

As Per NEP 2020

University of Mumbai



Syllabus for Basket of Open Elective (OE)	
Board of Studies in Zoology	
UG First Year Programme	
Semester - II	
Title of Paper	Credits 2/ 4
I) OE3A: Nutrition, Health and Fitness	2
II)	
III)	
From the Academic Year	2024-25

OE2: Nutrition, Health and Fitness

9	Module 1: Nutrition, Health and Fitness-I	15hr
	1.1. Introduction to the basic concept of food, nutrition and nutrients. Classification of Food, Classification of Nutrients	03hr
	1.2 Carbohydrates: 1.2.1 Definition, sources, daily requirements, functions. 1.2.2 Effects of too high and too Low carbohydrates on health. 1.2.3 Digestion and absorption of carbohydrate.	04hr
	1.3 Lipids: 1.3.1 Definition, Fatty acids: types and sources 1.3.3 Daily requirements, functions.	03hr
	1.4 Proteins: 1.4.1 Definition, sources of proteins, daily requirements, functions. 1.4.2 Types of amino acids, functions. 1.4.3 Effect of too high and too low proteins in diet on health.	05hr
	Module 2: Nutrition, Health and Fitness-II	15hr
	2.1 Dietary Fiber: Classification, sources, composition, properties, and nutritional significance. 2.2 Minerals & Trace Elements: bio- availability & requirements, sources, deficiency & excess (Calcium, Sodium, Potassium, Phosphorus, Iron, Fluoride, Zinc, Selenium, Iodine, Chromium) 2.3 Vitamins: Types, requirements, sources, deficiency & excess. 2.4 Water: Functions, daily requirements, Water balance.	09hr
	2.5 Social health problems: Smoking, Alcohol addiction, Drug addiction 2.6 Nutrition for special conditions: Introduction to Nutrition for physical fitness and sport 2.7 Feeding problems in children.	06hr
	Suggested assignment topics: Study of relevant topics such as food rich in various nutrients, Body Mass Index Calculation, Holistic health, Community health and nutrition, Benefits of Yoga, etc.	

10.	Text Books: 1. Swaminathan M (2007): Essentials of Food and Nutrition (Vol. I & II), 2nd Ed. Bappco 2. Srilakshmi B (2017): Nutrition Science, 6th Multicolour Ed. New Age International (P) Ltd. 3. Nutrient Requirements and Recommended Dietary Allowance for Indians, Indian Council of Medical Research: New Delhi.
11.	Reference Books: 1. Mann J and Truswell S (2017): Essentials of Human Nutrition, 5th Ed. Oxford University Press. 2. Robinson CH and Lawler M (1990): Normal and Therapeutic Nutrition. 17th Revised Ed. Macmillan USA. 3. Roday S (2012): Food Science and Nutrition, 2nd Ed. Oxford University Press

12	Internal Continuous Assessment: 40% (20 marks)	External, Semester End Examination : 60% Individual Passing in Internal and External Examination (30 marks)
13	Continuous Evaluation through: Quizzes, Class Tests, presentation, project, role play, creative writing, assignment etc.(at least 3)	As per paper pattern 01.00 hour
14	Format of Question Paper: for the final examination	
	Time 1.0 Hr	Max. Marks 30
	Q.1. Questions in the form of MCQ and answer in one sentence. (Overall equal weightage for both modules I & II) Q1a. Five questions in the form of MCQ (5 marks) Q1b. Five questions of answer in one line (5 marks)	10
	Q.2 Answer any one of the following (based on Module I) a. b.	06
	Q.3. Answer any one of the following (based on Module II) a. b.	06
	Q4. Write short note any two of the four from module I and II (equal weightage) a. b. c. d.	08

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