



PAT-003-013204

Seat No. _____

M. Sc. (Biotechnology) (Sem. II) (CBCS) Examination

August - 2020

BT - 210 : Biostatistics and Analytical Techniques

(Old Course)

Faculty Code : 003

Subject Code : 013204

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Answer the following : (Any Seven) 2×7=14

- (a) What is the role of X-ray diffraction?
- (b) State the principle of GC.
- (c) Define Sample and Population.
- (d) State different units and measurement of radiation.
- (e) What is sedimentation co-efficient?
- (f) Define Stationary phase.
- (g) State the significance of exciter filter and dichromatic mirror.
- (h) What is Type II Error?
- (i) State the principle of SEM.
- (j) Distinguish the term derived variable and ranked variable.

2 Answer the following : (Any Two) 7×2=14

- (a) Write a short note on various measures of central tendencies.
- (b) Give a brief account on F-test.
- (c) Discuss Paired t-test.

3 Answer the following : **7×2=14**

- (a) Write a short note on HPLC.
- (b) What is Iso-electro focusing (IEF)? Briefly describe its applications.

OR

- (a) Exemplify SDS-PAGE.
- (b) Discuss Centrifugation.

4 Answer the following : **7×2=14**

- (a) Discuss Adsorption spectroscopy.
- (b) Write a short note on NMR and its biological applications.

5 Answer the following : (Any **Two**) **7×2=14**

- (a) Describe the phenomenon of radioactive decay and its usefulness.
- (b) Write a short note on TEM.
- (c) Describe the principle of Flow cytometry and its applications.
- (d) Discuss basic differences between Electron Microscopy and Light Microscopy.
