

A

**M.Sc. (Part—I) Semester—II (CBCS Scheme)
Examination**

BIOCHEMISTRY

Paper—VIII

**(Bioinformatics, Biostatistics and Research
Methodology)**

Time—Three Hours]

[Maximum Marks—80

Note :— All questions are compulsory and carry equal marks.

1. (a) Describe Basic Components of Computer. 5
- (b) Explain Operating System. 5
- (c) What are storage devices ? 6

OR

- (p) Compare and contrast Hardware and Software ? 5
 - (q) Explain Programming Languages. 5
 - (r) Describe Input and Output devices. 6
2. What is Internet ? Describe in detail its uses and how it plays a role in communication ? 16

OR

Explain Bioinformatics. What is sequence alignment ?
Explain BLAST tool with the help of Bioinformatics.

16

3. (a) Explain Probability Theory. 5
(b) Explain F-test. 5
(c) Calculate Mean for the given values :
10, 18, 17, 19, 10, 15, 11, 17, 12. 6

OR

- (p) Explain Random variable and distribution functions. 5
(q) Explain student's t-test. 5
(r) Calculate Median for the given values :
10, 13, 17, 22, 27, 30, 31, 32. 6

4. What is the design of experiments in biochemistry ?
Explain the experimental methodology with the help of scientific research. 16

OR

What are sampling techniques ? How do they help in research methods ? Give its proper significance and uses. 16

5. (a) How to prepare a scientific report ? Describe. 5
(b) Write about order of paragraph writing. 5

- (c) Explain the importance of research methodology. 6

OR

- (p) Explain how to do research study. 5
(q) What is meant by preparation of review of research ? 5
(r) Explain interpretation summary of research. 6