

National Board of Examinations

Question Paper Name :	DNB Biochemistry Paper4
Subject Name :	DNB Biochemistry Paper4
Creation Date :	2024-10-21 16:15:58
Duration :	180
Total Marks :	100
Display Marks:	No
Share Answer Key With Delivery Engine :	No
Actual Answer Key :	No

DNB Biochemistry Paper4

Group Number :	1
Group Id :	3271872707
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	100

DNB Biochemistry Paper4

Section Id :	3271872710
Section Number :	1
Section type :	Offline
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	100
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	3271872714
Question Shuffling Allowed :	No

Question Number : 1 Question Id : 32718728354 Question Type : SUBJECTIVE Consider As Subjective : Yes

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. Describe mutation detection techniques. Write a note on in-vitro synthesized protein assay (IVSPA). [6+4]

Question Number : 2 Question Id : 32718728355 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

Describe hybridization techniques and applications of DNA hybridization in modern era of medicine. [5+5]

Question Number : 3 Question Id : 32718728356 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

Explain chromatography. Describe high pressure liquid chromatography (HPLC), reversed phase HPLC and their limitations. [3+7]

Question Number : 4 Question Id : 32718728357 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

Compare and Contrast colorimetric, spectrophotometry and flame photometry. Mention the role of each technique in the estimation of biochemical parameters and limitations of each technique. [10]

Question Number : 5 Question Id : 32718728358 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

a) Immunofluorescence assays, ELISA and Immunoblot. [5]

b) Differential centrifugation, density gradient centrifugation and analytical ultra centrifugation. [5]

Question Number : 6 Question Id : 32718728359 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

Describe recent advances in biochemistry of aging with reference to effect of caloric restriction on longevity. [10]

Question Number : 7 Question Id : 32718728360 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

Explain the DNA sequencing with reference to Gilbert and Sanger sequencing. State briefly advantage of Next Generation Sequencing (NGS) over basic type of sequencing. [5+5]

Question Number : 8 Question Id : 32718728361 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

- a) Biosensor and its application in laboratory services. [5]
- b) Difference between capillary electrophoresis and immunoelectrophoresis. [5]

Question Number : 9 Question Id : 32718728362 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

Differentiate between the following:

- a) Dry chemistry system and wet chemistry system. [5]
- b) Microarray technique and FISH Technique. [5]

Question Number : 10 Question Id : 32718728363 Question Type : SUBJECTIVE Consider As Subjective : Yes

Correct Marks : 10

- a) Plasmid Liposome complex as vector. [5]
- b) Human Microbiota, Microbiome metabolism and its role in novel obesity treatment. [5]