

S.No. 62

12PBTZ02

(For the candidates admitted from 2012–2013 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

Second Semester

Biotechnology

BIOPHYSICS AND BIOINSTRUMENTATION

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer ALL the questions.

1. (a) What is covalent bonding? Explain covalent bonding with examples.

Or

- (b) Explain the structure and function of fibrous protein.

2. (a) Explain the principle and applications of colorimeter.

Or

- (b) Explain the principle and applications of Spectroflurometry.

3. (a) Explain the principle and applications of TLC.

Or

(b) Explain the principle and applications of Partition chromatography.

4. (a) What is Radioactivity? What is the unit of measurement of Radioactivity?

Or

(b) Explain the principle and applications of GM counter.

5. (a) Explain the principle and applications of Angiography.

Or

(b) Explain the principle and applications of ECG.

SECTION B — (5 × 10 = 50 marks)

Answer ALL the questions.

6. (a) Explain the scope of biophysics.

Or

(b) Explain the protein folding and its implications.

7. (a) Explain the principle and applications of AAS.

Or

(b) Explain the principle and applications of Mass spectrophotometry.

8. (a) Explain the principle and applications of Ion exchange chromatography.

Or

(b) Explain the principle, types and applications of HPLC?

9. (a) Explain the phenomena and applications of Liquid scintillation?

Or

(b) Explain the principle, types and applications of Fluorimetry?

10. (a) Explain the principle and applications of X-ray crystallography?

Or

(b) Explain the principle and applications of NMR?