

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPHARM0422]

**APRIL 2022
(SEPTEMBER 2021 SESSION)**

Sub. Code: 2088

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 SEMESTER VIII
PAPER XII - DIETARY SUPPLEMENTS AND NUTRACEUTICALS
Q.P. Code: 562088**

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Describe the types of food adulterations in short. Explain with suitable examples how food adulteration is detected with rapid test.
2. Defend the free radical theory of ageing with the help of its modifications.
3. Explain the FDA regulations for nutraceuticals.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Explain in detail the interaction of environmental factors on the potential of nutraceuticals.
2. Elaborate vitamins as functional food.
3. Summarize the role of free radicals in cancer.
4. Why marine algae are referred as super food?
5. Elaborate "Resveratrol - a phytochemical as nutraceutical".
6. Compare and contrast the role of FSSAI and AGMARK rules and regulations.
7. Interpret Flaxseeds and Ginkgo as nutraceuticals.
8. Explain the role of Soya beans as nutraceutical.
9. Enlist the sources of anthocyanidines. Give examples along with their chemical structures.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Probiotics.
2. Source and medicinal benefits of Broccoli.
3. Active biomarkers of Garlic.
4. Biological functions of Carotenoids.
5. Chemical structure and medicinal benefits of Tocopherols.
6. Butylated Hydroxy Anisole.
7. Define nutraceuticals.
8. Melatonin.
9. Types of food adulteration.
10. Lacto Bacillum.

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[BPHARM 1022]

**OCTOBER 2022
(MARCH 2022 SESSION)**

Sub. Code: 2088

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 - SEMESTER VIII
PAPER XII - DIETARY SUPPLEMENTS AND NUTRACEUTICALS
Q.P. Code: 562088**

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Explain the role of nutraceutical in prevention and treatment of cancer and heart diseases.
2. What are flavanoids? Explain how they are beneficial as nutraceuticals by taking examples of Rutin and Naringin.
3. What are functional foods? Discuss the role of the dietary fibers as a functional food.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Point out the role of Spirulina as nutraceuticals.
2. Enumerate the beneficial and damaging roles of free radicals.
3. What are antioxidants? Classify antioxidants with examples.
4. What are prebiotics and probiotics? Explain how they are beneficial as nutraceuticals?
5. What are phytochemicals? Classify phytochemicals with examples.
6. Enlist the food items that are eligible for AGMARK certification.
7. Compare and contrast α and β -carotenes focusing their sources, chemical structures and medicinal benefits.
8. What is nutrition? Explain the role of nutrition in ageing.
9. Criticize the effect of storage conditions on the potential of nutraceuticals.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Mention any four marketed nutraceuticals.
2. Phytoestrogens.
3. Classify Carotenoids.
4. Vitamin C.
5. Biological source, family of Ginseng and structure of Ginsenosides.
6. Medicinal health benefits of Garlic.
7. Mention five regulatory aspects of nutraceuticals.
8. Alpha-Lipoic acid.
9. Write the medical benefits of Sea foods.
10. List out Reactive Nitrogen Species (RNS).

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[B.PHARM 0323]

**MARCH 2023
(SEPTEMBER 2022 EXAM SESSION)**

Sub. Code: 2088

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 - SEMESTER VIII
PAPER XIII - DIETARY SUPPLEMENTS AND NUTRACEUTICALS**

Q.P. Code: 562088

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Define and classify nutraceuticals with examples.
2. Discuss fructo-oligosaccharides and Tocopherols as nutraceuticals in detail.
3. Discuss the GMP on food safety in detail.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Summarize the positive effects of processing on potential of nutraceuticals with suitable examples.
2. Define HACCP. Explain the principles involved in HACCP.
3. Outline the role of free radicals in Diabetes mellitus.
4. Enlist the examples of functional foods for prevention of chronic diseases.
5. Explain the reactive oxygen species.
6. Elaborate the stepwise effects of free radicals on lipids.
7. Compare and contrast ROS and RNS on the basis of production site, function, clearance pathways and examples.
8. Explain Super Oxide Dismutase (SOD) with special emphasis on its isoforms.
9. Write a note on maternal and child nutrition.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Occurrence and chemical structure of Lycopene.
2. Medicinal benefits of Xanthophylls.
3. Chemical structure and medicinal benefits of Quercitin.
4. AGMARK.
5. Define nutraceuticals.
6. Biological source and medicinal benefits of Tea.
7. Vitamin E.
8. Microalgae.
9. Omega 3 fatty acid.
10. Types of inflammation.
