

**B.Sc. Sem.-3 Examination
CC 202**

**Bio-Chemistry (O&N)
December-2025**

Time : 2.30 Hours]

[Max.Marks : 70

(Cell Biology and Physiology)

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)	List the important differences between Prokaryotic and Eukaryotic cell .	(5)
(B)	Discuss the structure and function of Mitochondria .	(6)
(C)	What is cell fractionation ?	(3)
OR		
Q1. (A)	List the functions of the following organelles: 1. Golgi Bodies 2. Plasma membrane	(8)
(B)	Write a brief note on: Nucleus	(6)
Q2. (A)	Name the different types of muscles and discuss the structure, location and function of each.	(9)
(B)	Draw a well labelled diagram of a Neuron	(5)
OR		
Q2. (A)	Discuss the muscle proteins in detail and their role in muscle contraction	(8)
(B)	What are the main components of bone matrix? Name the inorganic salts present in bone. What is Bone Mineralisation	(6)
Q3. (A)	Discuss in detail two mechanisms of Hormone action	(08)
(B)	Name the dietary sources and list the different functions of Vitamin C	(06)
OR		
Q3. (A)	Discuss Insulin and its deficiency disorder.	(10)
(B)	Define Vitamins and coenzymes. Name the coenzyme involved in redox reactions. Which coenzyme is involved in acyl group transfer?	(04)
Q4. (A)	Discuss the structure of heart with a well labelled diagram.	(07)
(B)	Write a brief note on: Blood Pressure	(07)
OR		
Q4. (A)	Explain in detail cardiac cycle with a well labelled diagram	(09)
(B)	Discuss the two types of Blood circulation	(05)
		PTO

Section - II		
Q5.	Attempt any Seven out of the following:	(14)
1.	Name the types of Endoplasmic Reticulum. What is the function of Endoplasmic Reticulum	
2.	What are marker enzymes. Give one example	
3.	List two important differences between Plant cell and Animal cell.	
4.	What is Reflex action	
5.	Define a sarcomere.	
6.	Name the important protein found in Bone	
7.	Which cells of the pancreas secrete insulin?	
8.	Name the hormones secreted by the thyroid gland.	
9.	What is NAD ?	
10.	Define Artery and Vein	
11.	What are junctional tissues. Name them.	
12.	Give the full form of ECG	

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