

B.SC. HOME SCIENCE – DIETETICS (2020-21)
SEMESTER V

SNO.	PAPER/SUBJECT	CREDIT HOURS			THEORY MARKS			PRACTICAL MARKS			TOTAL
		T	P	TOTAL	PAPER	INT. ASS.	TOTAL	PAPER	INT. ASS.	TOTAL	
1.	Nutritional Biochemistry – I (Common to composite and dietetics)	3	2	5	40	10	50	35	15	50	100
2.	Community Nutrition and Public Health- I	3	2	5	40	10	50	35	15	50	100
3.	Institutional Food Service and quality management - I	3	2	5	40	10	50	-	50*	50*	100
4.	Nutritional management in Health and Disease –I (Common to composite and dietetics)	3	2	5	40	10	50	35	15	50	100
5.	Fundamentals of Food Science -I	3	2	5	40	10	50	35	15	50	100
6.	Economics and Entrepreneurship Development –I (Common to all)	2	2	4	40	10	50	25	25	50	100
7.	Extension Education –I (Common to all)	2	2	4	40	10	50	25	25	50	100
	Grand Total			33							700

* Continuous evaluation will be done throughout the year and marks will be awarded. No separate university examination will be conducted.

B.Sc. Home Science Dietetics(Semester V)
NUTRITIONAL BIOCHEMISTRY– I
(THEORY)
(Common to composite and Dietetics)

Credit hrs: 3/ week

Maximum Marks : 50
Exam hrs. : 3 Paper : 40
Internal Assessment: 10

Objectives:

1. The Course lays the foundation for introduction to various types of biomolecules and their biochemical roles in different processes in living systems.

Instructions to the Paper Setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

UNIT – I

1. Carbohydrates :Definition, classification, structure & importance
 - Monosaccharide – glucose, fructose, galactose
 - Disaccharides – maltose, lactose, sucrose
 - Polysaccharides – Dextrin, starch, glycogen
2. Proteins:
 - Definition & classification- Fibrous, Globular, Inter-membrane; Conjugated
 - Levels of Protein structure- primary, secondary, tertiary, quaternary
 - Denaturation of proteins
 - Amino acids-Common structural features, Peptide bond, essential and non-essential (names only, **no structures**)

UNIT – II

3. Lipids:Definition, classification, types and properties (**no structures**):
 - Essential Fatty acids, Characteristics of fatty acids and fats (saponification, iodine and acid values). Rancidity of fats, melting point and smoking point of fats
 - Phospholipids, Glycolipids & their importance

4. Lipoproteins & Ketone bodies(**no structures**):
- Classification and structure of lipoproteins-Types (Chylomicrons,VLDL, LDL, HDL) & composition, Role of lipoproteins in health & disease
 - Basic concept of Ketone bodies, Ketosis, Fatty liver

UNIT – III

5. Vitamins:
- Brief descriptive biochemical role of fat soluble vitamins A, D, K & E (**no structures**)
 - Brief descriptive biochemical role of water soluble vitamins – B1, B2, B6, niacin and C(**no structures**)
6. Minerals:Biochemical role & Pathophysiology- Ca, Na, K, Mg, S, Fe, Zn, I, Se

UNIT – IV

7. Introduction to genetic control of metabolism (elementary aspects)
- Nucleic acids- types, purines &pyrimidines(**no structures**), Nucleoside, Nucleotide
 - Watson & Crick model of DNA structure, Denaturation, DNA Replication
8. Basic concepts of Transcription, Genetic code, Translation

RECOMMENDED READINGS:

- Nelson DL, Lehninger AL, Cox MM. Lehninger: Principles of biochemistry. (5th Ed.) WH Freeman & Co. New York; 2008.
- Berg JM, Tymoczko JL, Stryer L. Biochemistry. (6th Ed.) WH Freeman & Co. New York; 2006.
- Voet D &Voet JG, Biochemistry. (3rd Ed.) John Wiley & Sons Inc., Singapore; 2004.
- Botham K, Mayes P, Murray RK, Granner DK. Harper's Illustrated Biochemistry. (27th Ed.) McGraw-Hill Companies New York; 2006.

B.Sc. Home Science Dietetics (Semester V)

NUTRITIONAL BIOCHEMISTRY-I (Practical) (Common to composite and dietetics)

**Credit hrs: 2 / week
Exam Hrs.: 3**

**Maximum Marks: 50
Paper: 35
Internal Assessment: 15**

1. Reactions of mono, di and polysaccharides and their identification in mixtures
2. Estimation of reducing and total sugars in foods
3. Reactions of fats and oils
4. Determination of acid value, saponification and iodine number of fats and oils
5. Reactions of amino acids and their identification in mixtures
6. Estimation of ascorbic acid content of foods by titrimetric / colorimetric method.
7. Estimation of calcium in calcium carbonate by EDTA titrimetric method
8. Estimation of phosphorus by colorimetric method

B.Sc. Home Science Dietetics (Semester V)
COMMUNITY NUTRITION AND PUBLIC HEALTH-I
(THEORY)

Credit Hrs: 3 /week
Exam Hrs: 3

Maximum Marks: 50
Paper: 40
Internal Assessment:10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

1. To understand the causes/determinants and distribution of nutrition problems in the community.
2. To orient the students with all the important methodologies applied in nutritional assessment and surveillance of human groups.
3. To understand the consequences of nutritional problems and familiarizethem with various approaches to nutrition and health intervention programs and policies.

UNIT - I

1. Concept of community nutrition and public health:
 - Nutritional Status & Surveillance- Concept, need and scope
2. Nutrition education:
 - Concept, need and scope
 - Individual and group methods for imparting nutrition education.

UNIT - II

3. Protein Energy Malnutrition:
 - Predisposing factors
 - Impact on community
 - Measures to prevent/overcome
 - Integrated child development scheme (ICDS)
 - Mid day meal programme

4. Zinc Deficiency:

- Relationship of Zinc deficiency with PEM
- Predisposing factors
- Impact on community
- Measures to prevent/overcome

UNIT- III

5. Vitamin A Deficiency:

- Predisposing factors
- Impact on community
- Measures to prevent/overcome
- National Programme for Control of Blindness (NPCB)

6. Anemia:

- Predisposing factors
- Types of Anemia: Iron deficiency, folic acid and vitamin B₁₂ deficiency anemia
- Impact on community
- Measures to prevent/overcome
- National Nutrition Anemia Prophylaxis Programme (NNAPP)

UNIT- IV

7. Iodine Deficiency:

- Predisposing factors
- Impact on community
- Measures to prevent/overcome
- National Iodine Deficiency Disorders Control Programme (NIDDCP)

8. Vitamin D Deficiency:

- Predisposing factors
- Impact on community
- Measures to prevent/overcome

RECOMMENDED READINGS:

- Gibney M.J., Margetts, B.M., Kearney, J.M. Arab, I. eds (2004) *Public Health Nutrition*, NS Blackwell Publishing. .
- K. Park (2015). Textbook of Preventive and Social Medicine 23rd edition. BanarsidaBhanot Publisher, Jabalpur.
- Wadhwa, A. and Sharma, S. (2006) *Nutrition in the Community*. A text book. SCN News, UN ACC/SCN Subcommittee on Nutrition.
- Mahtab S Bamji. (2010). Textbook of human nutrition. Delhi : Oxford.
- Stipanck , Martha H.,(2006). Biochemical Physiological Molecular aspect of human nutrition. London : Elsevier.
- IAP. Textbook of Pediatrics. IVth Edition. JP Publishers.

- Babasahib and Desai.(2000). Handbook of nutrition and diet. New York.
- MahindruSN., (2009). Food Science and Technology: Food Safety.Vol II. New Delhi. APH Publication.
- Community Nutrition: Applying Epidemiology and Contemporary Practice.(2007). New Delhi.Boston Jones.
- Public Health Nutrition in Developing Countries.(2011).Part 1 and 2.Edited by Sheila ChanderVir.Woodhead Publishing India Pvt. Ltd.

B.Sc. Home Science Dietetics(Semester V)
COMMUNITY NUTRITION AND PUBLIC HEALTH-I

(PRACTICAL)

Credit Hrs.: 2/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 35
Internal assessment:15

1. Planning and preparation of low cost nutritious recipes:

- High Protein
- High Calorie
- Vitamin A rich
- Iron rich

For various age groups:

- Preschoolers
- Adolescents
- Pregnant
- Lactating women

B.Sc. Home Science Dietetics(Semester V)
INSTITUTIONAL FOOD SERVICE AND QUALITY MANAGEMENT-I
(THEORY)

Credit Hrs: 3/week
Exam Hrs. : 3

Maximum Marks: 50
Paper: 40
Internal Assessment: 10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

1. To develop a knowledge base in key areas of institutional food management.
2. To impart necessary expertise to run a food service unit.
3. To provide practical level experience in managing food service management.
4. To critically evaluate the functioning of food service units.

UNIT-I

1. Types of institutional food service operations :
 - Commercial
 - Non commercial
2. Meal planning in institutions:
 - Basic factors in institutional meal planning
 - Menu types
 - Portion control and maintenance of standard serving

UNIT-II

3. Organization :
 - Theories of organization
 - Different types of organization
4. Management:
 - Definition and functions
 - Tools of management – Organization chart, job analysis, job specification, job evaluation.

UNIT-III

5. Physical plant:
 - Location
 - Floor plans
 - Space
 - Kitchen units
 - Storage units
 - Serving units
 - Dish washing units
6. Equipment :
 - Types of equipment as per the size and type of establishment.
 - Factors affecting choice of equipments-utility of design, ease of installation, functionality and maintenance.

UNIT-IV

7. Food purchasing:
 - Food buyer and methods of purchasing and pricing
 - Requisition and inventory
8. Food storage:
 - Receiving and storage of food in institutions
 - Location of storage spaces
 - Types of storage for different food stuffs

RECOMMENDED READINGS:

- A Textbook of Hotel Management by K S Negi, Wisdom Press New Delhi, 2011.
- Food Service Manual for Healthcare Institution by Ruby parker Puckett, 4th edition, 2012.
- Food Service Organizations: A Managerial and System Approach by Marian C. Spears, 3rd edition, Merill an imprint of Prentice Hall Publishers, New Jersey, 1995.
- Food Safety: Theory and Practice by Paul L. Knechtges, Ascend learning Company, 2012.
- Food Hygiene and Sanitation with Case Studies by SunetraRoday, 2nd edition, Tata McGraw Hill Education Pvt. Ltd, New Delhi, 2012.
- Food Service and Catering Management, RK Malhotra, Anmol Publications Pvt. Ltd., New Delhi, 1998.
- Introduction to Catering: Ingredients for Success by Stephen B. Shiring, Baba BarakhaNath Printers, 2001.
- Institutional Food Management, MohiniSethi, New Age International Ltd., New Delhi, 2008 (reprint).
- Kitchen Guide to Hotel Management by Pradeep Paul, Random Publications, 2014.

- Managing Food and Nutrition Service for the Culinary, Hospitality and Nutrition professions by Sari Edelstein, Jones and Bartlett Publishers, 2008.
- Quantity Food Production: operation and Indian Cuisine by Parvinder S Bali, Oxford University press, 2011.

B.Sc. Home Science Dietetics(Semester V)
INSTITUTIONAL FOOD SERVICE AND QUALITY MANAGEMENT-I
(PRACTICAL)

Credit Hrs: 2/week
Exam Hrs.: 3

Maximum Marks:50
Internal assessment:50

1. Standardization and preparation of –
 - Cookies
 - Cakes
 - Pudding
 - Snacks- laddoos, mathari, roasted namkeen and nutritious idli.
2. Procuring and executing orders for the above items. Preparation, packaging and selling of the same.

B.Sc. Home Science Dietetics(Semester V)
NUTRITIONAL MANAGEMENT IN HEALTH AND DISEASE- I
(THEORY)
(Common to Composite and Dietetics)

Credit Hrs: 3/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 40
Internal assessment: 10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

This course should enable the students to –

1. Know the principles of diet therapy.
2. Understand the modifications of normal diet for therapeutic purposes.
3. Understand the role of the dietician.

UNIT - I

1. Team approach to health care:
 - Role of doctor, dietitians and paramedical staff with regard to assessment of patients needs.
2. Energy modifications and nutritional care for weight management:
 - Overweight and obesity: Etiological factors, prevention, low energy diets, lifestyle and dietary management.
 - Underweight: Etiology, high energy diets.

UNIT - II

3. Etiology, dietary and lifestyle management of:
 - Constipation
 - Diarrhea
4. Etiology, dietary and lifestyle management of upper GI tract diseases:
 - Gastric and duodenal ulcers
 - Flatulence
 - Hyperacidity and reflux.

UNIT - III

5. Etiology, dietary and lifestyle management of Intestinal diseases:

- Steatorrhea
- Diverticular disease
- Ulcerative colitis

6. Etiology, dietary and lifestyle management of Intestinal diseases:

- Irritable bowel syndrome
- Hemorrhoids

UNIT – IV

7. Etiology, dietary and lifestyle management of fevers:

- Acute
- Chronic

8. Role of antioxidants in diseases

RECOMMENDED READINGS:

- Food, Nutrition and Diet Therapy, Krause, 10th edition, WB Saunders Company, London, 2000.
- Modern Nutrition in Health and Disease, Maurice E Shills, 9th edition, Lippincott Williams and Wilkins, USA. 2000.
- Handbook of Nutrition and Diet, Babasaheb B Desai, Marcel Dekkes, New York.
- Nutritive Value of Indian food, C Gopalan, ICMR, Hyderabad, 2000.
- Basic Nutrition and Diet Therapy, Sue Rodwell Williams, 14th edition, Mosby-Year book, New York, 2014.
- Human Nutrition and Dietetics, JS Garrow, WPT James, A Ralph, 10th edition, Churchill Livingstone, New York, 2000.
- Nutrition Science and Applications, Smolin, Grosvenor, John Wiley and sons, 2007.
- Normal and Therapeutic nutrition, H. Robinson, 17th edition, Macmillan Publishing Company, New York, 1986.
- Textbook of Nutrition and Dietetics, KumudKhanna, Phoenix publishing house, New Delhi, 2009.

B.Sc. Home Science Dietetics(Semester V)
NUTRITIONAL MANAGEMENT IN HEALTH AND DISEASE- I
(PRACTICAL)
(Common to Composite and Dietetics)

Credit Hrs: 2/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 35
Internal assessment: 15

1. Planning of therapeutic diets and calculation of nutritive content as mentioned in theory.
2. Preparation of therapeutic diets as mentioned in theory
3. Visit to a Dietetics Department in a local hospital for observing team approach to nutritional care of patients.

B.Sc. Home Science Dietetics(Semester V)
FUNDAMENTALS OF FOOD SCIENCE- I
(THEORY)

Maximum Marks: 50

Paper: 40

Internal assessment: 10

Credit Hrs.: 3/week

Exam Hrs.: 3

Instructions to the Paper Setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

1. Understand the basic concepts of food science and its applications in processing of food.
2. Learn about the quality parameters of various foods.
3. Gain practical knowledge about food components and their role in cooking.

UNIT – 1

1. Introduction to food science :
 - Definition, importance and applications
 - Basic terminology used in food science*
2. Basic Concept of :
 - Organic foods
 - Genetically Modified foods

UNIT – II

3. Food acceptability:
 - Factors affecting food acceptability
 - Subjective and objective methods of evaluation
 - Tests for sensory evaluation
4. Food packaging:
 - Basic types of packaging
 - Importance of nutritional labeling

UNIT – III

5. Role of colloidal chemistry in cookery :
 - Definition of colloidal systems
 - Hydrophilic and Hydrophobic colloids
6. Role of colloidal chemistry in cookery:
 - Gel - Formation and uses in cookery
 - Emulsions- types of Emulsion and uses in cookery
 - Foams- Formation and factors affecting foam formation and uses in cookery

UNIT – IV

7. Food adulteration :
 - Basic concept of adulteration
 - Types of adulterants
 - Common methods for detecting adulterants
8. Food quality assurance :
 - Concept of national and international food laws – FSSAI, Codex and ISO
 - Concept of quality assurance practices– TQM,GRAS, HACCP

RECOMMENDED READINGS:

- Manay N., ShadakSharaswamy M.(2008), Foods, Facts and Principles, 3rd Edition, New Age International (P) Ltd. Publication
- B.Srilakshmi(2009); Fifth edition; Food Science , New Age International Publishers Ltd.
- Swaminathan, M (2005): Essentials of Food and Nutrition, vols. I and II. Ganesh and Co. Madras
- R.Sunetra (2008); Food Hygiene and Sanitation; Oxford University Press.
- R.Sunetra (2012); Food Science and Nutrition; Oxford University Press.
- Potter**, Norman N., **Hotchkiss**, Joseph H.(1999);Food Science; Fifth Edition;Springer

*ANNEXURE:

1. Leavening
2. Marbling
3. Baste
4. Marinate
5. Fortification
6. Germination
7. Fermentation
8. Parboiling
9. Parching
10. Tenderizing

B.Sc. Home Science Dietetics(Semester V)
FUNDAMENTALS OF FOOD SCIENCE- I
(PRACTICAL)

Credit Hrs: 2/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 35
Internal Assessment: 15

1. Sensory evaluation of food products by using different standardized scales and tests for sensory evaluation
2. Study of interpretation of 10 different nutritional labels of different categories of food.
3. Demonstration of role of colloidal chemistry in preparation of:
 - Gels
 - Emulsions
 - Foams
4. Food adulteration - common tests to detect food adulterants (coffee, ghee, turmeric, honey, black pepper, corns, milk, salt, red chili powder, cereals and pulses).

B.Sc. Home Science Dietetics(Semester V)
Economics and Entrepreneurship Development-I
(Theory)
(Common to all)

Credit Hrs. : 2/week

Exam Hrs. : 3

Maximum Marks: 50

Paper: 40

Internal Assessment: 10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

1. To prepare the platform where the students view entrepreneurship and self-employment as a desirable and feasible career option.
2. Stimulating the potential to develop entrepreneurial orientation through innovation and creativity
3. To orient the students with basic principles involved in starting and managing a new enterprise

Unit-I

1. Entrepreneurial Economics:

- Need and importance
- Entrepreneurship and enterprise

2. Entrepreneurship and role in economic development

- Intrapreneurship and its importance

Unit-II

3. Entrepreneurial Behaviour:

- Types of an entrepreneur
- Entrepreneurial traits

4. Entrepreneurial Motivation

- Types and importance of motivation
- Various motivating factors

Unit-III

5. Women entrepreneurs:

- characteristics
- role and challenges faced during creation and enterprise management

6. Avenues for the growth of women entrepreneurs.

Unit-IV

7. Business Idea/Plan:

- Pitching a business idea and its formulation.
- Difference between Start ups and Small business.

8. Intellectual Property Rights (Creation-Protection-Encashing).

Recommended Readings:

1. Gupta C.B and Srinivisan N.P, “ Entrepreneurial Development” Sultan Chand and Sons, New Delhi
2. Khanna S.S, “Entrepreneurship Development” Sultan Chand and Sons, New Delhi
3. Patel, V. G., “The Seven Business Crises and How to Beat Them” Tata-McGraw, New Delhi, 1995.
4. SIDBI Report on Small Scale Industries Sector (Latest Editions)
5. Taneja, Satish and Gupta, S.L, “ Entrepreneurship Development-New Venture Creating” Galgotia Publishing House, New Delhi, Latest Edition
6. Arora Renu and S.K Sood, “Fundamentals of entrepreneurship and Small business” Kalyani publishers.

B.Sc. Home Science Dietetics (Semester V)
Economics and Entrepreneurship Development-I
(Practical)
(Common to all)

Credit Hrs.: 2/week

Exam Hrs.: 3

Maximum Marks: 50

Paper: 25

Internal Assessment: 25

The main objective of the Paper Setter:-

- (i) Familiarize the students with the process and skills of creation and management of enterprise.
- (ii) To plan, use, monitor and control resources optimally and economically.

CONTENTS

1. Preparation of project report of small enterprises/cottage industries/startups. (The students will be advised to develop a structured instrument (questionnaire) for conducting first hand survey of the various aspects of respective enterprise including the process of setting up of an enterprise, motivating factors responsible for undertaking entrepreneurial set up , capital invested, production techniques adopted, marketing practices adopted for sustainability and future prospects of the enterprise surveyed.
2. Class presentation of Project report by conducting the SWOT analysis and suggesting feasible measures for policy implementation.
3. Assignments/ presentation on opportunity scouting and idea generation. The contents of the assignment should be focused on the source of institutional finance to the business idea (including case analysis of any one financial institution)

B.Sc. Home Science Dietetics (Semester V)
EXTENSION EDUCATION-I
THEORY
(COMMON TO ALL)

Credit hours: 2/week

Exam Hrs.: 3

Maximum Marks: 50

Paper: 40

Internal Assessment : 10

Objectives:

1. To understand the concept of extension and its relevance for self & national development.
2. To appreciate the role of Home Science extension in community development.
3. To sensitize students towards various methods, preparation and selection of suitable materials for effective communication.

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified

UNIT – I

1. Concept of education
 - Formal education
 - Non formal education
 - Informal education
2. Concept of Extension education
 - Meaning and scope of extension
 - Difference between formal education and extension education
 - Extension education process
 - Concept of e-Extension

UNIT – II

3. Principles and philosophy of extension education
 - Principles of extension education
 - Philosophy of extension education
 - Function of extension education
4. Home Science Extension as a discipline and its contribution towards development.

UNIT – III

5. Teaching methods for extension education
 - Concept of extension teaching methods
 - Methods and steps in extension teaching
6. Classification of extension teaching methods
 - According to form and use
 - Advantages and limitations of extension teaching methods

UNIT – IV

7. Audio-visual aids
 - Classification of audio-visual aids
 - Advantages and limitations of various audio visual aids
8. Factors affecting selection and use of extension teaching methods and aids

B.Sc. Home Science Dietetics(Semester V)
EXTENSION EDUCATION-I
PRACTICAL
(COMMON TO ALL)

Credit hours: 2/week

Exam Hrs.: 3

Maximum Marks : 50

Paper : 25

Internal Assessment : 25

Objectives:

1. To prepare the students in developing various teaching methods and aids used in home science extension.
2. To develop the skills of students used in participatory approaches in program planning and evaluation.

Instructions for Paper Setter:

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and viva voice will be of 5 and 10 marks respectively
(Total = 15 marks)

Contents:

1. Preparation of non-projected aids-
 - a. Chart/Posters
 - b. Flash cards/Flip book
2. As a traditional media of communication:-
 - a. Preparation of puppets
 - b. Writing stories for puppets.
3. Developing skills and use of following different teaching methods –
 - a. Role play
 - b. Puppet play
4. Visit to a community to study a government or voluntary organization in action.

RECOMMENDED READINGS:

1. Dhama, O.P. Bhatnagar, O.P., Second Edition 1985, Education and Communication for Development, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
2. Dubey V.K. and Bishnoi Indira, First Edition 2008, Extension Education and Communication, New Age International Publishers, New Delhi.
3. Supe S.V., Second Edition 1997, An Introduction to Extension Education, Oxford and IBH Publishing Co.Pvt.Ltd, New Delhi.
4. Ray G.L., Seventh Edition, 2008, Extension Communication and Management, Kalyani Publishers, New Delhi.
5. Desai Vasant, First Edition 1991, Fundamentals of Rural Development, Himalaya Publishing Henge.
6. Oakley P. and Garforth C. FAO, 1985, Guide to Extension Training.
7. Singh K. Uttam, Nayak A.K., Commonwealth Publishers, 2005, Extension Education.

B.SC. HOME SCIENCE – DIETETICS
SEMESTER VI
2016-17

SNO.	PAPER/SUBJECT	CREDIT HOURS			THEORY MARKS			PRACTICAL MARKS			TOTAL
		T	P	TOTAL	PAPER	INT. ASS.	TOTAL	PAPER	INT. ASS.	TOTAL	
1.	Nutritional Biochemistry – II (common to composite and dietetics)	3	2	5	40	10	50	35	15	50	100
2.	Community Nutrition and Public Health- II	3	2	5	40	10	50	35	15	50	100
3.	Institutional Food Service and quality management - II	3	2	5	40	10	50	-	50*	50*	100
4.	Nutritional management in Health and Disease –II (common to composite and dietetics)	3	2	5	40	10	50	35	15	50	100
5.	Fundamentals of Food Science -II	3	2	5	40	10	50	35	15	50	100
6.	Economics and Entrepreneurship Development –II (Common to all)	2	2	4	40	10	50	25	25	50	100
7.	Extension Education –II (Common to all)	2	2	4	40	10	50	25	25	50	100
	Grand Total			33							700

* Continuous evaluation will be done throughout the year and marks will be awarded. No separate university examination will be conducted.

B.Sc. Home Science Dietetics (Semester VI)
NUTRITIONAL BIOCHEMISTRY –II
(THEORY)
(Common to Composite and Dietetics)

Credit hrs: 3/ week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 40
Internal Assessment: 10

Objectives:

1. The Course lays the foundation for understanding the functioning of metabolic processes at cellular level, and the role of various nutrients in these processes

Instructions to the Paper Setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

UNIT – I

1. Carbohydrate metabolism: Glycolysis, gluconeogenesis, glycogenesis, glycogenolysis
2. Biological oxidation:
 - Citric acid cycle
 - Electron transport chain.

UNIT – II

3. Metabolism
 - Proteins – general reactions of amino acid metabolism, urea cycle
 - Lipids – oxidation and biosynthesis of fatty acids.
4.
 - a) Fluid (ECF, ICF), electrolyte (Na, K) and acid-base balance
 - b) Fundamentals of membrane transport – osmosis, passive diffusion, facilitated diffusion, active transport

UNIT – III

5. Introduction to Enzymes :
 - Definition and classification of enzymes
 - Specificity of enzymes, Isoenzymes
 - Coenzymes, Allosteric enzymes

6. Enzymes:
 - Factors affecting enzyme catalysis
 - Enzyme inhibition- Competitive, Non-Competitive, Uncompetitive
 - Feedback inhibition

UNIT – IV

7. Hormones:
 - Mechanism of action of hormones- intracellular & nuclear receptors
 - Pancreatic Hormones (Insulin, Glucagon-**no structures**), Role in blood sugar regulation
 - Biological role of Pituitary hormones(**no structures**)

8. Functions of hormones of – adrenal cortex and medulla, thyroid, parathyroid glands (**no structures**)

RECOMMENDED READING:

- Berg JM, Tymoczko JL, Stryer L. Biochemistry. (6th Ed.) WH Freeman & Co. New York; 2006.
- Whitaker JR. Principles of Enzymology for the Food Sciences. (2nd Ed.) Marcel Dekker Inc.; 1994.
- Nelson DL, Lehninger AL, Cox MM. Lehninger: Principles of Biochemistry. (5th Ed.) WH Freeman & Co. New York; 2008.
- Voet D & Voet JG, Biochemistry. (3rd Ed.) John Wiley & Sons Inc., Singapore; 2004.
- Botham K, Mayes P, Murray RK, Granner DK. Harper's Illustrated Biochemistry. (27th Ed.) McGraw-Hill Companies New York; 2006.

B.Sc. Home Science Dietetics (Semester VI)
NUTRITIONAL BIOCHEMISTRY –II
(Practical)
(Common to Composite and Dietetics)

Credit hrs: 2 / week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 35
Internal Assessment: 15

1. Estimation of lactose in milk
2. Quantitative determination of Glucose
3. Estimation of protein content by Lowry method
4. Estimation of RNA by Orcinol method
5. Quantitative determination of DNA by diphenylamine method
6. Estimation of enzyme activity (amylase on starch)
7. Effect of pH and temperature on enzyme activity – amylase on starch / pepsin on proteins / lipase on fats (**Demonstration only**)

B.Sc. Home Science Dietetics (Semester VI)
COMMUNITY NUTRITION AND PUBLIC HEALTH-II
(THEORY)

Credit Hrs.: 3 /week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 40
Internal Assessment:10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

1. To understand the causes/determinants and distribution of nutrition problems in the community.
2. To orient the students with all the important methodologies applied in nutritional assessment and surveillance of human groups.
3. To understand the consequences of nutritional problems and familiarizethem with various approaches to nutrition and health intervention programs and policies.

UNIT - I

1. Assessment of Nutritional Status:
Anthropometry- Advantages and limitations.
Standardized techniques for measurement of:
 - Height
 - Weight
 - Various Circumferences (Mid Upper Arm Circumference, Head Circumference, Chest Circumference, Waist Circumference, Hip Circumference)
 - Skinfold Measurement

2. Interpretation of:
 - WHO Standards
 - IAP Standards and Classification

UNIT - II

3. Clinical assessment-Advantages and limitations. Signs and symptoms of:
 - PEM
 - Vitamin A deficiency
 - Iodine deficiency
 - Anemia
 - Zinc deficiency
 - Vitamin D deficiency

4. Biochemical tests and their interpretation-Advantages and limitations. Biochemical tests for:
 - PEM
 - Vitamin A deficiency
 - Iodine deficiency
 - Anemia
 - Zinc deficiency
 - Vitamin D deficiency

UNIT- III

5. Dietary Surveys :
 - Need and Importance
 - Methods of dietary survey

6. Methods to improve nutritional quality:
 - Germination
 - Fermentation
 - Enrichment
 - Novel Foods
 - Parboiling
 - Supplementation
 - Fortification
 - Genetically modified foods

UNIT- IV

7. Sources of secondary data related to community health:
 - Census
 - National Family Health Survey** (NFHS)
 - Directorate General of Health Services** (DGHS)
 - Sample registration system (SRM)
 - Hospital records, Disease registers

8. Vital statistics-Concepts of:

- Mortality and morbidity
- Incidence and prevalence
- Infant mortality rate (IMR), Maternal mortality rate (MMR), Age specific mortality rate (ASMR), Under five mortality rate (U5MR), Neonatal mortality rate (NMR), Perinatal mortality rate.
- Preterm babies (PTB), Small for gestational age babies (SGA), Low birth weight babies (LBW)
- Total Fertility Rate (TFR)
- Life expectancy (LE) and Human development Index (HDI)

RECOMMENDED READINGS:

- Gibney M.J., Margetts, B.M., Kearney, J.M. Arab, I. eds (2004) *Public Health Nutrition*, NS Blackwell Publishing. .
- K. Park (2015). Textbook of Preventive and Social Medicine 23rd edition. BanarsidaBhanot Publisher, Jabalpur.
- Wadhwa, A. and Sharma, S. (2006) *Nutrition in the Community*. A text book. SCN News, UN ACC/SCN Subcommittee on Nutrition.
- Mahtab S Bamji. (2010). Textbook of human nutrition. Delhi : Oxford.
- Stipanick , Martha H.,(2006). Biochemical Physiological Molecular aspect of human nutrition. London : Elsevier.
- IAP. Textbook of Pediatrics. IVth Edition. JP Publishers.
- Babasahib and Desai.(2000). Handbook of nutrition and diet. New York.
- MahindruSN., (2009). Food Science and Technology: Food Safety. Vol II. New Delhi. APH Publication.
- Community Nutrition: Applying Epidemiology and Contemporary Practice.(2007). New Delhi. Boston Jones.
- Public Health Nutrition in Developing Countries.(2011). Part 1 and 2. Edited by Sheila ChanderVir. Woodhead Publishing India Pvt. Ltd.

B.Sc. Home Science Dietetics (Semester VI)
COMMUNITY NUTRITION AND PUBLIC HEALTH-II
(PRACTICAL)

Credit Hrs.: 2/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 35
Internal assessment: 15

1. Planning and preparation of low cost nutritious recipes for mid day meal programme as per GOI guidelines.
2. Preparation of nutritious recipes for supplementary nutritious programmes using the following as basic ingredient:
 - Pumpkin
 - Soya Bean
 - Green leafy vegetables
 - Rice flakes
 - Amla/Seasonal fruit

B.Sc. Home Science Dietetics (Semester VI)
INSTITUTIONAL FOOD SERVICE AND QUALITY MANAGEMENT-II
(THEORY)

Credit Hrs: 3/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 40
Internal Assessment: 10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

1. To develop a knowledge base in key areas of institutional food management.
2. To impart necessary expertise to run a food service unit.
3. To provide practical level experience in managing food service management.
4. To critically evaluate the functioning of food service units.

UNIT-I

1. Quantity food production:
 - Food production system and process
 - Methods and techniques
 - Criteria of evaluating food quality
 - Use of leftover foods.
2. Food service:
 - Planning, decor and functionality of service and dining areas
 - Types of food service and their management
 - Vending and mobile catering

UNIT-II

3. Food quality:
 - Concept of food quality
 - Quantitative and nutritional aspect of food quality
 - Sensory quality
 - Foods for canteen, lunchrooms and kiosks.
4. Cost control and pricing:
 - Food cost control
 - Methods of pricing

- Factors affecting pricing
- Methods of controlling food cost

UNIT-III

5. Personnel Management:
 - Types of personnel required
 - Personnel relationship
 - Methods of recruitment
 - Welfare provisions for employees – health, safety, recreation, meals. Labor and food laws.
6. Recent advances in institutional food service management.

UNIT-IV

7. Safety measures:
 - Safety procedure and training
 - Safety devices used in food institutions
8. Hygiene and sanitation in food production:
 - Environmental hygiene, hygiene in food handling
 - HACCP, FSSSAI, PFA, FPO, ISI, TQM, GMP

RECOMMENDED READINGS:

- A Textbook of Hotel Management by K S Negi, Wisdom Press New Delhi, 2011.
- Food Service Manual for Healthcare Institution by Ruby Parker Puckett, 4th edition, 2012.
- Food Service Organizations: A Managerial and System Approach by Marian C. Spears, 3rd edition, Merill an imprint of Prentice Hall Publishers, New Jersey, 1995.
- Food Safety: Theory and Practice by Paul L. Knechtges, Ascend learning Company, 2012.
- Food Hygiene and Sanitation with Case Studies by Sunetra Roday, 2nd edition, Tata McGraw Hill Education Pvt. Ltd, New Delhi, 2012.
- Food Service and Catering Management, RK Malhotra, Anmol Publications Pvt. Ltd., New Delhi, 1998.
- Introduction to Catering: Ingredients for Success by Stephen B. Shiring, Baba Barakha Nath Printers, 2001.
- Institutional Food Management, Mohini Sethi, New Age International Ltd., New Delhi, 2008 (reprint).
- Kitchen Guide to Hotel Management by Pradeep Paul, Random Publications, 2014.
- Managing Food and Nutrition Service for the Culinary, Hospitality and Nutrition professions by Sari Edelstein, Jones and Bartlett Publishers, 2008.
- Quantity Food Production: operation and Indian Cuisine by Parvinder S Bali, Oxford University press, 2011.
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B.Sc. Home Science Dietetics (Semester VI)
INSTITUTIONAL FOOD SERVICE AND QUALITY MANAGEMENT-II
(PRACTICAL)

Credit Hrs: 2/week
Exam Hrs.: 3

Maximum Marks: 50
Internal assessment:50

1. Standardization, preparation, planning and quantity cooking of menus for-
 - Lunch party
 - Birthday party
 - Working Lunch
 - Kitty party
 - Festive dinner
2. Taking and executing orders related to above. Preparation and presentation of the same.

B.Sc. Home Science Dietetics (Semester VI)
NUTRITIONAL MANAGEMENT IN HEALTH AND DISEASE- II
(THEORY)
(Common to Composite and Dietetics)

Credit Hrs: 3/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 40
Internal assessment: 10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

This course should enable the students to –

1. Know the principles of diet therapy.
2. Understand the modifications of normal diet for therapeutic purposes.
3. Understand the role of the dietician.

UNIT - I

1. Etiology, dietary and lifestyle management of liver diseases:
 - Fatty liver
 - Infective hepatitis

2. Etiology, dietary and lifestyle management of liver diseases:
 - Cirrhosis

UNIT - II

3. Etiology, dietary and lifestyle management of diabetes mellitus:
 - Types
 - Glycemic index and load
 - Basic concept of diagnostic tests for diabetes – Fasting and post prandial blood sugar levels, Glucose tolerance test, glycosylated hemoglobin
4. Use of natural foods for management of diabetes

UNIT – III

5. Etiology, dietary and lifestyle management of cardiovascular diseases:
 - Atherosclerosis
6. Etiology, dietary and lifestyle management of hypertension

UNIT – IV

7. Etiology, dietary and lifestyle management of kidney disorders:
 - Glomerulonephritis
8. Role of fiber in health and disease

RECOMMENDED READINGS:

- Food, Nutrition and Diet Therapy, Krause, 10th edition, WB Saunder Company, London, 2000.
- Modern Nutrition in Health and Disease, Maurice E Shills, 9th edition, Lippincott Williams and Wilkins, USA. 2000.
- Handbook of Nutrition and Diet, Babasaheb B Desai, Marcel Dekkes, New York.
- Nutritive Value of Indian food, C Gopalan, ICMR, Hyderabad, 2000.
- Basic Nutrition and Diet Therapy, Sue Rodwell Williams, 14th edition, Mosby-Year book, New York, 2014.
- Human Nutrition and Dietetics, JS Garrow, WPT James, A Ralph, 10th edition, Churchill Livingstone, New York, 2000.
- Nutrition Science and Applications, Smolin, Grosvenor, John Wiley and sons, 2007.
- Normal and Therapeutic nutrition, H. Robinson, 17th edition, Macmillan Publishing Company, New York, 1986.
- Textbook of Nutrition and Dietetics, KumudKhanna, Phoenix publishing house, New Delhi, 2009.

B.Sc. Home Science Dietetics (Semester VI)
NUTRITIONAL MANAGEMENT IN HEALTH AND DISEASE II
(PRACTICAL)
(Common to composite and dietetics)

Maximum Marks: 50
Paper: 35
Internal assessment: 15

Credit Hrs: 2/week

Exam Hrs.: 3

1. Planning of therapeutic diets and calculation of nutritive content as mentioned in theory.
2. Preparation of therapeutic diets as mentioned in theory
3. Visit to a Dietetics Department in a local hospital for observing team approach to nutritional care of patients.

B.Sc. Home Science Dietetics (Semester VI)
FUNDAMENTALS OF FOOD SCIENCE- II
(THEORY)

Credit Hrs: 3/week
Exam Hrs.: 3

Maximum Marks: 50
Paper: 40
Internal assessment:10

Instructions to the Paper Setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four sections/units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives:

1. Understand the basic concepts of food science and its applications in processing of food.
2. Learn about the quality parameters of various foods.
3. Gain practical knowledge about food components and their role in cooking.

UNIT – I

1. Structure, composition, classification, selection , storage , anti nutritional factors and uses in cookery:
 - Cereals and cereal products.
2. Structure, composition, classification, selection , storage, anti nutritional factors and uses in cookery:
 - Pulses and legumes

UNIT – II

3. Structure, composition, classification, selection , storage, anti nutritional factors and uses in cookery :
 - Egg
 - Poultry
4. Structure, composition, classification, selection , storage and uses in cookery :
 - Meat
 - Fish

UNIT – III

5. Structure, composition, classification, selection , storage, anti nutritional factors and uses in cookery:
 - Milk and Milk Products.
 - Nuts and Oil Seeds
6. Structure, composition, classification, selection , storage, anti nutritional factors and uses in cookery:
 - Fruits and vegetables
 - Beverages – tea, coffee

UNIT – IV

7. Structure, composition, classification, selection , storage and uses in cookery:
 - Fats and oils
 - Sugars
 - Spices and herbs
8. Safe food handling techniques.

RECOMMENDED READINGS:

- Manay N., ShadakSharaswamy M.(2008), Foods, Facts and Principles, 3rd Edition, New Age International (P) Ltd. Publication
- B.Srilakshmi(2009); Fifth edition; Food Science , New Age International Publishers Ltd.
- Swaminathan, M (2005): Essentials of Food and Nutrition, vols. I and II. Ganesh and Co. Madras
- R.Sunetra (2008); Food Hygiene and Sanitation; Oxford University Press.
- R.Sunetra (2012); Food Science and Nutrition; Oxford University Press.
- Potter**, Norman N., **Hotchkiss**, Joseph H.(1999);Food Science; Fifth Edition;Springer

B.Sc. Home Science Dietetics (Semester VI)
FUNDAMENTALS OF FOOD SCIENCE- II
(PRACTICAL)

Credit Hrs: 2/week
Exam Hrs. : 3

Maximum Marks: 50
Paper: 35
Internal Assessment: 15

1. Milk and milk products: Effect of heat and acid on coagulation of milk proteins
2. Cereals and cereal products: Effect of use of different fermenting agents in preparation of pizza base.
3. Pulses: Study of the efficacy of different environmental conditions on sprouts of pulses.
4. Eggs: Demonstration of effect of heating on boiling of eggs
5. Fruits and vegetables: Demonstration of enzymatic browning
6. Sugar: Effect of temperature on solubility of sugars
7. Fats: Demonstration of smoking point of fats and oils
8. Preparation of the following beverages:
 - Nourishing
 - Stimulating
 - Appetizing

B.Sc. Home Science Dietetics (Semester VI)
Economics and Entrepreneurship Development-II
(Theory)
(Common to all)

Credit Hrs. : 2/week

Exam Hrs. : 3

Maximum Marks: 50

Paper: 40

Internal Assessment: 10

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

Objectives

1. To introduce the students to the world of business by developing in to them the core skills and competencies required for an entrepreneur.
2. To learn the process of creation and management of entrepreneurial venture.

Unit-I

1. Small business enterprise management:
 - Setting up of small scale enterprise.
 - Institutions assisting Small business enterprises in India
2. Problems of small business enterprises in India.

Unit-II

3. Business Environment:
 - Types of Business environment: Micro and Macro
 - Factors affecting business environment
4. Profitability of business:
 - Social cost and benefit Analysis

Unit-III

5. Business marketing:
 - Marketing strategies-packaging, advertising, e-marketing, personal selling
6. Four Ps of marketing:
 - Product, Price, Place and Promotion.

Unit-IV

7. Project Finance
 - Long term and short term sources of finance
 - Fixed capital and Working capital
8. Project Formulation
 - Need and scope
 - Elements of project formulation

Recommended Readings:

1. Gupta C.B and Srinivisan N.P, “ Entrepreneurial Development” Sultan Chand and Sons, New Delhi
2. Khanna S.S, “Entrepreneurship Development” Sultan Chand and Sons, New Delhi
3. Patel, V. G., “The Seven Business Crises and How to Beat Them” Tata-McGraw, New Delhi, 1995.
4. SIDBI Report on Small Scale Industries Sector (Latest Editions)
5. Taneja, Satish and Gupta, S.L, “ Entrepreneurship Development-New Venture Creating” Galgotia Publishing House, New Delhi, Latest Edition

B.Sc. Home Science Dietetics (Semester VI)
Economics and Entrepreneurship Development-II
(Practical)
(Common to all)

Credit Hrs.: 2/week

Exam Hrs.: 3

Maximum Marks: 50

Paper: 25

Internal Assessment: 25

The main objective of the Paper setter:

(i) Develop the ability to select potential areas for self-employment.

(ii) To acquire the knowledge of optimum use of human resources.

CONTENT

1. Case study of an entrepreneur (at least one for successful and one for failure enterprise). The case study will include:

1. Important features of an enterprise.
2. Competencies of an entrepreneur.
3. Sources of finance
4. Reasons for success and failures.
5. Preparation of a report on the basis of case study analysis and giving innovative ideas for better enterprise management.

2. Developing a Business Plan for Micro enterprises. Calculation of Breakeven point and conducting feasibility analysis.

3. Steps to organize and manage any one of the

following: a. Cafeteria/Diet clinic

b. Nursery school/Day care

c. Boutiques/window and interior store display

d. Interior Design studios.

B.Sc. Home Science Dietetics (Semester VI)
EXTENSION EDUCATION-II
THEORY
(COMMON TO ALL)

Credit hours: 2/week

Exam Hrs.: 3

Maximum Marks : 50

Paper : 40

Internal Assessment : 10

Objectives:

1. To understand the concept of extension and its relevance for self & national development.
2. To appreciate the role of Home Science extension in community development.
3. To create awareness about rural development and various programs and agencies involved in it.

Instructions to the paper setter:

1. Each theory paper will be of three hours duration.
2. Question paper will have four units. Paper setter will set a total of nine questions comprising of two questions from each section and one compulsory question of short answer type covering the whole syllabus.
3. Student will attempt one question from each unit and the compulsory question (Total of five questions)
4. All questions may carry equal marks, unless specified.

UNIT – I

1. Rural development
 - Concept of rural development
 - Role of extension workers in rural development
 - Qualities of extension worker
2. Rural Development Programmes in India
 - Integrated Child Development Service (ICDS)
 - Integrated Rural Development Programme (IRDP)
 - Mahatma Gandhi National Rural Employment Guarantee Act(MGNREGA)

UNIT – II

3. Community development
 - Concept and origin of community development
 - Basic features of community development
 - Philosophy of community development

4. Introduction to Panchayati Raj-
 - Concept of three tier system of administration
 - Evolution of panchayati Raj
 - Meaning of democratic decentralization

UNIT – III

5. Extension programme
 - Concept of extension programme.
 - Characteristics of a good extension programme.
6. Participation in extension programme
 - Advantages of people's participation in extension programme
 - Reasons for non-participation of people
 - Levels of participation

UNIT – IV

7. Extension programme planning
 - Concept of extension programme planning
 - Principles of extension programme planning
8. Process of Extension Programme Planning-Collect facts, analyse situation, identifying problems, decide objectives, develop plan of work, execute plan, evaluation of progress , reconsideration

B.Sc. Home Science Dietetics (Semester VI)

EXTENSION EDUCATION-II (PRACTICAL) (COMMON TO ALL)

Credit hours: 2/week

Exam Hrs. : 3

Maximum Marks: 50

Paper : 25

Internal Assessment:25

Objectives:

1. To enable the students to carry out their social responsibility by extending their knowledge and services to the people in need.
2. To develop skills in the use of participatory approaches in programme planning and evaluation.

Instructions for Paper Setter:

1. Each practical paper will be of 3 hours duration.
2. The question paper should cover the entire syllabus.
3. The file work and viva voice will be of 5 and 10 marks respectively
(Total = 15 marks)

Contents:

1. Survey of a specific community for need assessment.
2. Presentation of planning and organization of a need based extension programme for the selected community in relation to anyone of the following aspects:-
 - a. Literacy
 - b. Income Generation
 - c. Health
 - d. Social Evil
3. Conduct an extension or outreach activity in a selected community.
4. Evaluation of the above extension or outreach activity conducted.

RECOMMENDED READINGS:

8. Dhama, O.P. Bhatnagar, O.P., Second Edition 1985, Education and Communication for Development, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
9. Dubey V.K. and Bishnoi Indira, First Edition 2008, Extension Education and Communication, New Age International Publishers, New Delhi.
10. Supe S.V., Second Edition 1997, An Introduction to Extension Education, Oxford and IBH Publishing Co.Pvt.Ltd, New Delhi.
11. Ray G.L., Seventh Edition, 2008, Extension Communication and Management, Kalyani Publishers, New Delhi.
12. Desai Vasant, First Edition 1991, Fundamentals of Rural Development, Himalaya Publishing Henge.
13. Oakley P. and Garforth C. FAO, 1985, Guide to Extension Training.
14. Singh K. Uttam, Nayak A.K., Commonwealth Publishers, 2005, Extension Education.