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Total No. of Pages : 02

Total No. of Questions : 10

B.Pharma (2012 to 2016) (Sem.-7)
PHARMACEUTICAL BIOTECHNOLOGY
Subject Code : BPHM-701
M.Code : 71753

Time : 3 Hrs.

Max. Marks : 80

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **FIFTEEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt **ANY FOUR** questions.
3. **SECTION-C** contains **FOUR** questions carrying **TEN** marks each and students have to attempt **ANY THREE** questions.

SECTION-A**1. Answer Briefly :**

- a) Define haptens.
- b) What do you understand by humoral immunity?
- c) What is fed batch culture system?
- d) Define transformation.
- e) What is hybridoma technology?
- f) What are different methods of enzyme immobilization?
- g) What are typical components used in fermentor media?
- h) What are baffles?
- i) Enlist methods of biotransformation of steroids.
- j) What is the application of biotechnology in pharmaceutical sciences?
- k) What is humulin?

- l) What are the applications of amylase?
- m) Enlist the steps in isolation of penicillin.
- n) What do you understand by conjugation?
- o) What is the role of mutants in fermentation?

SECTION-B

- 2. Elaborate the isolation of ethanol during fermentation.
- 3. Write a note on adsorption method of enzyme immobilization with advantages and limitations.
- 4. Write a note on mutant isolation.
- 5. Differentiate batch and continuous culture system.
- 6. What are different steps involved in gene cloning?

SECTION-C

- 7. Write a note on production of monoclonal antibodies.
- 8. What are biotransformation methods?
- 9. What are fermentors? What is the typical design of a fermentor?
- 10. Write a note on immune system with special reference to immune intolerance.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.