



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 154654

Roll No.

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B. Tech.

(SEM. VI) THEORY EXAMINATION, 2014-15
BIOPHYSICS

Time : 2 Hours]

[Total Marks : 50

Note : Attempt all questions. All questions carry equal marks.

1 Attempt any three of the following : **7.5×2=15**

(a) Describe following :

(i) Bragg's Law

(ii) Electron density map.

(b) Discuss working principles of Refractometry and Cytophotometry along with its applications.

(c) Describe the Neutron diffraction and Electron diffraction process along with its application.

2 Attempt any two of following : **2×5=10**

(a) What is ESR Spectra ? Explain the working principle of ESR.

- (b) Discuss the working mechanism of electrophoresis along with its application.
- (c) Briefly describe protein structure determination using X-ray diffraction.

3 Attempt following : **3×5=15**

- (a) Explain the working mechanism of Potentiometry and Conductometry.
- (b) Describe the working mechanism of Ultracentrifugation process.
- (c) Explain the working principle of Flow Cell Cytometry.

4 Write short notes on any two of following : **2×5=10**

- (a) Infra Red (IR) Spectra
 - (b) Partition Chromatography
 - (c) Isoelectric focusing
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