

11 - STD

SECOND MID TERM EXAM - 2023

REG. NO.

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TIME : 1.30

CHEMISTRY

MARKS : 35

PART - I

YouTube/ Akwa Academy

10 x 1 = 10

- I. Choose the correct answers
 1. In which process, fused sodium hydroxide is electrolyzed for extraction of sodium?
 - (a) Castner's process
 - (b) Cyanide Process
 - (c) Down Process
 - (d) All the above
 2. The name "Blue John" is given to which of the following compound?
 - (a) CaH_2
 - (b) CaF_2
 - (c) $\text{Ca}_3(\text{PO}_4)_2$
 - (d) CaO
 3. The metal ion present in the chlorophyll is
 - (a) Be^{2+}
 - (b) Ca^{2+}
 - (c) Mg^{2+}
 - (d) Ba^{2+}
 4. Which one of the following is optically active
 - (a) 2-methyl pentane
 - (b) citric acid
 - (c) Glycerol
 - (d) None of these
 5. Which of the following compound will not undergo Friedel-Crafts reaction easily
 - (a) Nitrobenzene
 - (b) Toluene
 - (c) Cumin
 - (d) Xylene
 6. Methane react with water at 1273K gives
 - (a) $\text{CO} + \text{H}_2$
 - (b) $\text{CO}_2 + \text{H}_2\text{O}$
 - (c) $\text{CO} + \text{H}_2\text{O}$
 - (d) $\text{C} + \text{H}_2\text{O}$
 7. Which of the following molecule contain no π bond
 - (a) SO_2
 - (b) NO_2
 - (c) CO_2
 - (d) H_2O
 8. Shape and hybridisation of IF_5
 - (a) Trigonalbipyramidal, Sp^3d^2
 - (b) Trigonalbipyramidal, Sp^3d
 - (c) Square pyramidal, Sp^3d^2
 - (d) Octahedral, Sp^3d^2
 9. Osmotic pressure (π) of a solution is given by the relation
 - (a) $\pi = nRT$
 - (b) $\pi V = nRT$
 - (c) $\pi RT = n$
 - (d) None of these
 10. The van't Hoff factor (i) for a dilute aqueous solution of the strong electrolyte barium hydroxide is
 - (a) 0
 - (b) 1
 - (c) 2
 - (d) 3

PART - B

Answer any three questions. Question 15 is compulsory.

3 X 2 = 6

11. Why alkaline earth metals are harder than Alkalimetals.
12. What is retrograde solubility?

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13. Define – Mole fraction.
14. Draw the Lewis structures for the following species.
i) HNO_3 ii) SO_3
15. What is aromatization?

PART – C

Answer any three questions. Question 20 is compulsory.

3 X 3 = 9

16. Explain. Diagonal relationship
17. What is bonding energy?
18. Define the term “Isotonic solution”.
19. What is van't Hoff factor?
20. Write the structure for the following organic compounds..
(i) 2-methyl – 1 – propene (ii) 3 – methyl-1- butyne

PART – D

Answer the all questions

2 X 5 = 10

21. a. (i) How is plaster of paris prepared? (3)
(ii) Explain the anomalous behavior of beryllium. (2) (or)
 - b. (i) Deduce and explain the Henry's Law (3)
(ii) What are the colligative properties? (2)
- YouTube/ Akwa Academy**
22. a. Discuss the formation of N_2 molecule using MO theory. (5) (or)
 - b. (i) How does Huckel's rule help to decide the aromatic character of a Compound? (3)
(ii) Write the Friedal Crafts reaction (2)