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Total Number of Pages: 01

B.Tech.  
PCBT4401

7<sup>th</sup> Semester Regular/Back Examination 2017-18

Medical and Pharmaceutical Biotechnology

BRANCH: BIOTECH

Time: 3 Hours

Max Marks: 70

Q.CODE: B209

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

- Q1** Answer the following questions: (2x10)
- a) Give two examples of steroidal hormone.
  - b) Write the importance of pharmacogenomics.
  - c) What is a placebo therapy?
  - d) Write two applications of MAb?
  - e) Write the role of SDS in SDS-PAGE.
  - f) How microanalysis helps in disease diagnosis?
  - g) What is antibody array?
  - h) Write the role of DNA probes in diseases diagnosis?
  - i) How DNA vaccine works?
  - j) Define MALDI-TOF?
- Q2** Define proteomics? How proteomics has advantages over genomics in disease diagnosis? (2+8)
- Q3** a) Explain the pathway of insulin production using rDNA Technology? (5)  
b) Define microbial transformation? Give four example of industrially application of microbe used in biotransformation? (5)
- Q4** a) Define Hybridoma Technology? How the technology used for the production of MAb? (5)  
b) Briefly discuss the different types of diagnostic kits used for detection of diseases with examples. (5)
- Q5** a) Discuss the different step in drug designing? (5)  
b) What are the different types of gene therapy? Elaborate the *in-vivo* gene therapy with suitable example. (5)
- Q6** a) What is a biomarker? Briefly explain the various applications of biomarkers for clinical diagnosis? (5)  
b) Discuss various kinds of biosensor used in clinical diagnosis. (5)
- Q7** What are the different separation and identification techniques used for protein analysis? (10)
- Q8** Write short answer on any TWO: (5 x 2)
- a) Protein engineering in drug designing
  - b) Radioactive detection system in disease diagnosis
  - c) Toxicogenomics
  - d) Role of enzymes in clinical diagnosis