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**AG—22—2013**

**FACULTY OF SCIENCE**

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

**MARCH/APRIL, 2013**

**BIOTECHNOLOGY**

**Paper BTT8**

**(Bioinstrumentation)**

**(Monday, 01-04-2013)**

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

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*Time—Three Hours*

*Maximum Marks—80*

*N.B. :- (i) Attempt All questions.*

*(ii) Draw neat and well labelled diagrams wherever necessary.*

1. (a) Describe in detail principle and factors affecting Electrophoresis. 10
- (b) Describe in detail principle, working and application of Ion exchange chromatography. 10

P.T.O.

2. (a) Define Microscopy. Describe in detail principle and application of Transmission Electron Microscopy. 8
- (b) What is spectroscopy ? Describe in detail UV-visible spectroscopy. 7

*Or*

- (a) Describe in detail compound microscope. 8
- (b) Describe in detail basic principles of centrifugation. 7
3. (a) Describe in detail coloumn chromatography. 8
- (b) Describe in detail partition chromatography. 7

*Or*

- (a) Describe in detail differential centrifugation. 8
- (b) Describe in detail the types of Rotors. 7
4. (a) Describe in detail Agarose Gel Electrophoresis. 8
- (b) Define electrophoresis. Describe in detail SDS-PAGE. 7

*Or*

- (a) Describe in detail Pulse field gel electrophoresis. 8
- (b) Describe in detail principle, working and application of paper chromatography. 7

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

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- (i) Refractive index;
- (ii) Atomic structure;
- (iii) Centripetal force;
- (iv) Isochochophoresis;
- (v) Partition coefficient.