

AQ-835

**First Semester M. Sc. (Part-I) (CBCS)
Examination**

MICROBIOLOGY

**Paper – I
Microbial Techniques**

P. Pages : 2

Time : Three Hours]

[Max. Marks : 80

1. Describe in detail Isoionic point and Isoelectric points of proteins. 16

OR

- (a) Explain with suitable example the effect of pH on the ionisation of amino acids. 8
(b) Calculate the pH of a mixture of 0.01 N lactic acid and 0.087 M lactate. The Pka of lactic acid is 3.86. 8

2. Describe in detail principle, working and applications of U.V.-Visible Spectrophotometry.

OR

Explain laws of absorption of radiation. Write a note on flame photometry. 16

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P.T.O.

3. (a) Explain phenomenon of Radioactive Decay. 8

(b) Describe the labelling and measurement of radioactive isotopes. 8

OR

(c) Describe kinetics of radioactive disintegration. 8

(d) Explain the uses of radioactive isotopes in biology. 8

4. Describe High performance liquid chromatography with its applications.

OR

Discuss in detail principle, working and applications of column chromatography. 16

5. (a) What is Isoelectric focussing ? 8

(b) Explain Moving Boundary electrophoresis. 8

OR

(c) Describe separation of DNA by Agarose Gel electrophoresis. 8

(d) Explain-Immunoelectrophoresis. 8

