

M.PHARM. (PHARMACEUTICAL BIOTECHNOLOGY) SEM. – II
(CBCS – 2019 COURSE) : Winter 2021
SUBJECT : PROTEINS & PROTEIN FORMULATIONS

Day Monday
Date 29-11-2021

W-20761-2021

Time 02:00 PM-05:00 PM
Max. Marks : 75

N.B.

- 1) Q.1 and Q.5 are **COMPULSORY**. Out of the remaining questions answer any **TWO** from each section.
- 2) Answer to both section should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

- Q.1** A recombinant protein is expressed in *E.coli* using a pET vector system, give a scheme of its purification using His-tag. **(08)**
- Q.2** Give an outline on objectives of protein engineering. **(15)**
- Q.3** Write a note on the Finger-Printing approach for protein identification giving a suitable example. **(15)**
- Q.4** Write notes on **ANY TWO** of the following: **(15)**
- a) Green fluorescent protein
 - b) Factors affecting stability of Protein
 - c) Size exclusion chromatography

SECTION – II

- Q.5** What is protein mapping using “tryptic digest.” **(07)**
- Q.6** A patient presented with bone tumour approached in a clinic. Describe how you will find novel drug targets using 2-D electrophoresis. **(15)**
- Q.7** Discuss nasal delivery system for peptide drugs. **(15)**
- Q.8** Write notes on **ANY TWO** of the following: **(15)**
- a) Advantages of monoclonal antibody or antibody fragment as drug
 - b) Liposomal delivery system
 - c) Forced degradation study of protein

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