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BG—27—2016

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(Revised Course)

BIOTECHNOLOGY (Integrated)

Paper (BTT-2.4)

(Bioinstrumentation Techniques)

(Saturday, 26-11-2016)

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

Time—3 Hours

Maximum Marks—80

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

(ii) Draw diagram wherever necessary.

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|----|-----|--|----|
| 1. | (a) | Describe in detail the SEM. | 10 |
| | (b) | Explain in detail UV-visible spectroscopy. | 10 |
| 2. | (a) | Explain in detail the Ion Exchange Chromatography. | 8 |
| | (b) | Describe in detail the phase contrast microscope. | 7 |

Or

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|----|-----|---|---|
| | (a) | Give an account on general principle of spectroscopy. | 8 |
| | (b) | Write a note on column chromatography. | 7 |
| 3. | (a) | Describe in detail the types of rotor. | 8 |
| | (b) | Give an account on TLC. | 7 |

Or

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|----|-----|--|---|
| | (a) | Describe the basic principle of centrifugation. | 8 |
| | (b) | Discuss in detail the differential centrifugation. | 7 |
| 4. | (a) | Describe in detail IEF. | 8 |
| | (b) | Explain agarose gel electrophoresis in detail. | 7 |

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Or

- (a) Explain in detail the PAGE. 8
- (b) Explain the factors affecting on electrophoretic mobility. 7
5. Write short notes on (any *three*) : 3×5=15
- (a) Types of spectra
- (b) Electromagnetic spectrum
- (c) Basic law of absorption
- (d) Radiation energy
- (e) High voltage electrophoresis.

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