

NILAMBER PITAMBER UNIVERSITY



FYUGP

HOME SCIENCE HONOURS/ RESEARCH

FOR UNDER GRADUATE COURSES



Implemented from Academic Session 2022-26

Table 6: Semester wise Course Code and Credit Points:

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits
	Code	Papers	
I	CC-1	Language and Communication Skills (Modern Indian language including TRL)	6
	CC-2	Understanding India	2
	CC-3	Health & Wellness, Yoga Education, Sports & Fitness	2
	IRC-1	Introductory Regular Course-1	3
	IVS-1A	Introductory Vocational Studies-1	3
	MJ-1	Major paper 1 (Disciplinary/Interdisciplinary Major)	6
II	CC-4	Language and Communication Skills (English)	6
	CC-5	Mathematical & Computation Thinking Analysis	2
	CC-6	Global Citizenship Education & Education for Sustainable Development	2
	IRC-2	Introductory Regular Course-2	3
	IVS-1B	Introductory Vocational Studies-2	3
	MJ-2	Major paper 2 (Disciplinary/Interdisciplinary Major)	6

COURSES OF STUDY FOR **INTRODUCTORY/ MINOR ELECTIVE** FYUGP IN **“HOMESCIENCE”**

SEMESTER-1**MAJOR COURSE –MJ 1:**

(Credits: Theory-04, Practicals-02)

Marks: 15 (5 Attd. + 10 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75

Pass Marks: Th (SIE + ESE) = 30

Instruction to Question Setter for***Semester Internal Examination (SIE 10+5=15 marks):***

There will be **two** groups of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 60 marks):

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

BASICS OF FOOD SCIENCE AND NUTRITION**Theory: 60 Lectures****Course Description**

The course “Basics of Food Science and Nutrition” aims at developing the basic understanding of food and nutrition; it’s the effect on human health and newer advances in food technology. This course encompasses the physiological, biochemical and social aspects of food and discusses the relationship between metabolites and human health. Moreover, the Course is focused on the advances in the most emerging area of Applied Science of Nutraceuticals (where food is the medicine) and provides a detailed insight into understanding the composition, molecular interaction and bio mechanisms of food metabolites. The knowledge and skills to utilize food and nutrients are as the powerful tools for physical, mental and social well-being.

Learning Objectives:

1. Study the different methods of cooking foods
2. Obtain knowledge of different food groups, their composition and nutrients present in the foods.
3. Understand the vital link between foods, nutrition and health
4. Gain knowledge on functions, requirements and effects of deficiency of nutrients

Learning Outcome:

A successful completion of this course will enable students to

1. Summarize and critically discuss and understand both fundamental and applied aspects of Food Science and nutrition and Food Production
2. Able to explain functions of specific nutrients in maintaining health
3. Identifying nutrient specific force and apply the principles from the various factors of foods and related disciplines to solve practical as well as Real world problems
4. Use current information Technologies to locate and apply evidence-based guidelines and protocol and get imported with critical thinking to take leadership roles in the field of health, diet special nutritional needs and nutritional counselling.

Course Content

Unit-I. Introduction of Food Groups, Food Pyramid and Cooking Methods (12 Lectures)

Definition and Terms used in Food Science and Nutrition. Health, Food, Nutrition, Nutrients: Macronutrients (Carbohydrates, Proteins and lipids) and Micronutrients (Vitamins and Minerals), and Malnutrition. Various classifications of Foods and Food Groups.

Definition, Classification and Functions of Foods, Basic Food Groups and Need for Grouping Foods and Application of Food Groups in Planning Adequate/Balanced Diets Culinary terms and Methods of Cooking

An Overview of culinary terms

Different Modes of heat transfer like Radiation, Conduction and Convection

Moist heat methods like Boiling, Simmering, Poaching, Steaming, Pressure cooking

Dry heat methods: Air as medium of cooking: Grilling, broiling, roasting, Baking,

Fat as medium of cooking: Sautéing, Shallow fat frying, Deep fat frying

Combined (Moist and dry) Methods: Braising, Stewing

Other cooking methods: -Microwave cooking and Solar cooking.

Advantages and Disadvantages of Cooking methods

Unit-II. Nutritional Significance of Different Food Groups (12 Lectures)

Basic Concepts, classification, Composition, nutritive value and Role in Cookery

Cereals and Cereal Products-

Types of cereals: wheat, rice, millets,

Cereal Products-Flaked rice, puffed rice, wheat flour.

Principles and properties of Cereals and its utility: Germination (Amylase Rich Foods- ARF), Fermentation, Parboiling, Gelatinization, Dextrinization, Gluten formation)

Pulses and Legumes,

Fruits and Vegetables,

Salt, Sugar and Jaggery,

Nuts, oils and Oil seeds

Milk and Milk Products including Fortified milk & its importance

Eggs-Basic structure of an egg and biological value, Quality evaluation and grading of eggs

Meat, poultry and fish

Spices & Condiments – their importance and functional properties

Unit III- Macronutrients (12 Lectures)

Definition, Classification, Dietary Sources, Functions, Recommended Dietary Allowances, Clinical signs and symptoms of Deficiency diseases and Excess of Energy, Carbohydrates, Proteins, Lipids, Water

Unit IV- Minerals

(12 Lectures)

Definition, Classification, Distribution of minerals in the body.

Functions, sources, requirements and effects of deficiencies of Minerals: Calcium, Phosphorus, Iron, Iodine, Zinc, Fluorine, Copper, Magnesium, Sodium, Potassium, Selenium.

Unit V- Vitamins

(12 Lectures)

Classifications, functions, sources, Clinical signs and symptoms of deficiency, requirements of Fat Soluble Vitamins - A, D, E and K

Water Soluble, Vitamins-B Complex Vitamins- Thiamine, Riboflavin, Niacin, Pyridoxine, Folic acid, Cyanocobalamin and Vitamin C

Recommended Readings:

1. Maney S (2008). Foods, Facts and Principles, 3rd Edition Published by Wiley Eastern, New Delhi.
 2. Usha Chandrasekhar (2002) Food Science and Application in Indian Cookery, Phoenix Publishing House P. Ltd., New Delhi.
 3. Raina U, Kashyap S, Narula V, Thomas S Suvira, VirS, Chopra S (2010) Basic Food Preparation: A Complete Manual, 4th Edition, Orient Black Swan Ltd, Mumbai.
 4. Srilakshmi, B. (2017) Nutrition Science, New Age International (P) Ltd., New Delhi,
 5. Mahtab, S. Bamji, Kamala Krishnasamy, Brahmam G.N.V (2012) Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi.
 6. Sunetra Roday (2017). Food Science and Nutrition, Oxford University Press, New Delhi.
 7. Longvah, T, Ananthan, R., Bhaskarachary, K., Venkaiah, K (2017). Indian Food Composition Tables (IFCT), Indian Council of Medical Research, National Institute of Nutrition, Hyderabad
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HOME SCIENCE PRACTICAL- MJ 1 LAB

Marks : Pr (ESE: 3Hrs) =25

Pass Marks: Pr (ESE) = 10

Instruction to Question Setter for***End Semester Examination (ESE):***

There will be one Practical Examination of 3Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 15 marks

Practical record notebook = 05 marks

Viva-voce = 05 marks

PRACTICALS:**60 Lecture Hrs.**

1. Market survey of locally available food items like cereals, pulses, fruits and vegetables, milk and milk products, fats and oils, nuts and oilseeds, sugar and jaggery, meat, fish, and poultry and miscellaneous food items like biscuits, jams, jellies, ketchup etc. and their cost
2. Classify foods on the basis of nutrients: -Protein, Iron, Calcium, Vitamin A, Vitamin C
3. Controlling techniques: Weights and measures - standard and household measures for raw and cooked foods
4. Weights and Measures, Determination of Edible Portion of Foods, preparing market order and table setting
5. Food Preparation, understanding the principals involved, nutritional quality and portion size of 5-7 commonly consumed recipes in each food group
 - Cereals: rice, pulao, Roti, chapathi, paratha, poori, pastas etc
 - Pulses: Whole, dehusked- Dal, sambar, kootu, Chole, Rajmah, etc
 - Vegetables: Dry preparations, Curries
 - Milk and milk products: Kheer, Custard,
 - Meat, fish and poultry preparations
 - Egg preparations- Boiled, poached, fried, scrambled, omelettes, egg pudding

Recommended Readings:

1. Maney S (2008). Foods, Facts and Principles, 3rd Edition Published by Wiley Eastern, New Delhi.
 2. Usha Chandrasekhar (2002) Food Science and Application in Indian Cookery, Phoenix Publishing House P. Ltd., New Delhi.
 3. Raina U, Kashyap S, Narula V, Thomas S Suvira, VirS, Chopra S (2010) Basic Food Preparation: A Complete Manual, 4th Edition, Orient Black Swan Ltd, Mumbai.
 4. Srilakshmi, B. (2017) Nutrition Science, New Age International (P) Ltd., New Delhi,
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SEMESTER II

I. MAJOR COURSE- MJ 2:

(Credits: Theory-04, Practicals-02)

Marks: 15 (5 Attd. + 10 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75

Pass Marks: Th (SIE + ESE) = 30

Instruction to Question Setter for

Semester Internal Examination (SIE 10+5=15 marks):

There will be **two** groups of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 60 marks):

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

FUNDAMENTALS OF HUMAN DEVELOPMENT

Theory: 60 Lectures

Course Description

The course introduces students to the concept of human development. It then moves on to discuss the various schools of thought that gave rise to different theoretical frameworks to understand human development. It explains basic developmental principles and factors like heredity and environment which influence growth and development. It deals with development during different stages of life span, starting from conception to old age. It further discusses the principles of working with human beings and methods of studying human development.

Learning Objectives

1. Develop an understanding about the need and importance of studying human growth and development across life span
2. Learn about the biological and environmental factors that affect development
3. Learn about the characteristics, needs and developmental tasks of different stages in the human life cycle
4. Understand the different theoretical frameworks fundamental to HDFS
5. Learn about the classic human development theories
6. Develop professional attitude for working with human beings across life span

Learning Outcomes

1. Explain the need and importance of studying human growth and development across life span.

2. Identify the biological and environmental factors affecting human development.
3. Describe the characteristics, needs and developmental tasks of different stages in the human life cycle
4. Explain the broad theoretical perspectives and frameworks of HDFS

Course Content

Unit I Theoretical Frameworks and Theories

(12 Lectures)

Theoretical
Frameworks
Biological-
maturational
Environmental
learning Constructivist
Culture-contextual
Overview of theories of human development
Freud's theory of psychosexual
development
Erikson's theory of psychosocial
development
Piaget's theory of
cognitive development
Learning
theories- Skinner
Indian Thinkers (selected) on Child
Development
Mahatma Gandhi

Rabindranath Tagore
Gijubhai Badeka and Tarabai Modak

Unit II: Introduction to Human Development (10 Lectures)

Definition, History
Scope and importance of Human Development in contemporary society
Domains, Stages and Contexts of development,
Principles of Growth and Development,

Unit III: Prenatal Development and Birth Process (10 Lectures)

Reproductive health
Conception, Pregnancy, Prenatal Development – stages, factors affecting, diagnostics techniques, Birth Process
Stages of birth
Types of delivery (natural, c-section, breech, home vs. assisted delivery)
Capacities and Immediate care of newborn, adjustments made by newborn, types of feeding - natural and artificial, weaning, infant and mother mortality and morbidity, immunization schedule.

Unit IV: Stages in the Human Life Cycle: An Overview (14 Lectures)

Characteristics, needs and developmental tasks of individuals in relation to physical, cognitive, socio- emotional domains of development in the following life stages:

Neonate (birth-1 month)
Infancy (1 month-2 years)
Early childhood (2-6 years)
Middle childhood (6-11 years)
Adolescence (12-18 years)
Emerging and Young adulthood (18-35 years), diversity of roles and relationships
Middle age / mature adulthood (35-60 years)
Late adulthood / Old age (60 years and above)- Parenting and Grand Parenting

UNIT V: Professional Skills for Working with Human Beings (14 Lectures)

Research Methods:
Case study, interview, naturalistic observation, laboratory observation, experimental methods, cross sectional and longitudinal and sequential studies.
Ethics of research with human subjects – written consent, privacy, no harm, no plagiarism, debriefing Self-awareness and contextual sensitivity Building professional attitudes Understanding development in different contexts and circumstances Developing contextual sensitivity and preparation for field experiences Personal and Professional issues involved in a career as HDFS professional (Identify entry level jobs, career path and job tasks/requirements)

Recommended Readings:

1. Berk, L.E. (2005). *Child development* (5th ed.). New Delhi: Prentice Hall.
 2. Bhangaokar, R., & Kapadia, S. (in press). Human Development Research in India: A historical overview. In G. Misra (Ed.), *Hundred years of Psychology in India*. New Delhi: Springer.
 3. Feldman, R., & Babu, N. (2009). *Discovering the life span*. New Delhi: Pearson
 4. Kakar, S. (1998). *The inner world. Psychoanalytic study of childhood and society in India*. Delhi: Oxford University Press.
 6. Kapadia, S. (2011). Psychology and human development in India. Country paper. *International Society for the Study of Behavioural Development Bulletin Number 2, Serial No. 60, pp.37-42*.
 7. Keenan, T., Evans, S., & Crowley, K. (2016). *An introduction to child development*. Sage.
 8. Lightfoot, C., Cole, M., & Cole, S. (2012). *The development of children* (7thed.). New York: Worth Publishers.
 10. Santrock, J. (2017). *A topical approach to life span development* (9th ed.). New NY.: McGraw-Hill Higher Education.
 11. Singh, A. (2015). *Foundations of Human Development: A life span approach*. ND: Orient Black Swan.
 12. Walsh, B.A., Deflorio, L., Burnham, M.M., & Weiser, D.A. (2017). *Introduction to Human Development and Family Studies*. NY: Routledge
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HOME SCIENCE PRACTICAL- MJ 2 LAB:

Marks : Pr (ESE: 3Hrs) =25

Pass Marks: Pr (ESE) = 10

Instruction to Question Setter for**End Semester Examination (ESE):**

There will be one Practical Examination of 3Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 15 marks

Practical record notebook = 05 marks

Viva-voce = 05 marks

PRACTICALS:**60 Lectures Hrs.**

1. Preparation of an album on developmental milestones of children.
2. Visit to maternity ward and ante-natal clinics.
3. Visit to an Anganwadi
4. Plotting growth monitoring chart and interpretation.
5. Observation of motor activities of a toddler.
6. Visit to an old age home
7. Carry out case studies to know more about the different life stages, e.g., school going children, adolescents, middle adults.
8. Observations of infant child rearing practices in families from different social classes.
9. Interviews of adolescent girls and boys to understand their life style and behaviour based on gender and socio-economic status

Recommended Readings:

1. Keenan, T., Evans, S., & Crowley, K. (2016). *An introduction to child development*. Sage.
 2. Lightfoot, C., Cole, M., & Cole, S. (2012). *The development of children* (7thed.). New York: Worth Publishers.
 3. Santrock, J. (2017). *A topical approach to life span development* (9th ed.). New NY.: Mcgraw-Hill Higher Education.
 4. Singh, A. (2015). *Foundations of Human Development: A life span approach*. ND: Orient Black Swan.
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COURSES OF STUDY FOR **INTRODUCTORY/ MINOR ELECTIVE** FYUGP IN “**HOMESCIENCE**”

SEMESTER I/ II/ III

INTRODUCTORY REGULAR COURSE

1 Paper

I. INTRODUCTORY REGULAR COURSE (IRC)

(Credits: Theory-02, Practicals-01)

- All Four Introductory & Minor Papers of Home Science to be studied by the Students of **Other than Home Science Honours.**
- Students of **Home Science Honours** must Refer Content from the **Syllabus of Opted Introductory & Minor Elective Subject.**

Marks: 15 (5 Attd. + 10 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75

Pass Marks: Th (SIE + ESE) = 30

Instruction to Question Setter for**Semester Internal Examination (SIE 10+5=15 marks):**

There will be **two** groups of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 60 marks):

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

INTRODUCTORY HOME SCIENCE**Theory: 30 Lectures****Course Description**

This course will give a basic understanding of overall domain of Home Science as a discipline. It will deal with the basic knowledge of all the five branches or area of specialisation under the subject Home Science as an applied science

Learning Objectives

1. To make students enable to understand the domains of Home Science as a Subject
2. To make students aware of basics of Nutrition for a healthy life.
3. To make an understanding of Life and Human Development
4. To develop understanding of resources their best utilisation, textiles and their uses, Home Science extension education system for better community outreach programme

Learning Outcome

On successful completion of course

1. Students will develop a basic understanding of Home Science as Subjects.
2. Students will develop knowledge and understanding about health & nutrition, Human Development and its need, textiles & their uses, family resources and extension education system in order to achieve the aimed SDC by 2030.

Course Content**Unit I- Foods and Nutrition****(6 Lectures)**

Basic understanding of Foods, Nutrition, Health and its relationship, terminologies
 Function of Food, Food Groups as source of various nutrients.
 Macro and micronutrients, water
 Principles of meal planning, RDA
 A brief knowledge of nutrition during infancy, childhood, adolescence, adulthood, old age and special condition (pregnancy, lactation, calamities, disaster)

Unit II- Human Development**(6 Lectures)**

Definition, Introduction and importance of Human Development
 Pre-natal development, birth and neonates, stages and factors affecting pre-natal development
 Various developments during Infancy, Childhood, Adolescence, Adulthood, old age, (Physical, Mental, Social, Emotional)

Unit III- Family Resource Management**(6 Lectures)**

Concept, Universality, and Scope of management, approaches to management
 Family as resource, Meaning, classification and characteristics of resources, factor affecting utilisation of resources, maximising use of resources and resource conservation
 Family as resource, availability and management of resources by an individual/family- money, time, energy, space. Event planning and execution.

Unit IV- Textiles and Clothing**(6 Lectures)**

Textile fibers, its properties, classification, a brief comparative study of production, properties, uses of major natural (cotton, wool, silk, linen, jute) and manmade fiber (Nylon, Polyester, acrylic)
 Basic concept of yarn and fabric manufacturing process
 Reason of wearing clothes, factors affecting selection of cloth/ apparel
 Stain removal of major stains

Unit V- Home Science Extension Education**(6 Lectures)**

Definition, concept, nature, philosophy and principles of Home science extension education Methods and media of community outreach; Audio visual aids- concept, classification, characteristics and scope

Relationship between communication, extension and development.

Recommended Readings:

1. Srilakshmi (2007). Food Science, 4th Edition. New Age International Ltd.
 2. Wardlaw and Insel MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition. Mosby.
 3. Chadha R and Mathur P (eds). Nutrition: A Lifecycle Approach. Orient Blackswan, New Delhi. 2015
 4. Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata McGraw- Hill.
 5. Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient BlackSwan.
 6. Patri and Patri (2002); Essentials of Communication. Greenspan Publications
 7. Rao V.S. and Narayana P.S., Principles and Practices of Management, 2007, Konark Pub. Pvt. Ltd.
 8. Corbman, P.B., (1985) Textiles- Fiber to Fabric (6th Edition), Gregg Division/McGraw Hill Book Co.
 9. Sekhri S., (2013) Textbook of Fabric Science: Fundamentals to Finishing, PHI Learning, Delhi
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HOME SCIENCE PRACTICAL- IRC LAB:

Marks : Pr (ESE: 3Hrs) =25

Pass Marks: Pr (ESE) = 10

Instruction to Question Setter for***End Semester Examination (ESE):***

There will be one Practical Examination of 3Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

<i>Experiment</i>	<i>= 15 marks</i>
<i>Practical record notebook</i>	<i>= 05 marks</i>
<i>Viva-voce</i>	<i>= 05 marks</i>

PRACTICAL**30****Lectures**

1. Cultural practices related to pregnancy and infancy
2. Methods of study children- interview, observation, narratives
3. Planning and preparation of diet for infant, children, pregnant and lactating women
4. Planning and executing Birthday party/ fresher's party
5. Stain removal- Haldi, Curry, nailpolish, ball point ink, paint/warnish/ polish
6. Preparation of chart and poster to educate Mothers for caring their new born babies

Recommended Readings:

1. Srilakshmi (2007). Food Science, 4th Edition. New Age International Ltd.
 2. Wardlaw and Insel MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition. Mosby.
 3. Chadha R and Mathur P (eds). Nutrition: A Lifecycle Approach. Orient Blackswan, New Delhi. 2015
 4. Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata McGraw-Hill.
 5. Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: OrientBlackSwan.
 6. Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: OrientBlackSwan.
 7. Patri and Patri (2002); Essentials of Communication. Greenspan Publications
 8. Rao V.S. and Narayana P.S., Principles and Practices of Management, 2007, Konark Publishers Pvt. Ltd.
 9. Corbman, P.B., (1985) Textiles- Fiber to Fabric (6th Edition), Gregg Division/McGraw Hill Book Co.,US.
 10. Sekhri S., (2013) Textbook of Fabric Science: Fundamentals to Finishing, PHI Learning, Delhi
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