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PY 132708

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Azara, Hatkhowapara,
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Roll No. of candidate

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2019

B.Pharm. 7th Semester End-Term Examination

PHARMACEUTICAL BIOTECHNOLOGY

(Old Regulation)

Full Marks – 100

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer Question No. 1 and any *six* from the rest.

Q1 is compulsory (MCQS)/Fill in the blanks :

(10 × 1 = 10)

1. (i) Microbial transformations have the following advantages except
 - (a) It can reduce multistep reactions to a single step
 - (b) Reactions can be carried out under mild conditions
 - (c) Reactions are stereospecific and regiospecific
 - (d) It require more chemicals, labour and time

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- (ii) Monoclonal antibodies recognize a single
- (a) Antigen
 - (b) Bacterium
 - (c) Epitope
 - (d) B cell
 - (e) Virus.
- (iii) Restriction enzymes are also called as
- (a) biological scissors
 - (b) molecular scalpels
 - (c) molecular knives
 - (d) all of these
- (iv) Type IV hypersensitivity is also called as
- (a) Immediate hypersensitivity
 - (b) Delayed hypersensitivity
 - (c) Cytotoxic hypersensitivity
 - (d) Immuno complex hypersensitivity
- (v) A recombinant DNA molecule is produced by Recombinant DNA Technology
- (a) joining of two DNA fragments
 - (b) joining of two or more DNA fragments
 - (c) both (a) and (b)
 - (d) joining of two or more DNA fragments originating from different organisms
- (vi) Which of the following is the commonly employed adsorbent?
- (a) Calcium carbonate
 - (b) Alumina
 - (c) Celluloses
 - (d) All of these

(vii) DNA sequencing is used in

- (a) Forensic studies
- (b) Biotechnology
- (c) Diagnostics
- (d) All of above

(viii) Fusion between a plasma cell and a tumor cell creates a

- (a) Myeloma
- (b) Natural killer cell
- (c) Lymphoblast
- (d) Lymphoma
- (e) Hybridoma

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(ix) Formation of essential components of bacterium cell wall is inhibited by

- (a) Tetracycline
- (b) Erythromycins
- (c) Penicillin
- (d) both (a) and (b)

(x) Broad-spectrum antibiotics are developed through

- (a) Erythromycins
- (b) Cephalosporin
- (c) Tetacyclines
- (d) Penicillin

(Answer any Six questions)

(6 × 16 = 90)

2. (a) Define Antigen, Antibody and Hapten. Write the applications of Antigen-Antibody reactions.
- (b) Differentiate between
- (i) Cell mediated and Humoral immunity.
 - (ii) Active and Passive immunity.

3. (a) Define the terms Conjugation and Specialised transduction. Write on Plasmid mediated Gene transfer.
(b) What are bacterial recombination? Explain the different techniques used for gene transfer.
4. (a) Define Hypersensitivity. What are the various types of hypersensitivity reactions?
(b) What are Immunomodulators and write its application? Classify immunomodulators with examples.
5. (a) Explain in detail Methods of Enzyme immobilization. Discuss in short "Factors affecting enzyme kinetics".
(b) Write in short about different techniques used for selection of recombinant clones.
6. (a) Write notes on Biotransformation. Write its application in Plant tissue culture.
(b) Write a note on Biotransformation of Steroides.
7. (a) Discuss the Various reactions mediated by microorganisms and give suitable examples.
(b) Discuss the important bioconversions.
8. (a) What are Antibiotics? Explain about the various methods of their standardization in brief.
(b) What is a fermenter? Write the factors involved in the designing of a fermenter.
9. (a) Write the different properties of Enzyme. Explain in short methods used for microencapsulation of Enzymes.
(b) Write notes on Streptokinase and Amylase.