

National Board of Examinations

Question Paper Name : DNB Biochemistry Paper2
Subject Name : DNB Biochemistry Paper2
Duration : 182
Total Marks : 100
Display Marks: No

Maximum Instruction Time : 0
Is Section Default? : No

Question Number : 1 Question Id : 32718744569 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 the reciprocal regulation of glycolysis and gluconeogenesis. Add a note on the significance of 2,3 - BPG in the body. [6+4]

Question Number : 2 Question Id : 32718744570 Consider As Subjective : Yes

Explain the short term as well as long term regulation of cholesterol metabolism. Add a note on hypocholesterolemic drugs. [7+3]

Question Number : 3 Question Id : 32718744571 Consider As Subjective : Yes

Compare and contrast between:

- a) Glucokinase and hexokinase. [5]
- b) Transamination and oxidative deamination. [5]

Question Number : 4 Question Id : 32718744572 Consider As Subjective : Yes

- a) Explain the process by which ammonia is handled by brain. [2]
- b) Explain the process by which specialized products are generated from tryptophan. [4]
- c) Explain the biochemical defect and clinical manifestation of homocystinuria. [4]

Question Number : 5 Question Id : 32718744573 Consider As Subjective : Yes

Elaborate the signal transduction mechanism of insulin, highlighting the pathways activated for the different biological functions of insulin. [10]

Question Number : 6 Question Id : 32718744574 Consider As Subjective : Yes

Explain the process of ATP generation in the mitochondria. Add a note on uncouplers. [7+3]

Question Number : 7 Question Id : 32718744575 Consider As Subjective : Yes

- a) Glycaemic index. [2.5]
- b) Vegetarian (Vegan) diet and its consequences. [2.5]
- c) Dietary fibres. [2.5]
- d) Trans fatty acids and their effects. [2.5]

Question Number : 8 Question Id : 32718744576 Consider As Subjective : Yes

Explain methemoglobinemia under the headings of:

- a) Definition. [2]
- b) Biochemical defect. [4]
- c) Clinical manifestations. [2]
- d) Management protocol. [2]

Question Number : 9 Question Id : 32718744577 Consider As Subjective : Yes

Describe Vitamin A under the headings of:

- a) Vitamers. [2]
- b) Biological roles of each vitamer. [4]
- c) Deficiency manifestations and its management. [4]

Question Number : 10 Question Id : 32718744578 Consider As Subjective : Yes

Explain the various metabolic alterations that occurs during prolonged fasting. Enumerate the energy sources for brain and RBCs during the various phases of starvation. [8+2]