



Total page: 01

**PG (CBCS)
M.Sc. Semester- III Examination, 2023
FOOD SCIENCE AND NUTRITION
PAPER: FSN 301**

(FUNCTIONAL FOODS, NUTRACEUTICALS, FOOD NANOTECHNOLOGY & FOODOMICS)

Full Marks: 40

Time: 2 Hours

The figures in the right-hand margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

GROUP-A

- A. Answer any **FOUR** of the following questions: 4×2=8
1. What is apoptosis and necrosis?
 2. Write the dietary sources of nucleotides?
 3. What do you mean by phytochemical?
 4. What are phytates?
 5. What are Phytosterols? Give example.
 6. How does nutrigenomics impact on personalized nutrition?

GROUP-B

- B. Answer any **FOUR** of the following questions: 4×4=16
7. Describe the anti-nutritional activities of protease inhibitors.
 8. Describe the role of phytoestrogens on modulating bone health.
 9. Discuss cholesterol lowering effect of Phytosterols.
 10. Discuss the interaction of p53 gene and oncogene on cell cycle regulation.
 11. Write down the role of polyphenols on prevention of cancer.
 12. "Are probiotics effective without prebiotics"- justify the statement critically.

GROUP-C

- C. Answer any **TWO** of the following questions: 2×8=16
13. Define food nanotechnology. State the application of food nanotechnology in food industry. Mention the different health & risk assessment of food nanotechnology. 1+4+3=8
 14. State the bio-chemical aspect of 'Resveratrol'. Discuss the role of Vit-A and DHA on obesity management. 3+5
 15. Describe the adverse effect of xenoestrogens on reproductive system. How does xenobiotics biotransformation occurred in our body? 3+5
 16. Write about the selection of carbohydrate on a diet of PCOD patients. Write about the non-nutrient effect of PUFA. 4+4
