

National Board of Examinations

Question Paper Name : DNB Biochemistry Paper3
Subject Name : DNB Biochemistry Paper3
Duration : 182
Total Marks : 100
Display Marks: No

Maximum Instruction Time : 0
Is Section Default? : No

Question Number : 1 Question Id : 32718744877 Consider As Subjective : Yes

Please write your answers in the answer booklet within the allotted pages as follows:-

Question Number	Answer to be attempted within	Question Number	Answer to be attempted within
Q. 1	Page 1-5	Q. 6	Page 26-30
Q. 2	Page 6-10	Q. 7	Page 31-35
Q. 3	Page 11-15	Q. 8	Page 36-40
Q. 4	Page 16-20	Q. 9	Page 41-45
Q. 5	Page 21-25	Q. 10	Page 46-50

1. Explain different models of homologous and nonhomologous recombination. Add a note on pseudogenes. [8+2]

Question Number : 2 Question Id : 32718744878 Consider As Subjective : Yes

Explain Acquired Immunodeficiency Syndrome (AIDS) under the headings of:

- Pathogenesis. [2]
- Immunological alterations. [2]
- Diagnostic criteria. [3]
- Management protocols. [3]

Question Number : 3 Question Id : 32718744879 Consider As Subjective : Yes

- a) Antibody dependent cell mediated cytotoxicity (ADCC). [3]
- b) Mitochondrial DNA. [4]
- c) Coordinated regulation of purine and pyrimidine synthesis. [3]

Question Number : 4 Question Id : 32718744880 Consider As Subjective : Yes

Explain the process of generation of monoclonal antibodies. Add a note on their applications in medicine. [6+4]

Question Number : 5 Question Id : 32718744881 Consider As Subjective : Yes

Define epigenetics. Discuss the various mechanisms involved in epigenetic modifications and their role in regulation of gene expression. [2+8]

Question Number : 6 Question Id : 32718744882 Consider As Subjective : Yes

Compare and contrast between:

- a) TH1 & TH2 cells. [5]
- b) Genomic and cDNA library. [5]

Question Number : 7 Question Id : 32718744883 Consider As Subjective : Yes

Explain the process of central and peripheral immune tolerance. [10]

Question Number : 8 Question Id : 32718744884 Consider As Subjective : Yes

Explain the principles of:

- a) DNA fingerprinting. [4]
- b) Chromosome walking. [3]
- c) Personalized medicine. [3]

Question Number : 9 Question Id : 32718744885 Consider As Subjective : Yes

Explain the mechanism of exogenous antigen processing by dendritic cells. Add a note on non-professional antigen presenting cells. [7+3]

Question Number : 10 Question Id : 32718744886 Consider As Subjective : Yes

Enumerate the biochemical changes that occur during the malignant transformation of a cell. Add a note on the role of tumour markers in diagnostics. [5+5]