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NB—21—2023

FACULTY OF SCIENCE

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

NOVEMBER/DECEMBER, 2023

(New Course)

BIOTECHNOLOGY

(Bioinstrumentation Techniques)

(Wednesday, 6-12-2023)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

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

(ii) Draw a well labelled diagram wherever necessary.

1. Describe Scanning Electron Microscope with principle, instrumentation and application. 15

Or

(a) Compound microscope. 8

(b) UV-visible spectroscopy. 7

2. What is chromatography ? Describe types of paper chromatography. 15

Or

(a) TLC 8

(b) GC. 7

3. What is centrifugation ? Describe types of centrifuge with advantages and disadvantages. 15

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WT

(2)

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Or

- (a) Explain types of rotor. 8
- (b) Write a note on centripetal force and centrifugal force. 7
4. What is Electrophoresis ? Explain principle, instrumentation and application of agarose gel electrophoresis. 15
- Or
- (a) Pulse field gel electrophoresis. 8
- (b) Write factors affecting on electrophoretic mobility. 7
5. Write notes on (any *three*) : 15
- (a) TEM
- (b) Column chromatography
- (c) Basic law of absorption
- (d) Preparative centrifugation
- (e) IEF.

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