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**BR—347—2016**

**FACULTY OF SCIENCE**

**M.Sc. (First Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2016**

**(CBCS Pattern)**

**BIOTECHNOLOGY**

**Paper BT-IV**

**(Techniques of Biology)**

**(Wednesday, 23-11-2016)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time—Three Hours*

*Maximum Marks—75*

*N.B. :—* (i) All questions are compulsory.

(ii) All questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

1. Write a note on light microscope. 15

*Or*

(a) Write a note on types of Rotors. 8

(b) Describe in short preparative and analytical ultra-centrifuge. 7

2. Write working of electron microscope. 15

*Or*

(a) Write principle and explain thin layer chromatography. 8

(b) What is gas liquid chromatography. 7

3. Write a note on working of HPLC. 15

*Or*

(a) What is SDS PAGE ? 8

(b) Write methods of DNA sequencing. 7

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4. Describe working of Agarose gel electrophoresis. 15

Or

(a) Write a note on NMR. 8

(b) Write a note on atomic spectroscopy. 7

5. Write short notes on (any *three*) : 15

(a) ELISA

(b) Flowcytometry

(c) Application of Radioisotopes

(d) Pulse field gel electrophoresis

(e) Application of Biosensor.

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