



Centre for Nutrition and Dietetics
School of Interdisciplinary Sciences and Technology
Jamia Hamdard, New Delhi-110062
END SEM EXAMINATION
M.Sc. Nutrition and Dietetics, December, 2025,
Paper Title: Nutritional Biochemistry; Paper Code: MDNCC-104

Roll No.

15.12.25
MSc. Nutrition
1st Sem.

Time allotted: 2.5 Hrs.

Max Marks: 60

Important: At the END, mention how many questions from each section you have attempted.

Note: Write to the point. Do not insert margins in the answer sheet. Before answering make sure you have mentioned the Question No. & Section.

Section-A (2 Marks each, Attempt All)

<u>Questions</u>		<u>Mapping</u>
Q1.	How glucose and Fructose are isometric to each other	PO:2,3/CO:1
Q2.	In brief write how pyruvate is metabolized under aerobic and anaerobic conditions.	PO:2,3/CO:2
Q3.	What is the fate of ammonia in the body?	PO:2,3/CO:3
Q4.	Define apoenzyme and holoenzyme.	PO:2,3/CO:4
Q5.	What is Maple Syrup Urine Disease (MSUD)?	PO:2,3/CO:5

Section- B (Attempt any 5) (5 Marks Each)

Q6.	Draw Glycolysis cycle and Elaborate on the energy yield of glycolysis under aerobic and anaerobic states.	PO:2,3/CO:3
Q7.	Explain Lock and Key and Induced Fit models of enzyme action.	PO:2,3/CO:3
Q8.	Discuss the importance and mechanism of ammonia detoxification in the body.	PO:2,3/CO:3
Q9.	Write a detailed note on different types of vitamins	PO:2,3/CO:2
Q10.	Explain the β -oxidation of fatty acids with steps. What is the role of HDL?	PO:2,3/CO:3
Q11.	Explain the factors affecting enzyme activity (temperature, pH, substrate concentration) with graphs	PO:2,3/CO:4
Q 12.	Explain mode of hormone action defining both the mechanism briefly	PO:2,3/CO:3

Section C (Attempt any 2) (12.5 Marks Each)

Q 13.	Explain enzyme kinetics and diagnostic significance of enzymes	PO:2,3 /CO:1
Q14.	Explain in detail the mechanisms of hormone action with diagrams.	PO:2,3 /CO:2
Q15.	Write a detailed account of lipid digestion, absorption, transport, storage, and oxidation.	PO:2,3 /CO:3
Q16.	Give detail reactions of TCA cycle with its significance	PO:2,3 /CO:4