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NEPWT—317—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

BOTANY

Paper SBOTE-401

(Bioinstrumentation and Methods in Biology)

(Thursday, 19-12-2024)

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

Time—3 Hours

Maximum Marks—60

Note :— (i) Question No. 1 is compulsory.

(ii) Of the remaining, attempt any *three* questions.

(iii) Draw neat and well labelled diagram wherever required.

1. Write brief notes on (any *three*) : 15
 - (a) Working of compound microscope
 - (b) Autoclave
 - (c) Beer-Lambert's law
 - (d) RFLP technique.
2. Write in brief on :
 - (a) Safe use of laboratory equipments. 8
 - (b) Working and application of simple microscope. 7

P.T.O.

3. Describe in brief :
- (a) Working and applications of laminar air flow. 8
 - (b) Sterilization by filtration methods. 7
4. Write in brief on :
- (a) Principles and techniques of colorimeter. 8
 - (b) X-ray diffraction. 7
5. Explain in brief :
- (a) Principle and applications of electrophoresis. 8
 - (b) Southern blotting techniques. 7
6. Write brief notes on any *three* :
- (a) Micrometry
 - (b) pH meter
 - (c) Uses of radioisotopes in life sciences
 - (d) RAPD technique. 15