

**6 SEM TDC BOT M 3**

**2019**

( 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 )

( Turn Over )

( 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 :  $3 \times 3 = 9$

(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.  $2+9=11$

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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) :  $4 \times 3 = 12$

(a) Transposons

(b) AIDS

(c) Different approaches for IPHM

(d) Interaction of plants with bacteria

(e) Role of IgM

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