S.No. 329 **17PBTE01**

(For the candidates admitted from 2017-2018 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

First Semester

Biotechnology

BIOPHYSICS AND BIOINSTRUMENTATION

Time : Three hours Maximum : 75 marks

SECTION A — ($5 \times 5 = 25$ marks)

Answer ALL questions.

1. (a) Explain the Structure of fibroul protein.

Or

(b) Describe the Scope and methods of biophysics.

2. (a) Explain the principle and applications of Circular Dichorism.

Or

(b) State Beer-Lamberts laws and merits and demerits.

3. (a) Principle and applications of ion exchange chromatography.

Or

(b) Explain the principle and applications of Analytical ultra centrifuge.

4. (a) Explain the principle behind separation and applications of PAGE.

Or

(b) Explain the Principle and applications of Ion exchange chromatography.

5. (a) Explain the Biological structures of X-ray crystallography.

Or

(b) Explain the principle involved in Angiography and its application.

SECTION B — (5 × 10 = 50 marks)

Answer ALL questions.

6. (a) Discuss about Covalent bonding and its significances.

Or

(b) Discuss about Protein stability and protein folding.

7. (a) Explain the principle, instrumentation and applications of Atomic absorbance spectroscopy.

Or

(b) Explain the principle, instrumentation and applications of Mass spectrophotometer.

8. (a) Explain the principle, instrumentation and applications of HPLC.

Or

(b) Explain the types of centrifuge and their advantages

9. (a) Discuss about GM counter and scintillation counter and its applications.

Or

(b) Explain the methodology and principle application and limitations of Pulsefield electrophoresis.

10. (a) Explain the principle, instrumentation and applications of ECG.

Or

(b) Explain the principle, instrumentation and applications of NMR.

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