

**PARUL UNIVERSITY**  
**PARUL INSTITUTE OF APPLIED SCIENCES**  
**MID SEMESTER INTERNAL EXAMINATION, MARCH 2020**  
**B. Sc. Chemistry Semester VI**

**Paper Name: Organic Chemistry II**

**Date: 02/03/2020**

**Paper Code: 11105351**

**Time: 1hr 30min**

**Max. Marks: 40**

**Instructions:**

1. All questions are compulsory and options are given in first and second question only.
  2. Numbers to the right of question indicate the marks of respective question.
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**Q. 1** Attempt any one question of the following. **(08)**

- (i) Explain the classification of carbohydrate.
- (ii) Explain the preparation method of amino acid

**Q. 2** Attempt any three questions from the following. **(12)**

- (i) Explain chain elongation and chain shortening of monosaccharide.(only reaction)
- (ii) Give the detail explanation about Electrophoresis.
- (iii) What is a **Ruff Degradation**?
- (iv) Explain the structure of glucose.
- (v) Explain the tertiary and quaternary structure of protein.

**Q. 3** Do as directed. Attempt all five questions. **(05)**

- (i) Write the **structure** of Fructose.
- (ii) ----- called invert sugar.
- (iii) Gluconic acid forms when bromine water reacts with-----.
- (iv) Write the structure of 2-amino butanoic acid.
- (v) . Write the **structure** of glucose osazone(only structure not reaction).

**Q. 4** Write correct option in your answer sheet for following 15 multiple choice questions. **(15)**

MCQ 1 Which among the following is a non-essential amino acid?

- a) Serine b) Threonine c) Lysine d) Histidine

MCQ 2 Which one is alpha amino acid?

- a)  $\text{H}_2\text{NCH}_2\text{COOH}$  b)  $\text{H}_2\text{NCH}_2\text{CH}_2\text{CH}_2\text{COOH}$  c)  $\text{H}_2\text{NCH}_2\text{CH}_2\text{COOH}$  d) all

MCQ 3 When  $\text{NOCl}$  react with alpha amino acid it forms

- a) alpha halo acid b) aldehyde c) ketones d) carboxylic acid

MCQ 4 Strecker synthesis is preparation method of

- a) aldehyde b) ketones c) amino acid d) all

MCQ 5 How much number of anomer in glucose.

- a) 5 b) 4 c) 3 d) 2

- MCQ 6 Sucrose is?  
a) Optical active b) optical inactive c) a and b d) none of the above.
- MCQ 7 Glucose reacts with HI/P which produce.....  
a) n-hexane b) acid c) a and b d) none of the above.
- MCQ 8 Which are the sign of optical active compound.  
a) d(+) b) D c) L d) all
- MCQ 9 Which functional group is present in amino acid?  
a) -CO b) -COOH c) -NH<sub>2</sub> d) b and c
- MCQ 10 Glucose reacts with HCN and form  
a) Glucose cyanohydrins b) gluconic acid c) amide d) amines
- MCQ 11 C-Terminus protecting reagent react on  
a) acidic group b) amino group c) a and b d) none of the above
- MCQ 12 Amino acid preparation method is  
a) Gabriel phthalimide reaction b) aldol condensation c) a and b d) none of the above
- MCQ 13 Glucose is  
a) dD b) dL c) lL d) none of the above
- MCQ 14 N-Terminus protecting reagent react on  
a) acidic group b) amino group c) a and b d) none of the above
- MCQ 15 NH<sub>2</sub>OH forms?  
a) hydrazine b) oxime c) hexane d) all