

FIRST REVISION EXAM - 2023

STD - X

TIME : 3.00 Hrs

SCIENCE

MARKS : 75

SECTION - A

I. Choose the correct answer :

12 x 1 = 12

1. Unit of radioactivity is
 - a) Roentgen
 - b) curie
 - c) Becquerel
 - d) All the above
2. Which of the following denotes the high temperature?
 - a) 1 celsius
 - b) 1 kelvin
 - c) 1 Fahrenheit
 - d) All are equal
3. Inertia of a body depends on
 - a) weight of the object
 - b) acceleration due to gravity of the planet
 - c) mass of the object
 - d) Both a & b
4. Which of the following is a triatomic molecule?
 - a) Glucose
 - b) Helium
 - c) Carbon dioxide
 - d) Hydrogen
5. Molecular formula of Blue nitriol is
 - a) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
 - b) Gypsum
 - c) CaO
 - d) $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
6. TFM in soaps represents content in soap.
 - a) mineral
 - b) vitamin
 - c) fatty acid
 - d) carbohydrate
7. Which is formed during anaerobic respiration
 - a) Carbohydrate
 - b) Ethyl alcohol
 - c) Acetyl CoA
 - d) Pyruvate
8. Which of the following shows correct composition of blood?
 - a) plasma - blood + lymphocyte
 - b) serum - blood + Fibrinogen
 - c) Lymph - plasma + RBC + WBC
 - d) Blood - plasma + RBC + WBC + platelets
9. To increase the sugar production in sugarcanes, they are sprayed with
 - a) Auxin
 - b) cytokinin
 - c) Gibberellins
 - d) Ethylene
10. The units form the backbone of the DNA
 - a) 5 carbon sugar
 - b) phosphate
 - c) Nitrogenous base
 - d) sugar phosphate
11. Pusa Komal is a disease resistant variety of
 - a) Sugarcane
 - b) Rice
 - c) Cowpea
 - d) Maize
12. A cheap, conventional, commercial and inexhaustible source of energy is
 - a) Hydropower
 - b) Solar energy
 - c) Wind energy
 - d) Thermal energy

SECTION - B

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

7 x 2 = 14

13. 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) S.I. unit of temperature is kelvin.
14. State soddy and Fajan's displacement law.
15. Match the following :

a) Galvanisation	-	Noble gas elements d
b) Redox reaction	-	coating with Zn c
c) Dental filling	-	Silver-tin amalgam a
d) Group 18 elements	-	Alumino thermic process b

16. Differentiate reversible and irreversible reactions.
17. How is diastema formed in Rabbit?
18. Draw and label the structure of oxysome.
19. The complete events of cardiac cycle last for 0.8 sec. What is the timing for each event?
20. How can you determine the age of the fossils?
21. What is stage?
22. Calculate the current through a 100w, 200v electric bulb in an electric circuit of your house.

SECTION - C

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

7 x 4 = 28

23. Describe rocket propulsion.
24. a) State Joula's law of heating. b) How does a fuse wire protect electrical appliances?
25. a) A is a silvery white metal. A combines with O^2 to form B at $800^{\circ}C$, the alloy of A is used in making the aircraft. Find A and B.
b) What is rust? Give the equation for formation of rust.
26. What is a chemical equilibrium? What are its characteristics?
27. Write the importance of transpiration.
28. a) What is respiratory quotient? b) Write the overall equation of photosynthesis.
29. How nerve impulses are transferred from one neuron to next neuron?
30. Why is euploidy considered to be advantages to both plants and animals?
31. With a neat labelled diagram, explain the techniques involved in gene cloning.
32. A solution is prepared by dissolving 45g of sugar in 180g of water. Calculate the mass percentage of solute.

SECTION - D

Answer all the Questions in detail.

3 x 7 = 21

33. a) (i) What is an echo? (1)
(ii) State two condtions necessary for hearing an echo. (2)
(iii) What are the medical applications of echo? (2)
(iv) How can you calculate the speed of sound using echo? (2) (OR)
- b) (i) What is power of accommodation of eye? (2)
(ii) Differentiate the eye defects : Myopia and Hypermetropia. (3)
(iii) What is the value of the near point and far point of the human eye? (2)
34. a) (i) Define : Atomicity (2)
(ii) Give the salient features of "Modern atomic theory". (5) (OR)
- b) (i) Differentiate soaps and detergents. (3)
(ii) Explain the mechanism of cleaning action of soap. (4)
35. a) (i) What are the phases of menstrual cycle?. Indicate the changes in the ovary and uterus. (5)
(ii) What is the role of parathormone? (2) (OR)
- b) (i) Changes in lifestyle is a risk factor for occurence of cardiavascular diseases. Can it be modified? If yes suggest measures for prevention. (5) (OR)
(ii) Solar energy is a renewable energy. How? (2)