

B.Sc. (NEP) Sem.-3 Examination

DSC-C-232

Bio-Chemistry

November-2025

Time : 2-00 Hours]

[Max. Marks : 50

Instructions:1) All Questions in Section I and Section II are compulsory and carry equal marks

2) Illustrate your answers with neat diagrams wherever necessary

Section - I

Q1. (A)	Write a short note on Zymogens and their significance.	(6)
(B)	Define:1. Apoenzyme 2. Holoenzyme 3. Prosthetic group 4. Cofactor	(4)
OR		
Q1. (A)	Explain in detail enzyme specificity.	(7)
(B)	Briefly explain active site of an enzyme.	(3)
Q2. (A)	List the differences between fat soluble and water-soluble Vitamins.	(6)
(B)	Define and give one example each:1. Avitaminosis. 2. Antivitamins 3. Hypervitaminosis 4. Provitamin	(4)
OR		
Q2. (A)	Explain the physiological role of Vitamin C	(6)
(B)	Name the source and Deficiency diseases caused by the lack of Vitamin B1,B2,Biotin& B12	(4)
Q3. (A)	Define hormones and classify the hormones based on their chemical structure.	(5)
(B)	Explain in detail the role of Insulin.	(5)
OR		
Q3. (A)	Discuss in detail the two mechanisms of hormone action.	(6)
(B)	Write a brief note on hypothyroidism.	(4)
Q4. (A)	Define the following:1. Mean 2. Median 3. Mode 4. Frequency polygon 5. Histogram	(10)
OR		
Q4. (A)	Define standard deviation and discuss applications of Biostatistics in research.	(6)
(B)	The heart rate of 12 hypertension patients is as follows: 177,150,175,149,156,140,148,130,142,170,115,130. find out the mean heart rate and calculate the standard deviation.	(4)
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	Section - II	
Q5.	Attempt any TEN out of the following:	(10)
1.	Define: Activation energy	
2.	Define Ribozymes	
3.	What is induced fit hypothesis of enzyme action model	
4.	Give one difference between enzyme & vitamins	
5.	Give the dietary source of Vitamin A	
6.	Name the coenzyme form of Vitamin B6	
7.	What is the physiological role of Vitamin D	
8.	What is the function of Glucagon. Where is it formed.	
9.	Which hormone is produced by the pituitary gland	
10.	What happens in Hyperthyroidism	
11.	Name any two methods to represent biological data.	
12.	What do we mean by range in biostatistics	

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