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6 SEM TDC BOT M 3

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(May)

BOTANY

(Major)

Course : 603

(Molecular Biology and Immunology)

Full Marks : 48

Pass Marks : 19/14

Time : 2 hours

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

1. (a) Answer as directed : 1×5=5

(i) A weak _____ bond is involved in antigen-antibody interactions.

(Fill in the blank)

(ii) In hybridoma technology, hybrid cells are selected in MS medium / HAT medium / white medium / hybridoma medium.

(Choose the correct answer)

(2)

(iii) Vaccination is artificially acquired passive immunity.

(Write True or False)

(iv) Unwinding of DNA is done by helicase / ligase / hexokinase / unwindinase.

(Choose the correct answer)

(v) In prokaryotes, the first amino acid in the polypeptide chain is _____.

(Fill in the blank)

(b) Write short accounts on the following :

3×3=9

(i) Codon dictionary

(ii) Recombination of prokaryotes

(iii) Inflammation in body

2. What is gene regulation? Describe the process of gene expression in prokaryotes with the help of lac operon model. 2+9=11

Or

What is promoter? Describe the molecular mechanism of transcription in prokaryotes.

2+9=11

(3)

3. How would you define acquire immunity? Describe on mechanism of antigen-antibody interactions in host. 2+9=11

Or

What are *r*-genes? Write briefly about laws in the distribution of immunity from infectious diseases in plants. 2+9=11

4. Write explanatory notes on the following (any *three*) : 4×3=12

- (a) Transposons
- (b) AIDS
- (c) Different approaches for IPHM
- (d) Interaction of plants with bacteria
- (e) Role of IgM

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