

MAHATMA GANDHI UNIVERSITY, KOTTAYAM**MGU-UGP (HONOURS) B SC BOTANY EXAMINATION****V SEMESTER****MG5DSEBOTA04****PLANT-BASED NUTRACEUTICALS**

(2024 ADMISSION ONWARDS)

Duration: 2 Hours**Maximum Marks: 70**

Remember(K), Understand(U), Apply(A), Analyse(An), Evaluate(E), Create(C), Skill(S), Interest(I) and Appreciation(Ap)

Students should attempt at least one question from each course outcome to enhance their overall outcome attainability.

Part A**Short Answer Questions**

Answer any 10 questions

Each question carries 2 marks

1. Define nutraceuticals and give two examples of plant-based nutraceuticals. [CO1]
2. What are functional foods? Mention any two of their important features. [CO1]
3. List any four major plant-derived bioactive compounds. [CO1]
4. Define ethnobotany and state its importance in nutraceutical discovery. [CO2]
5. Name any two traditional medicine systems that use plants for healthcare and nutrition. [CO3]
6. What is bioprospecting? Mention one of its applications in nutraceutical discovery. [CO2]
7. Mention any two general health benefits of plant-based nutraceuticals. [CO3]
8. Name two plant-based nutraceuticals used for supporting heart health. [CO3]
9. What is meant by the safe use of nutraceuticals? [CO3]
10. What is Soxhlet extraction? [CO4]
11. Mention the principle and significance of HPLC in nutraceutical testing. [CO4]
12. State the role of FSSAI in the regulation of nutraceutical products. [CO4]

[2×10 = 20]**Part B****Short Essay Questions**

Answer any 8 questions

Each question carries 5 marks

13. Explain the evolution and scope of nutraceuticals [CO1]
14. Explain the differences between herbal drugs and pharmaceuticals.. [CO1]
15. Explain the major plant-derived bioactive compounds and discuss their importance in plant-based nutraceuticals. [CO1]
16. Discuss the health benefits of *Emblica officinalis*. [CO2]
17. Describe the methods for collecting traditional knowledge. [CO2]
18. Explain the advantages and limitations of nutraceuticals.. [CO3]
19. Discuss the role of bitter melon in diabetes management. [CO3]
20. Discuss factors affecting extraction efficiency. [CO4]
21. Describe the principles and significance of HPLC and UV-Vis spectrophotometry in nutraceutical testing. [CO4]
22. Explain the roles of FSSAI, AYUSH, and WHO in ensuring safety and quality. [CO4]

[5×8 = 40]

Part C

Essay Questions

Answer any 1 questions

Each question carries 10 marks

- 23. Explain the importance of medicinal plants in traditional healthcare practices [CO2]
- 24. Discuss the general health benefits and uses of plant-based nutraceuticals.[CO3]

[10×1 = 10]