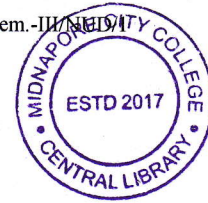


PG CBCS
M.Sc. Semester-III Examination, 2022
NUTRITION & DIETETICS
Paper: NUD 303



Full Marks: 40

Time: 2 Hours

Write the answer for each unit in separate sheet

UNIT-29

(CONCEPTS OF NUTRITIONAL GENOMICS, PROTEOMICS AND METABOLOMICS)

GROUP-A

Answer any **TWO** of the following questions:

2×2=4

1. Compare nucleotide and nucleoside.
2. Write the fundamental difference between PCR and RT-PCR.
3. Name the types of epigenetic modifications.
4. What are the determinants of personalized diet?

GROUP-B

Answer any **TWO** of the following questions:

2×4=8

5. Justify the statement, "Diet is an epigenetic regulator".
6. Discuss the role of minerals in DNA metabolism.
7. Define "Nutrigenomics". Discuss the application of nutrigenomics.
8. What is the fundamental process in genetic engineering? Write the applications of genetic engineering in nutrition.

GROUP-C

Answer any **ONE** of the following questions:

1×8=8

9. What is "gene-diet interaction"? How do epigenetic factors induce or prevent Diabetes?
How do different factors affect diet-gene-cancer interaction? 2+3+2
10. State the types of diet influenced histone modifications with their specific catalyzing enzymes. Discuss the importance of maternal nutrition in epigenetic effect of the offspring. 4+4

(P.T.O.)

**UNIT- 30****(DRUG & NUTRIENT INTERACTION)****GROUP-A****Answer any TWO of the following questions:****2×2=4**

1. What do you mean by pharmacokinetics?
2. Mention the name of different routes of drug administrations.
3. Define first pass metabolism of drug.
4. Mention one name of four probiotic organisms, which influence the human health.

GROUP-B**Answer any TWO of the following questions:****2×4=8**

5. Discuss the role of polyphenols as anticancer agent.
6. Briefly discuss about first order & zero order kinetics of drug elimination.
7. Write a short note on bioavailability of drug.
8. Explain the role of plasma protein on drug transportation.

GROUP-C**Answer any ONE of the following questions:****1×8=8**

9. Classify nutraceuticals. Discuss the health beneficial role of probiotic on human health.

2+6

10. "Nutrient can interfere with drug metabolism"- Justify. Explain the role of drug on nutrient absorption & bioavailability. Mention the routes of drug elimination after metabolism.

3+3+2********