

(i) Printed Pages : 2

Roll No.

(ii) Questions : 9

Sub. Code :

0	3	6	9
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Exam. Code :

0	0	0	4
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B.A./B.Sc. (General) 4th Semester

1046

BIO-CHEMISTRY

Paper : A—Advanced Bio-Chemical Techniques

Time Allowed : Three Hours]

[Maximum Marks : 36

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

(2) Attempt any **four** more questions and at least **one** question from each of the four Sections.

1. Write notes on the following :

(a) Surface Tension

(b) Units of radioactivity

(c) Nature of isotopes

(d) Gamma counter.

4×2=8

SECTION-I

2. Discuss the applications of the following biological system :

(a) Membrane filtration

4

(b) Diffusion.

3

3. Discuss the following biological techniques :
 - (a) Cell counting 4
 - (b) Cryopreservation. 3

SECTION-II

4. Write applications of following techniques :
 - (a) Fluorescence immunoassay 4
 - (b) FISH. 3
5. Discuss in detail the principle and application of Fluorescence activated sorting. 7

SECTION-III

6. Write notes on :
 - (a) Labelling of biochemical compounds 4
 - (b) Radioactive decay. 3
7. Briefly discuss the following :
 - (a) Use of radioactive tracers in the study of enzyme reaction mechanism and metabolic pathway. 4
 - (b) Safety measures in handling radio isotopes. 3

SECTION-IV

8. Write applications of following techniques :
 - (a) MALDI 4
 - (b) Mass Spectrometry. 3
9. Discuss briefly :
 - (a) Nuclear Magnetic Resonance 4
 - (b) Electron Spin Resonance. 3