

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019
I Year I Semester
Allied Chemistry - I

Time : 3 Hours

Max.marks :60

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

Answer any **TEN** questions

1. What is pH?
2. Write any two examples of strong and weak electrolytes.
3. What is water gas?
4. What is meant by NPK fertilizers?
5. Define hardness of water.
6. Name the hybridization takes place in i) ethylene ii) acetylene.
7. Define the term electrophile. Give any two example.
8. How furan is prepared?
9. Write any two properties of pyrrole.
10. State Stark- Einstein law.
11. Define quantum yield. Give its expression.
12. Define fluorescence.

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

Answer any **FIVE** questions

13. Derive Henderson equation.
14. How is urea manufactured? Give its applications.
15. How is hard water softened by reverse osmosis? Explain.
16. Explain the following: (i) Addition reaction (ii) Polymerisation.
17. Discuss the mechanism of nitration of benzene.
18. Discuss $H_2 - Cl_2$ reaction.
19. Explain the properties and chemical reactions of thiophene.

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

Answer any **THREE** questions

20. What is buffer solution? Explain the buffer action in biological system.
21. Explain the various steps involved in purification of domestic water.
22. Describe the classification of organic reactions with suitable examples.
23. Explain the preparation and chemical reaction of pyridine.
24. Write a short notes on (i) Photosynthesis (ii) Chemiluminiscence.

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