FACULTY OF SCIENCE
B.Sc. II-Semester (CBCS) Examination, May / June 2018
Subject : Biochemistry

Paper – II : Chemistry of Nucleic Acids & Biochemical Techniques

Time : 3 Hours Max. Marks: 80

PART – A (5 x 4 = 20 Marks)
(Short Answer Type)
Note : Answer any FIVE of the following questions.

1. Structure of pyrimidines and their role.
2. Spectral characters of nucleic acids.
3. Structure and functions of DNA.
4. Cot curves and their significance
5. Principle and applications of colorimetry
6. Explain UV-Visible spectra
7. Paper chromatography
8. Affinity chromatography

PART – B (4 x 15 = 60 Marks)
(Essay Answer Type)
Note: Answer all the questions.

9. (a) Give an account of the different types of RNA and their biological functions.
   OR
   (b) Explain formation phosphodiester bond and the action of acids, alkalis and nucleases on it.

10. (a) Describe with diagrams the circular, supercoiled and coiled forms of DNA and their significance.
    OR
    (b) Give an account of Denaturation and Reassociation kinetics of nucleic acids.

11. (a) Explain the Beer Lambert’s law, its applications and limitations.
    OR
    (b) Give an account of the basis of sedimentation, Svedberg’s units and its application in Centrifugation techniques.

12. (a) Explain principle and applications of Gel filtration chromatography. Give an account of the material used.
    OR
    (b) Write the principle and applications of ion-exchange chromatography. What are the two major types? Give examples.

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