

2025

M.S.c 3rd Semester Examination

PAPER : M250306 (MOOCS)

**FUNCTIONAL FOODS AND
NUTRACEUTICALS**

Full Marks : 100

Time : Three Hours

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

Group - A

Answer any *nine* questions from the following :

2×9=18

1. Define gums. Give examples of gums used as food additives. 1+1
2. In cancer management which functional foods are beneficial? 2
3. What do you mean by probiotics and prebiotics? Give examples of each of them. 1+1
4. Define protease inhibitors with suitable examples. 1+1
5. Enlist the sources of capsaicin and piperine. 1+1
6. What are gingerols? 2

P.T.O.

(2)

7. How does a functional food differ from a nutraceutical? 2
8. Why vitamins are important for living beings? 2
9. Write the differences between proteins and peptides. 2
10. Define phytoestrogens. 2
11. Differentiate between anthocyanins and anthocyanidins. 2
12. Draw the chemical structure of curcumin. 2
13. Name the organosulphur compounds present in onion and garlic. 2
14. What is French Paradox? 2

Group - B

Answer any *five* questions from the following :

4×5=20

15. What are saponins and haemagglutinins? 2+2
16. Write the five major classes of polyphenols. 4
17. What are the challenges and opportunities in developing ready-to-eat (RTE) and ready-to-cook millet (RTC)-based functional foods? 4
18. Classify functional food based on nutrients and non-nutrients components. 4
19. Discuss the beneficial effects of cinnamaldehyde on human health. 4

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20. Describe the role of fiber in the management of coronary heart disease. 4
21. How gastrointestinal microbiota and brain health are interrelated? 4
22. Write briefly on the anti-nutritional factors. 4

Group - C

Answer any *four* questions from the following :

8×4=32

23. Define enzyme. Classify it. Enumerate vitamins which function as coenzymes. 2+2+4
24. What is resveratrol? What are the sources of it? Describe the metabolism and bioavailability of it. What are the health benefits of it? 1+1+3+3
25. Write the names of omega 3-fatty acids. Discuss the roles of omega 3 fatty acids in brain development and cancer prevention. 3+5
26. Discuss the health benefits of Quercetin. 8
27. How oligosaccharide in the large intestine can promote beneficial gut bacteria? How oligosaccharides can be distinguished from other polysaccharides? 6+2
28. Explain the physiological effects and health benefits of phytosterol. 8

Internal Assessment : 30 marks