



PG
M.SC. Semester- IV Examination, 2026
FOOD SCIENCE & NUTRITION
PAPER: FSN 401
(GENETICALLY MODIFIED FOODS, FOOD FORTIFICATION AND
FOODTOXICOLOGY)

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

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

2×4=8

1. Briefly state about over-fortification of food with one example.
2. What are 'Endocrine disrupter' type of environmental toxins.
3. Define QSARs and SARs.
4. What is meant by malting?
5. What are genetically modified (GM) organism and GM foods?
6. Why is cooking not always effective in eliminating drug residue in food?

GROUP-B

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

4×4=16

7. Evaluate the importance of 'Hazard Analysis Critical Control Point (HACCP) in preventing food poisoning.
8. Discuss the risk of pesticides on human health focusing 'Bioaccumulation and Biomagnification.'
9. How are crops being genetically engineered?
10. Describe the mechanism of toxicity of "Nitroso compounds" during food processing and their health impact.
11. Compare prospective and retrospective studies with respect to design and validity in food safety research.
12. Explain in details about the effects of any two heavy metals present in foods on human health.

GROUP-C

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

8×2=16

13. Discuss the mechanism of 'Malachite green' induced toxicity, health hazards and regulatory concerns in food system.

(P.T.O.)

(2)

14. Draw & describe an experimental design to assess food toxicity in experimental model. What do you mean by therapeutic index? 6+2
15. Discuss on favism and its effects. Write the importance of mass food fortification in community health up gradation.
16. Give an account about the toxicity of aflatoxin poisoning. Write a short about glycoalkaloids toxicity in humans. 4+4

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