

National Board of Examinations

Question Paper Name :	DNB Biochemistry Paper2
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DNB Biochemistry Paper2

Group Number :	1
Group Id :	3271871293
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 Paper2

Section Id :	3271871296
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 :	3271871300
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 1 Question Id : 32718711982 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. a) Explain the role of fructose 2, 6 bisphosphatase in regulating the blood glucose levels. [6]
- b) Enumerate various types of Glucose transporters (GLUT) and describe their tissue distribution. [4]

Question Number : 2 Question Id : 32718711983 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 role of carnitine in fatty acid metabolism. [4]
- b) Enumerate different types of lipoproteins. Explain in detail the metabolism of VLDL. [2+4]

Question Number : 3 Question Id : 32718711984 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) Pentose phosphate pathway and its significance. [5]
- b) JAK STAT pathway. [5]

Question Number : 4 Question Id : 32718711985 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 role of vitamin D in calcium homeostasis. [6]
- b) Explain why vitamin B₁₂ deficiency causes functional folic acid deficiency. [4]

Question Number : 5 Question Id : 32718711986 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) Write down structure and function of insulin. [5]
- b) What are antioxidants? Explain the mechanism of action of any two antioxidants. [1+4]

Question Number : 6 Question Id : 32718711987 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 energetics of Krebs cycle in detail. [5]
- b) Explain the role of electron transport chain in bioenergetics. [5]

Question Number : 7 Question Id : 32718711988 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 biochemical basis of following therapeutic agents:

- a) Statins. [2.5]
- b) Methotrexate. [2.5]
- c) 5-fluorouracil. [2.5]
- d) Ethanol. [2.5]

Question Number : 8 Question Id : 32718711989 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 role of cAMP in cell signaling with suitable examples. [5]
- b) Explain the signaling defect in cholera and pertussis disease. [5]

Question Number : 9 Question Id : 32718711990 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 biochemical basis of following disorders:

- a) Galactosemia. [2.5]
- b) Von Gierke disease. [2.5]
- c) Gout. [2.5]
- d) Zellweger syndrome. [2.5]

Question Number : 10 Question Id : 32718711991 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) Discuss the importance of one carbon metabolism. [5]

b) Enumerate various inborn errors of amino acid metabolism. Discuss any one in detail. [5]