

National Board of Examinations

Question Paper Name : DNB Biochemistry Paper1
Subject Name : DNB Biochemistry Paper1
Duration : 180
Total Marks : 100
Display Marks: No

Maximum Instruction Time : 0

Question Number : 1 Question Id : 32718736925 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. Discuss, how internal and external quality control is done in clinical biochemistry laboratory. [10]

Question Number : 2 Question Id : 32718736926 Consider As Subjective : Yes

- a) Michaelis constant in enzyme kinetics. [2]
- b) Mechanism based enzyme inhibition. [3]
- c) Allosteric regulation of enzyme activity. [2]
- d) Therapeutic enzymes. [3]

Question Number : 3 Question Id : 32718736927 Consider As Subjective : Yes

According to ICMR guidelines for biomedical and health research in human participants, discuss the following:

- a) Principles of ethical conduct of research. [4]
- b) Informed consent. [3]
- c) Recruitment of study population. [3]

Question Number : 4 Question Id : 32718736928 Consider As Subjective : Yes

- a) List different grades of water used in clinical biochemistry lab. How are the different grades of water prepared in laboratory? Mention two uses of each grades of water in Biochemistry lab. [1+2+1]
- b) Classify centrifuge machines which are used in clinical laboratory based on their:
- (i) speed. [2]
 - (ii) rotors used. [2]
- c) Mention the good operating practices to be followed for centrifuge. [2]

Question Number : 5 Question Id : 32718736929 Consider As Subjective : Yes

- a) Role of cell nucleus in accelerate ageing. [2.5]
- b) Peroxisome biogenesis disorders. [2.5]
- c) Lysosomal acid lipase deficiency. [2.5]
- d) Mitochondrial diseases. [2.5]

Question Number : 6 Question Id : 32718736930 Consider As Subjective : Yes

- a) You have been asked to evaluate a new diagnostic test kit in clinical biochemistry lab that involves a new method and is different from that is used conventionally. What parameters will you check for evaluation of the kit? What criteria will you follow before using the kit for patient care? [2+3]
- b) Discuss the uses of six sigma metrics in clinical laboratory. [5]

Question Number : 7 Question Id : 32718736931 Consider As Subjective : Yes

Discuss about Arterial Blood Gas (ABG) analysis with respect to:

- a) Sample collection for ABG analysis. [2.5]
- b) Parameters measured and calculated by ABG machine. [2.5]
- c) Principle of blood gas analyser. [2.5]
- d) ABG parameters altered in metabolic acidosis. [2.5]

Question Number : 8 Question Id : 32718736932 Consider As Subjective : Yes

Discuss the types of proteinuria, their causes and the types of proteins excreted in each type of proteinuria. [10]

Question Number : 9 Question Id : 32718736933 Consider As Subjective : Yes

Discuss various methods of blood glucose estimation (including glucometer) under following headings:

- a) Principle involved in each method. [5]
- b) Advantages and disadvantages of each method. [5]

Question Number : 10 Question Id : 32718736934 Consider As Subjective : Yes

- a) Linear regression analysis. [2.5]
- b) Cohort studies. [2.5]
- c) Meta-analysis. [2.5]
- d) Impact factor of journal. [2.5]