

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 do you mean by electrochemistry?
2. What is common ion effect?
3. What is water gas?
4. Write the uses of UV-light.
5. Give an example for sp and sp^2 hybridization.
6. What is a condensation reaction?
7. What are aromatic heterocyclic compounds?
8. Why is thiophene more reactive than benzene?
9. Define photosynthesis.
10. What do you mean by quantum yield?
11. Write any two uses of natural gas.
12. What are free radicals? Give an example.

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

Answer any **FIVE** questions

13. Write a note on the buffer action in biological systems.
14. Write the preparation and uses of NPK fertilizers.
15. Explain the hybridisation and geometry of methane.
16. Write any two methods of preparation of furan.
17. State the various laws of photochemistry.
18. Distinguish between weak and strong electrolyte.
19. Define the following terms with example (i) Electrophiles (ii) Nucleophiles

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

Answer any **THREE** questions

20. Derive the Henderson equation for the determination of pH of a buffer solution.
21. What is meant by the hardness of water? Explain the types hardness of water.
22. Explain the mechanism of the following reactions in benzene
(i) Nitration (ii) Sulphonation
23. Describe the preparation and properties of pyrrole.
24. Discuss the following with suitable example
(i) Fluorescence (ii) Phosphorescence (iii) Photosensitization (iv) Chemiluminescence

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