B.Sc. DEGREE EXAMINATION,APRIL 2020
I Year II Semester
Allied Chemistry -II

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. What are disaccharides? Give an example.
2. What happens when glucose is treated with Conc. HNO_3?
3. Give any one colour reaction of protein.
4. What are tranquilizers? Give an example.
5. What are the advantages of gaseous fuel?
6. What is water gas? Write the composition of water gas.
7. What is the composition of semi water gas?
8. How is urea prepared? Write its uses.
9. Define quantum yield of a photochemical reaction.
10. State Grotthus – Draper law.
11. Distinguish between strong electrolyte and weak electrolyte.
12. What is meant by reference electrode?

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. How will you distinguish between glucose and sucrose?
14. What are α amino acids? How are they related to proteins?
15. Write the cause and treatment of cancer?
16. Write preparation and uses of (i) superphosphate (ii) triple superphosphates.
17. Give the composition and uses of (i) carburetted water gas (ii) producer gas.
18. Write notes on (i) Chemiluminescence (ii) Fluorescence
19. Define pH of a solution. Calculate the pH of 0.001M HCl.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. (a) Starting from glucose how will you prepare (i) Glucosazone (ii) Gluconic acid. (b) Explain the following with an example (i) sedatives (ii) hypnotics.
21. Describe the preparation, properties and uses of silicones.
22. (a)Define buffer solution and Derive Henderson's equation to calculate the pH of the buffer solution. (b) Write a short note on (i) EMF (ii) standard electrode potentials.
23. How will convert D- glucose into D- fructose? Discuss the properties and open chain structure of fructose.
24. (a) Discuss the classification and biological functions of proteins. (b) Write notes on (i) NPK fertilizer (ii) buffer action in biological systems.

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