

05/01/24

Seat Number

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DAGDU-42

BP605T

Pharmaceutical Biotechnology

(736605)

Total Pages : 7]

Time : 3 Hours

Max. Marks : 75

Note : (1) Do not write anything on question paper except Seat No.

(2) Draw well labelled diagram wherever necessary.

(3) No supplement will be provided.

1. Answer the following questions :

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(a) The chemical used for conversion of toxin into toxoid is

(i) Ethanol

(ii) Chloroform

(iii) Formaldehyde

(iv) Hydrochloric acid

(b) BCG vaccine contains

(i) Attenuated M. Tuberculosis

(ii) Killed M. Tuberculosis

(iii) Killed M. Bovis

(iv) Attenuated M. B. Vis

P.T.O.

- (c) The process of weakening a pathogen is called
- (i) Vaccination
 - (ii) Attenuation
 - (iii) Immunization
 - (iv) Virulence reduction
- (d) The principle antibodies involved in Type-II reaction are
- (i) IgE and IgA
 - (ii) IgM and IgA
 - (iii) IgG and IgM
 - (iv) IgD and IgA
- (e) Type-I hypersensitivity includes all of the following *except* :
- (i) Anaphylaxis
 - (ii) Hay fever
 - (iii) Extrinsic Asthma
 - (iv) Autoimmune hemolytic anemia
- (f) The transfer of naked DNA from one cell to another is transferred as :
- (i) Transduction
 - (ii) Lysogeny
 - (iii) Transformation
 - (iv) Conjugation

- (g) The process in which bacteria can exchange plasmids with other bacteria is called :
- (i) Binary fission
 - (ii) Budding
 - (iii) HGT
 - (iv) Fragmentation
- (h) V-shaped chromosomes are named as
- (i) Teleocentric
 - (ii) Submetacentric
 - (iii) Metacentric
 - (iv) Acrocentric
- (i) Proteins responsible for compact packing and writing of chromosomal DNA are :
- (i) Histones
 - (ii) Non-histone
 - (iii) Trypsin
 - (iv) Serein
- (j) How many histone molecules are found in nature ?
- (i) 3
 - (ii) 4
 - (iii) 5
 - (iv) 6

- (k) Types of vaccine is prepared from :
- (i) Synthetic medium
 - (ii) Lung tissue of gerbils
 - (iii) Fertile egg
 - (iv) Brain of monkey
- (l) Which is the first steroidal compound produced by microbial transformation by corynebacterium sp ?
- (i) Testosterone
 - (ii) Estrogen
 - (iii) Progesterone
 - (iv) Cortisone
- (m) The non-steroidal substance used in the formation of lotions and cosmetics is :
- (i) Dihydroxyacetone
 - (ii) L. Ascorbic acid
 - (iii) Prostaglandin
 - (iv) Cortisone
- (n) Conversion of cortisone to produce Prednisolone is an example of
- (i) Epoxidation
 - (ii) Deamination
 - (iii) Dehydrogenation
 - (iv) Reduction

- (o) Transposons are
- (i) RNA sequence
 - (ii) DNA sequences
 - (iii) Only found in eukaryotes
 - (iv) Contain no genes
- (p) Which of the following role is preferred by a bacteriophage in transduction ?
- (i) Vector
 - (ii) Donor
 - (iii) Recipient
 - (iv) Episome
- (q) Specialized transduction is mediated by
- (i) Lytic phages
 - (ii) Lysogenic phages
 - (iii) Both lytic and lysogenic
 - (iv) T_4 phages
- (r) Which of the following is *not* a product of fermentation ?
- (i) Lactose
 - (ii) Oxygen
 - (iii) Carbon dioxide
 - (iv) Ethanol

- (s) Somatic mutations are also called :
- (i) Spontaneous mutation
 - (ii) Bud mutational budspots
 - (iii) Induced mutation
 - (iv) None of the above
- (t) What is the detection technique of auxotrophs ?
- (i) Spread plating
 - (ii) Replica plating
 - (iii) Streaking
 - (iv) Pouring

2. Solve any two :

20

- (i) Define protein engineering. Explain different methods of protein engineering.
- (ii) Define hypersensitivity. Explain different classes of hypersensitivity reactions.
- (iii) What are the different classes and functions of interferons ? Write the different methods of interferon production ?

3. Attempt any *seven* :

35

- (i) Write the different methods of classification of plasmids.
- (ii) What are the effects of mutations ?
- (iii) What are the ideal characteristics of fermenter ? Mention the different provisions provided in a fermenter with their use.
- (iv) List out the various blood components and their use.
- (v) Define vector. Write the properties and example of some artificial vectors used in rDNA technology.
- (vi) Briefly discuss steps involved in polymerase chain reaction.
- (vii) Write different classes of antibodies and their functions.
- (viii) What is immunosuppression ? Give drugs used as immunosuppressant.
- (ix) What are the different methods of attenuation ?

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