

Roll no.....

8.12.25
MSc. Nutri.
3rd Sem.

Centre for Nutrition and Dietetics
School of Interdisciplinary Sciences and Technology
Jamia Hamdard, New Delhi – 110062
M.Sc. Nutrition and Dietetics, (Batch-24-26)
End Term Examination, Semester- III, December, 2025
Paper Title: Nutrigenomics; Paper Code: MDNEC-306

Duration: 2:30 Hours

Max Marks: 60

Note: write to the point, please make sure you have mentioned question no. before answering

SECTION-A

Q. no- I. Attempt any five from the following questions:

(2 marks each; 2X5=10 marks)

1)	What is DNA methylation? Write the methyl donor sources.	(CO-1,2 PO-2,3)
2)	What is the role of PPARs? Give the role of ADIPOQ and ALDH2.	(CO-1,2 PO-2,3)
3)	What is the difference between Epigenetics and Nutrigenomics?	(CO-1,2 PO-2,3)
4)	What is HDAC?	(CO-1,2 PO-2,3)
5)	What do you mean by Nucleoside and nucleotide?	(CO-1,2 PO-2,3)
6)	Which foods are rich in Allicin and genestein.	(CO-4 PO-2,3)

SECTION-B

Q. no-II. Attempt any five of the following question:

(5 marks each; 5X5=25marks)

1)	What is Central dogma of life? Explain translation in eukaryotes.	(CO-1,2 PO-2,3)
2)	Describe the genes associated with coronary heart disease (CHD) and the potential treatments.	(CO-1,2,3 PO-2,3)
3)	Describe the laws of inheritance in detail and discuss how these principles influence the occurrence of genetic diseases in individuals	(CO-1,2 PO-2,3)
4)	Explain the ethical consideration for genetic testing.	(CO-5 PO-2,3)
5)	What is histone? Explain the histone modification.	(CO-1,2 PO-2,3)
6)	Mention the salient features of Human genome project and its application.	(CO-1,2 PO-2,3)
7)	Explain DNA replication.	(CO-1,2 PO-2,3)
8)	What do you understand by nutraceuticals? Explain the role of nutraceuticals giving examples of animal and plant based foods.	(CO-4 PO-2,3)

SECTION-C

Q. no- III. Choose any two of the following question:

(12.5 marks each; 12.5X2=25)

1)	Elaborate the importance of Nutrigenomics in detail.	(CO-1,2 PO-2,3)
2)	Provide an overview of the major OMICS fields and explain their roles in biological research.	(CO-1,2,3 PO-2,3)
3)	Write about the effects of fat intake on gene expression.? Describe in detail.	(CO-1,2,3 PO-2,3)
4)	Discuss how genetic interactions contribute to the onset and progression of type II diabetes.	(CO-1,2,3 PO-2,3)