

Question Bank

*(For I B.Sc Biochemistry & I B.Sc Foods
& Nutrition students)*

Allied chemistry-I

I Semester

D.K.M. COLLEGE FOR WOMEN (AUTONOMOUS),VELLORE.

ALLIED CHEMISTRY-I I SEMESTER

UNIT-I NUCLEAR CHEMISTRY

Section-A (2 Marks)

1. Define Mass Defect.
2. What are isobars? Give examples.
3. Draw the Banana structure of Diborane.
4. What do you mean by mass defect?

Section-B (5 Marks)

1. Explain C^{14} carbon dating.
2. Write the medicinal uses of isotopes.
3. Write a short note on Mass Defect.
4. Write any five properties of α -particles.
5. Write any five properties of β -particles
6. Write any five properties of γ -particles.
7. Write a short note on N/P ratio.

Section-C (10 Marks)

1. Explain the following:
 - i. N/P ratio
 - ii. Applications of radioisotopes.

UNIT-II METALLURGY AND BORON COMPOUNDS

Section-A (2 Marks)

1. Write any one operation of Inorganic benzene.
2. Write any two properties of Borazole.

Section-B (5 Marks)

1. Explain any one method of ore dressing.
2. Write notes on zone refining.
3. Discuss the properties and structure of inorganic benzene.

Section-C (10 Marks)

1. Explain the preparation and structure of Diborane.
2. Explain the preparation and structure of Borazole.

UNIT-III PHARMACEUTICAL CHEMISTRY

Section-A (2 Marks)

1. Write the uses of streptomycin.
2. What are Vitamins?
3. Draw the open chain structure of glucose.
4. Write the structure of penicillin
5. What are the fat soluble vitamins?

Section-B (5 Marks)

1. Mention the applications of penicillin.
2. What are sulpha drugs? Discuss the preparation and uses of sulphapyridine.

Section-C (10 Marks)

1. Write the classification, occurrence and deficiency diseases caused by vitamins.
2. Give the preparation of the following:
 - (A) Prontosil
 - (B) Sulphadiazine.
3. What are hormones? Discuss the biological importance of insulin and adrenaline.
4. Explain the following
 - i. Give the preparation and uses of sulphadiazine.
 - ii. Discuss the occurrence and deficiency diseases of water soluble vitamins.

UNIT-IV ORGANIC CHEMISTRY

Section-A (2 Marks)

1. Give the confirmatory tests for aldehydes.
2. Give the structure of Glucose.

3. Define Mutarotation.
4. Give any two confirmatory tests for phenols.
5. Give the confirmatory tests for Primary Amines.

Section-B (5 Marks)

1. Describe the oxidation and reduction reactions of glucose.
2. Write the confirmatory tests for phenols and diamide.
3. Explain the classification of carbohydrates.

Section-C (5 Marks)

1. Explain in detail about the confirmatory test for aldehydes and phenols.
2. Explain in detail about the confirmatory test for diamide and Acids.
3. Explain in detail about the confirmatory test for primary amines and Reducing Sugar.
4. What is Carbohydrates? Describe in detail about the classification of carbohydrates with examples.

UNIT-V INDUSTRIAL CHEMISTRY

Section-A (2 Marks)

1. Give the composition of Water gas and Gobar gas.
2. Give the uses of semiwater gas and carbureted water gas.
3. What is water gas?
4. Write the composition of producer gas.
5. What is meant by R_f value?

Section-B (5 Marks)

1. Discuss the principle and applications of TLC.
2. Write a short note on safety matches.
3. Describe the classification of polymers.

Section-C (10 Marks)

1. Write notes on the types plastics.
2. Write notes on
 - i. Manufacture of safety matches.

- ii. Carburetted water gas and Gobar gas.
3. What are silicones? How are they prepared? Mention their applications.
4. Write short notes on:
- a. Column chromatography.
 - b. Paper chromatography.