

D 72975

(Pages : 2)

Name.....

Reg. No.....

**FIRST SEMESTER M.A./M.Sc./M.Com. DEGREE EXAMINATION
DECEMBER 2019**

(CBCSS)

Microbiology

MBG 1C 02—BIOPHYSICS AND INSTRUMENTATION

(2019 Admissions)

Time : Three Hours

Maximum : 30 Weightage

Wherever needed answers must be supported by structural illustrations and diagrams.

Section A

*Short answer type : Answer any **four** of the following.*

Each question carries 2 weightage.

1. Cruciform DNA.
2. Zn finger nuclease.
3. MALDI-TOF.
4. GC-MS.
5. Super secondary structures.
6. Sonication.

(4 × 2 = 8 weightage)

Section B

*Short essay type questions : Answer any **four** of the following.*

Each question carries 3 weightage.

Comment on the following :

7. Explain on Geiger-Mueller counter and its applications.
8. Biological safety aspects in laboratory.
9. DNA-drug interaction.
10. Explain on the principles of various column chromatographic techniques.
11. Importance of Redox potential in biological system.
12. Working principle of phase contrast microscope with suitable diagram.

(4 × 3 = 12 weightage)

Turn over

Section C

*Essay type questions. Answer any **two** questions.*

Each question carries 5 weightage.

13. Explain on various types of electrophoresis methods and its applications in biology.
14. Explain the principle , design and importance of polarization, confocal, atomic force and interference microscopy.
15. Give details on Ramachandran plot and its significance in biophysics.
16. Explain on various interactions of transcription factors with DNA.

(2 × 5 = 10 weightage)