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PG CBCS
M.Sc. Semester-III Examination, 2020
NUTRITION & DIETETICS
PAPER: NUD 303
(Concepts of Nutritional Genomics, Proteomics and Metabolomics)

Full Marks: 40**Time: 2 Hours****Write the answer for each unit in separate sheet****NUD 303.1**

- 1. Answer any two question from the following. (250 Words) **10X2=20****
- a. (i) What do you mean by metabolomics? 2+6+2
(ii) Briefly discuss about mode of action of aflatoxin M1 and M2 for toxicity.
(iii) What is genome?
- b. (i) Explain the role of fatty acids on gene expression. 8+2
(ii) What is FAS gene?
- c. (i) What do you mean by nutrigenomics? 2+8
(ii) Write the role of glucose on gene expression.
- d. (i) Define epigenetic. 2+4+4
(ii) Explain any one epigenetic regulation with special reference to cancer.
- e. (i) What do you mean by carcinogen and mutagens? 2+4+4
(ii) What are the genetical basis of cancer?
(iii) State the role of antioxidant on prevention of cancer.
- f. Explain the fundamental principle, procedure and basic application of q-PCR. 10

NUD 303.2

- 2. Answer any two questions from the following. (250 Words) **10X2=20****
- a. (i) Define Pharmacokinetics and Pharmacodynamic. 3+2+5
(ii) What is Pharmacotherapeutics?
(iiii) Discuss the major routes of drug administration.

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- b. (i) What do you mean plasma half life of drug? 3+7
(ii) Explain first order and zero order kinetics of drug elimination.
- c. (i) Briefly discuss about Drug biotransformation with special reference to Oxidation and Glutathione conjugation. 8+2
(ii) Define first pass metabolism.
- d. (i) State the role of plasma protein in drug transportation. 5+2+3
- e. (ii) What do you mean by LD50, TD50, ED 50?
(iii) Differentiate among Antacids, proton pump inhibitor and H2 blocker.
- f. (i) Discuss the role of nutrient on drug metabolism. 5+5
(ii) Write the role of probiotic on human health.
- g. Explain the role of Drug on nutrient absorption and bioavailability. 10
