

## End Term (Even) Semester Examination May-June 2025

Roll no.....

Name of the Course and Semester: **B. PHARM VIII Semester**

Name of the Subject: **DIETARY SUPPLEMENTS AND NUTRACEUTICALS**

Subject Code: **BP-812ET**

Time: **3 hour**

**Maximum Marks: 75**

**Note:**

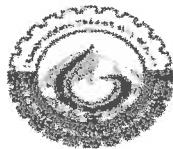
- (i) This question paper contains three sections
- (ii) All the sections are compulsory

### Section-A

#### MULTIPLE CHOICE QUESTION

**20 X 1 = 20 MARKS**

S.N	CONTENTS		
1.	Functional foods are defined as foods that: A. Have no nutritional value B. Only provide calories C. Provide health benefits beyond basic nutrition D. Are used solely for weight loss		CO-1
2.	Which compound is a marker in garlic with medicinal value? A. Allicin B. Curcumin C. Resveratrol D. Lycopene		
3.	A major health problem that soy isoflavones help manage is: A. Osteoporosis B. Diabetes C. Cancer D. Menopausal symptoms		
4.	The main nutrient in spirulina that helps combat anemia is: A. Vitamin E B. Iron C. Vitamin K D. Selenium		
5.	Which phytochemical is found abundantly in green tea? A. Catechin B. Lignin C. Lycopene D. Rutin		CO-2
6.	Anthocyanidins are pigments that give fruits which color? A. Green B. Purple/Red/Blue C. Yellow D. White		
7.	Quercetin belongs to which class of phytochemicals? A. Carotenoids B. Flavonoids		



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	C. Polyphenolics D. Alkaloids		
8.	Alliyl trisulfide contributes to the health benefits of which food? A. Onion B. Spinach C. Tomatoes D. Carrots		
9.	Which of the following is a common reactive oxygen species (ROS)? A. Superoxide anion ( $O_2^-$ ) B. Glucose C. ATP D. DNA		CO-3
10.	Which macromolecule is NOT directly damaged by free radicals? A. Proteins B. Lipids C. Nucleic acids D. Vitamins		
11.	Which enzyme acts as an antioxidant by converting superoxide into hydrogen peroxide? A. Catalase B. Peroxidase C. Superoxide dismutase (SOD) D. Glutathione		
12.	Which of the following is a common reactive oxygen species (ROS)? A. Superoxide anion ( $O_2^-$ ) B. Glucose C. ATP D. DNA		
13.	Which synthetic antioxidant is commonly used in food preservation? A. Glutathione B. -Lipoic acid C. Butylated hydroxyanisole (BHA) D. Melatonin		CO-4
14.	Glutathione peroxidase requires which mineral for its activity? A. Calcium B. Selenium C. Iron D. Zinc		
15.	Which non-enzymatic antioxidant is a tripeptide involved in detoxification? A. Coenzyme Q10 B. Melatonin C. Glutathione D. Vitamin C		



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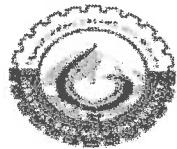
16.	In diabetes mellitus, free radicals contribute to complications by: A. Enhancing insulin secretion B. Causing oxidative damage to blood vessels C. Increasing glucose uptake D. Promoting $\beta$ -cell regeneration		
17.	Which Indian authority regulates food safety and standards? A. AGMARK B. FDA C. FSSAI D. ISO		CO-5
18.	AGMARK certification primarily ensures: A. Nutritional value B. Color and flavor C. Agricultural product quality D. Shelf life		
19.	Which authority ensures that GMPs are followed in nutraceutical manufacturing in India? A. FSSAI B. AGMARK C. ISI D. NABL		
20.	Which one of the following is NOT a factor that affects nutraceutical stability? A. Temperature B. Time C. Humidity D. Barcoding		

**Section B**

**Short Questions: Attempt any seven questions.**

**7x5 = 35 marks**

SN	QUESTIONS	CO's
1.	What are nutraceuticals? Classify them with examples.	CO 1
2.	Explain the significance of public health nutrition.	CO 1
3.	Differentiate between prebiotics and probiotics with examples.	CO 2
4.	Write a short note on carotenoids and their types.	CO 2
5.	Define free radicals and explain how they are produced in biological systems.	CO 3
6.	Write a note on the role of complex carbohydrates in energy metabolism.	CO 3
7.	What is ischemia-reperfusion injury, and how are free radicals involved?	CO 4
8.	Explain the function and significance of catalase and glutathione peroxidase.	CO 4
9.	Describe the objectives and responsibilities of FSSAI in food safety.	CO 5



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**Section C**

**Long questions: Attempt any two questions**

**2x10 = 20 marks**

SN	QUESTIONS	CO's
1	Explain the medicinal uses, health benefits, and marker compounds of Garlic, Ginseng, and Gingko.	CO 1
2	Detail the health benefits and chemical nature of sulfur compounds like diallyl sulfide and allyl trisulfide.	CO 2
3	Elaborate on the involvement of free radicals in the pathophysiology of chronic diseases like diabetes, cancer, and atherosclerosis.	CO 4