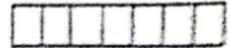


# QUARTERLY EXAMINATION - 2023

**CLASS :10**

**SCIENCE**



**TIME : 3.00 hrs**

**MARKS : 75**

### PART - I

**I Note : i) Answer all the questions. ii) Choose the most appropriate answer from the alternatives.** 12 X 1 = 12

1. One horse power is equal to  
 a) 646 watts                      b) 746 watts                      c) 846 watts                      d) 946 watts
2. Which of the following is triatomic molecule?  
 a) Glucose                      b) Helium                      c) Carbon di oxide                      d) Hydrogen
3. Chemical formula of rust is .....  
 a)  $FeO \cdot X H_2O$                       b)  $FeO_4 \cdot X H_2O$                       c)  $Fe_2O_3 \cdot X H_2O$                       d)  $FeO$
4. Impulse is equal to  
 a) rate of change of momentum                      b) rate of force and time  
 c) rate of change of mass                      d) change of momentum
5. Where should an object be placed so that a real and inverted image of same size is obtained by a convex lens  
 a)  $f$                       b)  $2f$                       c) infinity                      d) between  $f$  and  $2f$
6. Identify the non - aqueous solution  
 a) Sodium chloride in water                      b) Glucose in water  
 c) Copper sulphate in  $H_2O$                       d) Sulphur in carbon - di - sulphide
7. Which is formed during anaerobic respiration  
 a) Carbohydrate                      b) Ethyl alcohol                      c) Acetyl COA                      d) Pyruvate
8. .... is a gaseous hormone involved in abscission of organs and acceleration of fruit ripening  
 a) Auxin                      b) Ethylene                      c) Abscisic acid                      d) Gibberellin
9. Male gametes in angiosperms are formed by the division of .....  
 a) generative cell                      b) vegetative cell  
 c) microspore mother cell                      d) microspore
10. Okazaki fragments are joined together by .....  
 a) Helicase                      b) DNA polymerase                      c) RNA primer                      d) DNA ligase
11. Four chambered heart is present in  
 a) Fishes                      b) Frog                      c) Snake                      d) Crocodile
12. The longest cell in our body  
 a) Nephron                      b) Neuron                      c) Egg                      d) Cyton

### PART - II

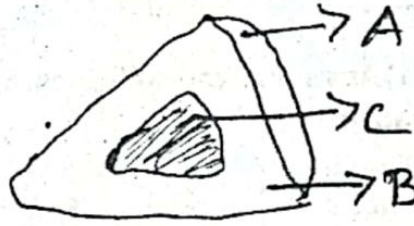
**II Note : Answer any 7 of following. (Q.NO.22 is compulsory)** 7 X 2 = 14

13. Why does the sky appear in blue colour?
14. Distinguish between ideal gases and real gases.
15. Classify the types of force based on their application.
16. Match the following.
 

1. Electric current	-	a) Joule
2. Electric power	-	b) Ohm meter
3. Electric energy	-	c) Watt
4. Specific resistance	-	d) Ampere
17. State Ohm's law.

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18. Differentiate atoms and molecules.  
 19. What is Respiratory quotient?  
 20. State Henry's law.  
 21. Which instrument is used to measure the electric current? How should it be connected in a circuit?



22. Draw the diagram and label the parts.

### PART - III

**III. Note : Answer any 7 of the following questions. (Q.No.32 is compulsory) 7 X 4 = 28**

23. List any five properties of light.  
 24. **State True or False. If false correct the statement.**  
 a) 1. Thermal energy always flows from a system at lower temperature to a system, at higher temperature.  
 2. The SI unit of potential difference is Watt.  
 b) State Boyle's law.  
 25. Describe Rocket Propulsion.  
 26. a) Define Atomicity.  
 b) What is Avogadro number? State any three applications of Avogadro's law.  
 27. a) What is photosynthesis and where in a cell it occurs?  
 b) ..... is the ATP factory of the cell.  
 28. Differentiate aerobic respiration and anaerobic respiration?  
 29. a) Why are thyroid hormones referred to as personality hormones?  
 b) Define triple fusion.  
 30. How does locomotion take place in leech?  
 31. Enumerate the functions of blood.  
 32. A solution is prepared by dissolving 45 g of sugar in 180 g of water. Calculate the mass percentage of solute.

### PART - IV

**IV. Answer all the questions.**

3 X 7 = 21

33. a) i) Define Relative atomic mass.  
 ii) Give the salient features of "Modern Atomic Theory".  
 (OR)  
 b) i) In what way hygroscopic substances differ from deliquescent substances.  
 ii) What is rust? Give the equation for formation of rust?  
 34. a) i) Write the events involved in the sexual reproduction of a flowering plant.  
 ii) Discuss the first event and write the types.  
 iii) What is bolting. (OR)  
 b) i) Explain the structure of a neuron with a neat labelled diagram.  
 ii) What are Okazaki fragments?  
 35. a) i) State and prove the law of conservation of linear momentum.  
 ii) State Snell's law. (OR)  
 b) i) State Avogadro's law.  
 ii) Derive the ideal gas equation.