Registration No. : | | | | | | | | | | |

Total number of printed pages – 2

B. Tech

PCBT 4401

Seventh Semester Back Examination – 2014

MEDICAL AND PHARMACEUTICAL BIOTECHNOLOGY

BRANCH : BIOTECH

QUESTION CODE : L 142

Full Marks – 70

Time – 3 Hours

*Answer Question No. **1** which is compulsory and any **five** from the rest.*
The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2 ×10

   (a) What is biotransformation ?

   (b) What are the different types of ELISA ?

   (c) What do you understand by clinical trials ? What are the different stages of clinical trials ?

   (d) What are semisynthetic antibiotics ? Give examples.

   (e) Write any two applications of MAb with suitable examples.

   (f) What are the different types of biosensors ?

   (g) Differentiate between conventional vaccine and modern vaccine.

   (h) What is microarray ?

   (i) What are the different techniques used for identification of proteins ?

   (j) What is interferon ? What are the different forms of interferons ?

2. Explain the different stages of drug designing in details with suitable examples. 10

P.T.O.

3. What do you understand by Hybridoma Technology ? How MAb are produced using this technology ? 10

4. (a) Write a short note on competitive ELISA. 5

   (b) Write note on Insulin production by using r-DNA technology. 5

5. (a) What are the different techniques employed for separation of proteins ? 5

   (b) Write a note on role of proteomics in disease diagnosis. 5

6. (a) What is toxicogenomics ? What are the different components of toxicogenomics ? Write any four application of toxicogenomics. 5

   (b) Write a note on in vivo gene therapy. 5

7. (a) Write note on different enzymes used in diagnosis of different diseases. 5

   (b) What is drug targeting ? Write the importance of drug targeting. 5

8. Write short notes on any **two** of the following : 5 × 2

   (a) Role of protein engineering in drug designing

   (b) Biosensors in clinical analysis

   (c) DNA based diagnosis

   (d) Microbial transformations of steroids.