

National Board of Examinations

Question Paper Name :	DNB Biochemistry Paper4
Subject Name :	DNB Biochemistry Paper4
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Share Answer Key With Delivery Engine :	No
Actual Answer Key :	No

DNB Biochemistry Paper4

Group Number :	1
Group Id :	3271872452
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 Paper4

Section Id :	3271872455
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 :	3271872459
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 1 Question Id : 32718724753 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. Lateral Flow Immunoassay (LFIA) in Point of Care testing (POCT). [10]

Question Number : 2 Question Id : 32718724754 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 Next Generation Sequencing (NGS)? Enumerate the difference between third generation sequencing and fourth generation sequencing. [10]

Question Number : 3 Question Id : 32718724755 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Explain the process of determination of primary structure of peptide with the help of mass spectrometry. Write the advantage of protein sequencing by mass spectrometry. [10]

Question Number : 4 Question Id : 32718724756 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Write the difference between Contrast phosphorescence, fluorescence and chemiluminescence. Mention the role of each phenomenon in the biochemical parameter. [10]

Question Number : 5 Question Id : 32718724757 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) Bioprinting technology and its role in Biomedicine. [5]
- b) LAMP (Loop Mediated Isothermal Amplification) test and its advantage over standard PCR technique. [5]

Question Number : 6 Question Id : 32718724758 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Explain the term "resolution" with reference to chromatographic separation. State briefly the factors that affects "chromatographic" resolution. [10]

Question Number : 7 Question Id : 32718724759 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) Chromatin immunoprecipitation (CHIP) technique. [5]
- b) Difference between fingerprinting and footprinting. [5]

Question Number : 8 Question Id : 32718724760 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Differentiate between the following:

- a) siRNA and miRNA. [5]
- b) QF-PCR and RT-PCR. [5]

Question Number : 9 Question Id : 32718724761 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) CRISPR as a genome editing tool. [5]
- b) Stem cells and bone marrow transplant. [5]

Question Number : 10 Question Id : 32718724762 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Describe the recent advances in iron metabolism with reference to transferrin shuttles and transferrin cycle. [10]