National Board of Examinations

Question Paper Name :	DNB Biochemistry Paper3
Subject Name :	DNB Biochemistry Paper3
Creation Date :	2022-12-26 13:13:51
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Share Answer Key With Delivery Engine :	No
Actual Answer Key :	No

DNB Biochemistry Paper3

Group Number :	1
Group Id :	3271871294
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Group Marks :	100
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

DNB Biochemistry Paper3

Section Id :	3271871297
Section Number :	1
Section type :	Offline

Mandatory or Optional :	Mandatory
Number of Questions to be attempted :	10
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	3271871301
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 1 Question Id : 32718711992 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

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. How are miRNAs synthesised? How do they regulate gene expression? Explain their role in carcinogenesis. [3+5+2]

Question Number : 2 Question Id : 32718711993 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Briefly describe various vaccines developed and used for SARS COV2 in covid pandemic. [10]

Question Number : 3 Question Id : 32718711994 Question Type : SUBJECTIVE Consider As

Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Enlist dfferent types of DNA repair systems. Describe the mechanism of Base excision and mismatch repair systems and their clinical significance. [2+4+4]

Question Number : 4 Question Id : 32718711995 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

What is the significance of following epigenetic processes in gene expression?

a) DNA methylation. [2.5]

b) Nucleosome positioning. [2.5]

c) Histone modification. [2.5]

d) Genomic imprinting. [2.5]

Question Number : 5 Question Id : 32718711996 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

a) Circulating nucelic acids in molecular diagnostics. [2.5]

b) DNA footprinting. [2.5]

c) Hybridoma techniques. [2.5]

d) MALDI-TOF. [2.5]

Question Number : 6 Question Id : 32718711997 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

a) Explain the phenomenon of antibody diversity. [5]

b) Describe the role of MHC1 and MHC 2 in development of immune response. [5]

Question Number : 7 Question Id : 32718711998 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

a) What is autophagy? Explain its role in health and disease. [5]

b) Explain various features of an ideal tumour marker with suitable examples. [5]

Question Number : 8 Question Id : 32718711999 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

a) Explain the functions of oncogenes, proto oncogenes and tumor suppressor genes. [6]

b) What is the significance of these genes in molecular diagnostics? [4]

Question Number : 9 Question Id : 32718712000 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

a) Describe the process of protein translation in prokaryotes. [8]

b) Enumerate various drugs that inhibit translation in bacteria. [2]

Question Number : 10 Question Id : 32718712001 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

a) Post transcriptional modifications. [2.5]

b) Mitochondrial DNA. [2.5]

c) Frameshift mutations. [2.5]

d) Role of telomeres in aging. [2.5]