Day : **Saturday**   **S-2018-3921**   Time : **02.00 PM TO 05.00 PM**
Date : **21/04/2018**   Max. Marks : 60


N. B. :

1) **Q. No. 1** and **Q. No. 5** are **COMPULSORY**. Out of remaining solve **ANY TWO** questions from each Section.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION - I

Q. 1   Solve **ANY FIVE** of the following: (10)

   a) Write structure and properties for maltose.
   b) Write structure and properties for cellobiose.
   c) Explain acid-base properties of amino acids.
   d) What is peptide linkage?
   e) Explain the fehling's test of glucose.
   f) What is annomerization of glucose?

Q. 2   Write detailed classification of Amino acids with structures.   (10)

Q. 3 a) Write a detailed note on chemistry of Glucose.   (07)

   b) Explain the iso-electric point of Amino acids   (03)

Q. 4   Write a note on **ANY TWO** of the following: (10)

   a) Separation of Amino acids by electrophoresis

   b) Ruff degradation of carbohydrates

   c) Peptide bond formation in Amino acids

SECTION - II

Q. 5   Solve **ANY FIVE** of the following: (10)

   a) Draw structure and give numbering to following structures

      i) Pyrrole   **ii)** Imidazole

   b) Name the heterocycle and give the numbering:

      (i)   **(ii)**
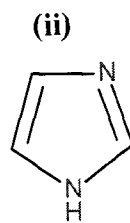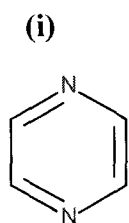
c) What are phospholipids?

d) Define the term and give the example;

   i) Synthon   **ii)** Retrosynthesis

e) What is Fischer indole synthesis?

f) Give structures of two Sulphur containing heterocycles.

g) Why pyrrole undergoes electrophilic substitution reaction at 2–position?

Q. 6   Give any three methods of preparation and two chemical reactions of furan   **(10)** and pyridine.

Q. 7   **a)**   Explain rules of disconnections for retrosynthesis using synthesis of   **(07)** pyrimidine.

      b)   Give the numbering and corresponding drugs for following structure: **(03)**

           i)   Hydantoin   **ii)**   Quinoline

Q. 8   Write a note on **ANY TWO** of the following: **(10)**

      a)   Methods of preparation of Isoquinoline

      b)   Chemical properties of Imidazole

      c)   Fat soluble vitamins

      d)   Synthon approach in synthesis

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