessary for rusting of iron. (2) (OR)  
b) How does pH play an important role in everyday life? (OR)
35. a) Illustrate the structure and functions of brain. (7)  
b) (i) What do you understand by the term phenotype and genotype? (2)  
(ii) What are the effects of hybrid vigour in animals. (5)

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