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NEPNY—64—2023

FACULTY OF SCIENCE AND TECHNOLOGY

M.Sc. (NEP) (First Year) (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

BOTANY

Paper SBOTE-401

(Bioinstrumentation and Methods in Biology)

(Thursday, 28-12-2023)

Time : 10.00 a.m. to 12.30 p.m.

Time—2½ Hours

Maximum Marks—60

- N.B.* :— (i) Question No. 1 is compulsory.
- (ii) Of the remaining, attempt any *three* questions.
- (iii) Draw neat and well labelled diagrams wherever necessary.

1. Write brief notes on any *three* : 15
- (a) Applications of simple microscope
- (b) Hot air oven
- (c) Uses of radioisotopes in life sciences
- (d) Ultracentrifuge.

P.T.O.

2. Write in brief on :

- (a) Working and applications of phase contrast microscope. 8
- (b) Microtomy. 7

3. Describe in brief on :

- (a) Principle, working and application of autoclave. 8
- (b) Principle, working and applications of incubator. 7

4. Write in brief on :

- (a) Principle and techniques of UV-visible spectrophotometer. 8
- (b) Atomic absorption spectrometry. 7

5. Explain in brief :

- (a) Gel agarose electrophoresis. 8
- (b) Principle and application of centrifugation techniques. 7

6. Write brief notes on any *three* :

15

- (a) Hazards and waste disposal
- (b) Laminar air flow
- (c) Half life of isotopes
- (d) AFLP technique.