D (Printed Pages 4)

(20321) Roll No.

M.Sc. (Biotech.)-I Sem.

NP-3333

M.Sc. (Biotechnology) Examination, Dec. – 2020

Tools & Techniques of Biotechnology

(H-104)

[M.Sc. (Bio-Tech.)]

Time : Three Hours] *[Maximum Marks : 50*

Note : Attempt questions from all sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Answer all the **five** questions. Each question carries 2 marks. Very short answer is required not exceeding 75 words. 2×5=10

1. Mention different types of centrifuges available for the centrifugation.

P.T.O.

2. What are radioisotopes?
3. Briefly mention the applications of GLC.
4. What is the constitution of mass spectrometers?
5. What is the principle behind elector microscopy?

Section-B

(Short Answer Questions)

Note : Answer any **two** questions out of the following three questions. Each question carries **5 marks.** Short answer is required not exceeding 200 words. 5×2=10

6. What are the different types of spectroscopy and what are its main applications?
7. What is the principle and application of Adsorption chromatography?

8. Describe in brief type of rotors used in centrifugation.

Section-C

(Detailed Answer Questions)

Note : Attempt any **three** questions.

10×3=30

9. Write down the applications of HPLC and its principle.

10. Describe in detail edectrophoresis of nucleic acids.

11. What is radioactivity? Describe in detail detection, measurement and applications of this technique.

12. Discuss the principle and applications of 'permeation chromatography'.

13. Describe the process of detection, estimation and recovery of proteins in gels during electrophosesis.