

B.Sc. Semester - 6 (CBCS) Examination**May/June-2021 (NEW COURSE)****Analytical Techniques and Bioinformatics (Core)****Time: 1:30 Hours****Marks: 42****Instructions:**

1. Figure to the right indicate marks.
 2. There are five questions in the question paper.
 3. Answer any three of the following questions.
-

- Q.1(A) Objective Type Questions: (04)
1. Write Beer-Lamberts Law.
 2. What is the range of Infra-Red radiation?
 3. Write applications of Flame photometer.
 4. True or False: Absorption flame spectrometer are more sensitive than Emission spectrometer.
- Q.1(B) Answer in Brief (Any One) (03)
1. Application of NMR.
 2. Importance of Radio isotopes in Biosciences.
- Q.1(C) Write a Note on (Any One) (07)
1. Principle and application of Spectrophotometry.
 2. Mass Spectroscopy.
- Q.2(A) Objective Type Questions: (04)
1. Define: R_f value
 2. What is Partition co-efficient?
 3. What are Anion exchangers?
 4. Write full form: FPLC
- Q.2(B) Answer in Brief (Any one) (03)
1. Thin Layer Chromatography.
 2. Application of Gas chromatography.
- Q.2(C) Write a Note on (Any One) (07)
1. HPLC
 2. Size Exclusion Chromatography
- Q.3(A) Objective Type Questions: (04)
1. What are biosensors?
 2. Give an example of tracking dye used in electrophoresis.
 3. Which paper is used in Paper electrophoresis?
 4. Give applications of Flow cytometry.
- Q.3(B) Answer in Brief (Any one) (03)
1. Iso Electric Focusing
 2. Capillary electrophoresis
- Q.3(C) Write a Note on (Any One) (07)
1. Agarose gel electrophoresis
 2. SDS PAGE

- Q.4(A) Objective Type Questions: (04)
1. Expand the term: SNP
 2. Give two examples of next generation DNA sequencing technologies.
 3. Who invented Chain termination DNA sequencing method?
 4. What is the use of RFLP?
- Q.4(B) Answer in Brief (Any one) (03)
1. Primer designing for PCR
 2. Chemical synthesis of DNA
- Q.4(C) Write a Note on (Any One) (07)
1. PCR technology
 2. Blotting techniques
- Q.5(A) Objective Type Questions: (04)
1. True or False: ENTREZ is database retrieval tool.
 2. What is the use of Clustal W?
 3. Give two examples of structural database.
 4. Expand the term: DDBJ.
- Q.5(B) Answer in Brief (Any one) (03)
1. File format: FASTA.
 2. Importance of Bioinformatics.
- Q.5(C) Write a Note on (Any One) (07)
1. Primary and Secondary biological databases
 2. Sequence alignment
