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Model Question Paper: Final Semester Examination
B.Sc. Semester-6, Core Course – XIV (Organic Chemistry-V)

Section- II Carbohydrates

MCQ (2- Marks)

1. Table sugar is called:
a) Glucose b) Fructose c) Maltose d) Sucrose
2. The oldest synthetic sweetener is:
a) Saccharin b) Aspartame c) Acesulfame d) Sucralose.
3. Synthetic Sucralose is times sweeter than sucrose by:
a) 2000 b) 200 c) 2 d) 600
4. Sucralose has a clear structural resemblance to a:
a) Carbohydrates b) Saccharin c) Acesulfame d) All
5. Hydrolysis of sucrose provide:
a) Glucose and Fructose b) only Glucose c) only Fructose d) all

Short Answer type Questions (5- Marks)

Q-1. Disclose the following information for the open chain Glucose (1) and Its Haworth structure (2):

- a. The analogy on its name Glucopyranose.
- b. The analogy between its α and β form.
- c. The analogy between its D and L form.
- d. The analogy behind that their anomers are epimers.

Q-2. Write in brief to justify “Why carbohydrates are coined as “biomolecules?”.

Q-3. Describe Mutarotation in glucopyranose. Why polarimeter is so useful for carbohydrate chemistry?

Q-4. Describe the mechanism of formation of Glycosides in D-glucopyranone.

Long answer type questions (12.5)

Q-1. Discuss the chemistry and mechanism of happening in Ruff-Fenton Degradation in D-Glucose for chain shortening.

Q-2. Describe the classification and stereochemistry of carbohydrates.

Q-3. Describe the chemistry of Chain lengthening process proposed by Kiliani–Fischer.