

**Avinashilingam Institute for Home Science and Higher Education for Women,
Coimbatore – 641 043**

Continuous Internal Assessment Test II – April, 2025

Class: I PG

Semester II

Time: 2 Hours

Major: FSMD

Max. Marks: 60

23MBCI01 – Natural Antioxidants in Human health and Diseases

Course Outcomes:

CO1. Acquire knowledge about the free radicals and oxidative stress

CO2. Understand the pathophysiology of oxidative stress associated diseases

CO3. Attain knowledge about different criteria of antioxidants classification and their role in combating free radical- induced diseases

CO4. Identify different phytoconstituents with antioxidant activity

CO5. Explore the role of antioxidants to neutralize free radicals and combat oxidative stress

Part-A

6x 1 = 6

Circle the correct answer

1. Pick the odd man out CO3K4
a. Citric acid b. Flavanoids c. Phenols d. Carotenoids
2. Identify the singlet oxygen quenching antioxidant CO3K2
a. Citric acid b. Flavanoids c. Phenols d. Carotenoids
3. Anthocyanins are rich in CO4K3
a. Spinach b. Pumpkins c. Beetroot d. Pulses
4. Identify the foods richest in antioxidants CO4K2
a. Eggs b. Meat c. Vegetables d. Fish
5. All the following diseases are aggravated due to disturbance in redox balance EXCEPT CO5K2
a. Alzheimer's disease b. Diabetes Mellitus
c. Rheumatoid arthritis d. Hypertension
6. Which of the following assays is used in estimating antioxidants? CO5K2
a. TBARS b. DPPH c. Vitamin C d. MDA

Part B

3x6=18

Answer the following

Answer should not exceed 200 words or one page

7. a. Write a note on synthetic antioxidants CO3K2
[OR]
7. b. What are the different types of flavonoids? State their significance CO3K2
8. a. Comment on the role of vitamins as antioxidants CO4K2
[OR]
8. b. Explain about food sources of antioxidants CO4K2
9. a. Relate the role of antioxidants in neutralizing free radicals CO5K2
[OR]
9. b. Briefly explain the role of free radicals CO5K2

Part C

3X12=36

Answer any one question

Answer should not exceed 700 words or four pages

10. a. Write a note on oxygen scavenging and reducing antioxidants CO3K2
[OR]
10. b. Elaborate role of metal chelating antioxidants CO3K2
11. a. Write a note the glutathione transferases and reductases CO4K2
[OR]
- 11.b. Relate the role of alkaloids and polyphenols in antioxidant defence mechanisms CO4K2
12. a. Give a detailed account the neutralizing free radicals and combating oxidative stress CO5K2
[OR]
12. b. Explain about the free radical antioxidants imbalance leading to degenerative diseases CO5K2

Staff in-charge: Dr. E. Nithya

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