CLASS : XII **TIME : 3.00 hrs**
SUBJECT : CHEMISTRY **UNIT TEST-9,14,15** **MARKS : 70**

PART-I

CHOOSE THE CORRECT ANSWER : **15 X 1 = 15**

1. Faraday constant is defined as
   a) Charge required to deposit one mole of substance
   b) charge carried by 1 electrton
   c) Charge carried by $6.22X10^{10}$ electrons
   d) Charge carried by one mole of electrons

2.how many faradays of electricity are required for the following reaction to occur
$MnO^{4+} \rightarrow Mn^{2+.}$
   a) 7F b) 5F c) 3F d) 1F

3.Among the following cells
   I) Leclanche cell II) Nickel – Cadmium cell
   III) Lead storage battery IV) Mercury cell
   Primary cells are
   a) I and IV b) I and III c) III and IV d) II and III

4. The number of electrons that have a total charge of 9650 coulombs is
   a) $6.022 \times 10^{22.}$ b) $6.22 \times 10^{23.}$ c) $6.022 \times 10^{-34.}$ d) 6.022×10^{24}

5. Which of the following amino acids are achiral?
   a) Alanine b) Leucine c) Proline d) Glycine

6. If one strand of the DNA has the sequence 'ATGCTTGA', then the sequence of complementary strand would be
   a) TACGAACT b) TCCGAACT c) TACGTACT d) TACGRAGT

7. Which of the following vitamins is water soluble?
   a) Vitamin E b) Vitamin K c) Vitamin A d) Vitamin B

8. The pyrimidine bases present in DNA are
   a) Cytosine and Adenine b) Cytosine and Guanine
   c) Cytosine and Thiamine d) Cytosine and Uracil

9. Aspirin is a/an
   a) acetylsalicylic acid b) benzoyl salicylic acid
   c) chlorobenzoic acid d) anthranilic acid

10. The polymer used in making blankets (artificial wool) is
   a) polystyrene b) PAN c) polyester d) polythene

11. Which of the following is an analgesic?
   a) Streptomycin b) Chloromycetin c) Aspirin d) Penicillin

12. Terylene is an example of
   a) polyamide b) polythene c) polyester d) polysaccharide

13.The number of hydrogen bonds are formed between guanine and cytosine
   a) Three b) Two c) One d) Four

14.As per BIS standard Grade 1 soap have _____minimum TFM value
   a) 70% b) 60 % c) 67% d) 76%

15.Which of the following conditions are satisfied when the cell rection in the electrochemical cell is spontaneous ?

a) $\Delta G^0 > 0$ b) E^0 cell < 0 c) E^0 cell $= 0$ d) $\Delta G^0 < 0$

PART-II

ANSWER THE FOLLOWING ANY SIX QUESTIONS. 6 X 2 = 12

COMPULSORY QUESTION NO : 24

16. Define equivalent conductance
17. Explain about Galvanic cell notation
18. write the faraday second law of electrolysis ?
19. What is zwitter ion ? give example
20. How are vitamine classified ?
21. What are epimers ? give example
22. What are antibiotics ?
23. What are bio degrable polymers? Give examples
24. How do you prepare of Nylon-2 , Nylon-6 ?

PART-III

ANSWER THE FOLLOWING ANY SIX QUESTIONS. 6 X 3 = 18

COMPULSORY QUESTION .NO : 33

25. State kohlrausch law and explain any one of the application ?
26. Write the any three factors that affects electrolytic conductance ?
27. Write a short note on peptide bond ?
28. Give three difference beteween Hormoes and Vitamins?
29. Write a note on denaturation of proteins?
30. How is terylene prepared ?
31. Write briefly on vulcanization of rubber
32. How to antiseptics differ from disinfectants ?
33. Ionic conductance at infinite dilution of Al^{3+} and SO_4^{2-} 189 and 160 mho cm^2 equivalent calculate the equivalent and molar conductance of the electrolyte $Al_2(SO_4)_3$ at infinite dilution

PART-IV

ANSWER ALL THE QUESTION **5 X 5 = 25**

34.a) Derive an expression for Nernst equation

(OR)

b) Write a note on Standard Hydrogen Electrode(SHE)

35. a) Explain the structure of glucose

(OR)

b) Explain the structure of fructose

36. a) Differentiate thermoplastic and thermosetting

(OR)

b) i) Give a brief account antioxidants

ii) State any three advantage of food additives

37. a) Give the difference between DNA and RNA

(OR)

b) i) what are narcotic and non-narcotic drugs. give examples

ii) Write the preparation of Buna-N, ?

38. a) i) what are antacid ? give example.

ii) Why carbohydrate are generally optical active

(OR)

b) i) Dintinguis nucleoside from nucleotides?

ii) Define anode and cathode

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