

डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद

परिपत्रक क्रमांक/एस.यु./विज्ञान/अभ्यासक्रम/७४/२०१४

या परिपत्रकाद्वारे सर्व संबंधितांना सुचित करण्यात येते की, विज्ञान विद्याशाखेने शिफारस केल्यानुसार बी. एस्सी. / एम. एस्सी. प्रथम व द्वितीय वर्षाच्या सुधारित अभ्यासक्रमास आणि बी. एस्सी. प्रथम वर्षाच्या अभ्यासक्रमात किरकोळ बदल करण्यास विद्यापरिषदेच्या वतीने मा. कुलगुरु यांनी, त्यांना प्राप्त असलेल्या विशेष अधिकार महाराष्ट्र विद्यापीठ अधिनियम-१९९४ कलम १४(७) अन्वये मान्यता दिलेली आहे. त्या अनुषंगाने सुधारीत तयार केलेल्या अभ्यासक्रमाची प्रत या परिपत्रकासोबत आपल्या पुढील कार्यवाहीसाठी पाठविण्यात येत आहे.

[1]	B.Sc. Physics	Semester-III & IV,
[2]	B.Sc. Chemistry	Semester-III & IV,
[3]	B.Sc. Botany	Semester-III & IV,
[4]	B.Sc. Zoology with minor changes	Semester-I & II,
[5]	B.Sc. Zoology	Semester-III & IV,
[6]	B.Sc. Fisheries	Semester-III & IV,
[7]	B.Sc. Electronics (Opt.)	Semester-III & IV,
[8]	B.A./B.Sc. Mathematics	Semester-III & IV,
[9]	B.Sc. Computer Science	Semester-I & II,
[10]	B.Sc. Information Technology	Semester-I & II,
[11]	B.C.A.	Semester-I & II,
[12]	B.Sc. Computer Science(Opt.)	Semester-I & II,
[13]	B.Sc. Information Technology(Opt.)	Semester-I & II,
[14]	B.Sc. Computer Application(Opt.)	Semester-I & II,
[15]	B.Sc. Computer Maintenance(Opt.)	Semester-I & II,
[16]	B.Sc. Biotechnology (Progressively)	Semester-I to VI,
[17]	B.Sc. Biotechnology (Opt.) (Progressively)	Semester-I to IV,
[18]	B.Sc. Sericulture Technology	Semester-I & II,
[19]	B.Sc. Networking Multimedia	Semester-III & IV,
[20]	B.Sc. Bioinformatics	Semester-I & II,
[21]	B.Sc. Hardware & Networking	Semester-I & II,
[22]	B.Sc. Animation	Semester-I & II,
[23]	B.Sc. Dairy Science & Technology	Semester-III & IV,
[24]	B.Sc. Biochemistry	Semester-III & IV,
[25]	B.Sc. Analytical Chemistry	Semester-III & IV,
[26]	B.Sc. Textile & Int. Decoration with minor changes	Semester-I & II,
[27]	B.Sc. Textile & Int. Decoration	Semester-III & IV,
[28]	B.Sc. Home Science with minor changes	Semester-I & II,
[29]	B.Sc. Home Science	Semester-III & IV,
[30]	B.Sc. Agro.Chem. & Fertilizers	Semester-III & IV,

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[31]	B.Sc. Geology	Semester-III & IV,
[32]	B.A. Statistics with minor changes	Semester-I & II,
[33]	B.A. Statistics	Semester-III & IV,
[34]	B.Sc. Statistics with minor changes	Semester-I & II,
[35]	B.Sc. Statistics	Semester-III & IV,
[36]	B.Sc. Industrial Chemistry	Semester-III & IV,
[37]	B.Sc. Horticultural	Semester-I & II,
[38]	B.Sc. Dry land Agriculture	Semester-I & II,
[39]	B.Sc. Microbiology	Semester-III & IV,
[40]	M.Sc. Computer Science	Semester-I to IV,
[41]	M.Sc. Information Technology	Semester-I to IV.

हा सुधारीत व नवीन तयार केलेल्या अभ्यासक्रमाचा आराखडा शैक्षणिक वर्ष २०१४-१५ करिता मर्यादित असेल व विद्यापरिषदेच्या अंतिम मान्यतेनंतर हे परिपत्रक नियमित ठेवण्याबाबत या कार्यालयाद्वारे नवीन परिपत्रक पारीत करण्यात येईल. तसेच सुधारीत व नवीन तयार केलेल्या अभ्यासक्रमाची प्रत विद्यापीठाच्या संकेतस्थळावर उपलब्ध आहे.

करिता, या परिपत्रकाची सर्व संबंधितांनी नोंद घ्यावी.

विद्यापीठ प्रांगण,  
औरंगाबाद-४३१ ००४.  
संदर्भ क्र.एस.यु./सा.शा./सबवि /२०१३-१४/  
६५९९-७०२  
दिनांक :- २७-०५-२०१४.

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संचालक,  
महाविद्यालये व विद्यापीठ  
विकास मंडळ.

या परिपत्रकाची एक प्रत :-

- १) मा. परीक्षा नियंत्रक, परीक्षा विभाग,
  - २) मा. प्राचार्य, सर्व संलग्नीत महाविद्यालये,
  - ३) संचालक, युनिक यांना विनंती करण्यात येते की, सदरील अभ्यासक्रम विद्यापीठाच्या संकेतस्थळावर उपलब्ध करुण देण्यात यावेत.
  - ४) संचालक, ई-सुविधा केंद्र, विद्यापीठ परिसर,
  - ५) जनसंपर्क अधिकारी, मुख्य प्रशासकीय इमारत,
  - ६) कक्ष अधिकारी, पात्रता विभाग, मुख्य प्रशासकीय इमारत,
  - ७) कक्ष अधिकारी, बी.ए. / बी.एस्सी./ बी.सी.एस./एम.एस्सी. विभाग, परीक्षा भवन,
  - ८) अभिलेख विभाग, मुख्य प्रशासकीय इमारती मागे,
- डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद.

**DR.BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,  
AURANGABAD.**



**Syllabus**

**Of**

**B.Sc. First Year  
Home Science  
First & Second Semester  
With minor changes**

**THREE YEAR DEGREE COURSE**

**( EFFECTIVE FOR 2014-15 )**

# **Syllabus of B. Sc. (Home Science)**

## **Semester – I**

### **Compulsory English ( Theory )**

**Code No.CL1**  
**Period / wk. : 5**

**Max. Marks : 50**

#### **PAPER-I: LEARNING LANGUAGE SKILLS-I : 50 MARKS**

##### **UNIT ONE: PROSE 15 MARKS**

- 1) Happy Prince- Oscar Wilde
- 2) Good Manners- J.C. Hill
- 3) The Eyes Are Not Here- Ruskin Bond
- 4) Forgetting- Robert Lynd
- 5) Home Coming- Rabindranath Tagore

##### **UNIT TWO: POETRY 15 MARKS**

- 1) One Day I Wrote Her Name upon the Strand- Edmund Spenser
- 2) Ode on Solitude- Alexander Pope
- 3) If- Rudyard Kipling
- 4) My Love Is Like Red Red Rose- Robert Burns
- 5) Stopping by Woods on a Snowy Evening- Robert Frost

**PRESCRIBED TEXT: LANGUAGE THROUGH LITERATURE:** an anthology of prose and poetry by The Board of Studies in English, Published by Orient Blackswan Pvt. Ltd. Hyderabad, 2012.

##### **UNIT THREE: GRAMMAR 12 MARKS**

- 1) Parts of Speech
- 2) Nouns: classes and gender; number and case.
- 3) Adjectives: kinds of adjectives; comparison of adjectives; the correct use of some adjectives and articles.
- 4) Pronouns: personal pronouns, reflexive pronouns, demonstrative pronouns, interrogative pronouns, distributive pronouns, relative pronouns.

- 5) Verbs: transitive and intransitive; verbs and mood: indicative mood, imperative mood, subjunctive mood; the auxiliaries: be, have, do, shall, can, must; modal auxiliaries.
- 6) Adverbs: kinds: simple, interrogative and relative; formation of adverbs; position of adverbs.
- 7) Prepositions: phrase prepositions; object of prepositions; relations shown by prepositions; correct use of prepositions.
- 8) Conjunctions: phrase conjunctions; coordinating and subordinating conjunctions; correct use of some conjunctions.
- 9) Interjections

**PRESCRIBED TEXT:** BASIC ENGLISH GRAMMAR AND COMPOSITION, Edit. By Board of Studies in English, Pub. By Macmillan Publishers India Ltd., Mumbai: 2013.

#### **UNIT FOUR: PRECIS WRITING 8 MARKS**

Recommended Reading for Grammar Units:

- 1) Contemporary English Grammar Structures and Composition by David Green Pub. By Macmillan Publishers India Ltd., 2011 edition.
- 2) Modern English: A Book of Grammar Usage and Composition, By N.Krishnaswami, Pub. By Macmillan Publishers India Ltd. 2009.

# Human Physiology (Theory)

Code No.111  
Periods/wk.: 3

Max. Marks: 50

## Unit-I

1. Cell-Structure in brief.
2. Tissue-Classification and function
3. Loco motor system- Classification of bones and functions

## Unit-II

### 1. Circulatory System: Blood

- i) Composition and function
- ii) Clotting
- iii) Common blood groups, and importance of Rh factor

#### Heart

- i) Structure
- ii) Action of valves
- iii) Coronary blood supply
- iv) Structure and function of artery, vein and capillaries.

### 2. Respiratory System:

- i) Structure and functions of respiratory organs
- ii) Process of respiration
- iii) Transport of oxygen in brief

## Unit-III

### 1. Digestive System:

- i) Study of the anatomical organs in digestive tract
- ii) Function of glands in digestion
- iii) Digestion and absorption

### 2. Excretory System:

- i) Structure and function of excretory organs
- ii) Formation of urine

### **3. Reproductive system:**

- i) Male - female reproductive organs, structure and functions
- ii) Menstrual cycle

### **Unit-IV**

Endocrine glands: Structure, function of Pituitary gland, Thyroid gland and Adrenal gland in brief.

### **Books Recommended:**

1. Human Physiology – C. C. Chatterjee
2. Anatomy and Physiology for Nurses – Pears
3. Text book of Medical Physiology – Janet S. Ross, Kathleen J. W. Wilson
4. Text book of Human Physiology- Sharada Subramaniam and Madhavan Kutty
5. Applied Physiology- Wright – Samson, Oxford University press, Madras.
6. Elementary to Human Physiology- Thrence, A. Rogers

# **Human Development (Theory)**

**(Prenatal – Toddlerhood)**

**Code No.112**  
**Periods/wk.: 3**

**Max. Marks: 50**

**UNIT-I:- Introduction to Human development:**

- Definition, meaning & scope, developmental periods
- Understanding growth and development
- General principles of growth & development and factors affecting: heredity, environment, maturation and learning

**UNIT-II:- Prenatal Development:**

- Fertilization, conception, stages ( growth of foetus)
- Factors influencing prenatal development and hazards during development.
- Birth process – stages of labour, kinds of birth.

**UNIT-III:- Infancy and Toddlerhood:(0-2 yrs)**

- Neonate – an overview, reflexes, APGAR Scale & adjustments
- Physical development– Anthropometric measurements
- Motor Development – common motor skills
- Language Development – pre speech forms of communication.
- Cognitive Development
- Socio – emotional development
- Personality development

**UNIT-IV:- Care during infancy and toddlerhood**

- Feeding, weaning, teething, toilet training, bathing, clothing, sleeping, immunization & development of senses.
- Importance of environment and training, Significance of stimulation during infancy – Visual, motor, auditory and language.
- Role of toys in development.



## UNIT V:-

- Behaviour Problems: Bedwetting, thumb sucking, lying, stealing, nail biting, pica ,temper tantrum and day dreaming

### Books Recommended:

1. Human Development : John W Santrock, 7<sup>th</sup> Edition, Brown & Bench Mark Publishers, U.S.A.
2. Developmental Psychology: Elizabeth Hurlock, 5<sup>th</sup> Edition 1981, Tata Mcgraw Hill Publishing Co. New Delhi.
3. Human Development : Diane E Papalia & Sally Wendkos Olds 5<sup>th</sup> Edition 1981, Tata Mcgraw Hill Publishing Co. New Delhi.
4. Child Development : Suriyakamthi A. (1989) Javutga Publication Gandhi Gram.
5. Child Development : Harris A.C. (1986) West Pub. Unit.
6. Human Development : Graig G (1999) N. J. Peentice Hall.
7. Child Development : Hurlock, E.B., Mc Graw Hill, New York 1988.
8. Text Book of child development : Devadas, R.P. and Jaya. N. Mc Mullan and Co., 1981.

## **Fundamentals of Home Science Extension Education (Theory)**

**Code No.113**  
**Periods/wk.: 3**

**Max. Marks: 50**

- UNIT-I :** Extension education- Meaning, Definition, Objectives and Principles of Extension Education, Types of extension education – Formal and Non formal and adult education, Contribution of extension education in rural development.
- UNIT-II:** Home science extension education- Meaning, Definition and importance of Home Science extension education. Major fields of Home Science extension, philosophy of Home Science extension, variation between formal and non formal education
- UNIT-III :** Extension education programmes: Rural Development programmes of Government, Non-Government and aided organization, Role of Home Science extension in community building for upliftment of rural families.
- UNIT-IV :** Social Problems: Meaning & Importance of social problems, over population, Caste tension, Unemployment, Malnutrition, poor health and sanitation.
- UNIT-V:** Gender and Development: Sex ratio, Human development index, National policy on women and children .

### **Books Recommended:**

1. Dahama O.P. & Bhatnagar O.P. "Education and Communication for Development". Oxford & IBH Publishing Co. New Delhi 1977.
2. Supe S.V. "An Introduction to Extension Education", Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi & Calcutta.

3. G. L. Ray, "Extension Communication & Management".
4. Dr. I. Satyasundaram "Rural Development".
5. Singh R. "Text Book of Extension Education". Sahitya Kala Prakashan, Ludhiana, 1987.
6. Woodford J.C.G. Edwin A & Cummins K.C. Organisational communication – The Keystone to Managerial Effectiveness, Mc Graw Hill Tokya, Japan, Kgakusha Ltd.
7. Rudramurthy B "Extension in Planned Social Change" Allied Publishers Pvt. Ltd. Chennai.
8. Waghmare S.K. "Teaching Extension" Prashant Publishers Vallabh Vidyanagar, 1980.
9. Reddi Adivi, "Extension Education – Shree Laxmi Press, Bapatia, Gunthur A.P.
10. Gurg J. S. "Agricultural Extension & Community Development", Gaya Prasad & Sons, Agra U.P.
11. Sandhu A. S. "Extension Programme Planning" Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi 1996.

## **Basics of Textiles and Clothing (Theory)**

**Code No.114**  
**Periods/wk.: 3**

**Max. Marks: 50**

### **UNIT-I : Review of Textile fiber**

- a) Classification of fiber
- b) Primary & Secondary properties of fiber

### **UNIT-II: : Yarn**

- a) Process of spinning
- b) Classification of yarn
- c) Twist – its types
- d) Types of yarns

### **UNIT-III: Fabric construction**

- (a) Methods of fabric construction-Weaving, knitting, felting & braiding.
- (b) Types of looms – Handlooms & Machine loom
- (c) Types of Weaves –plain, twill, satin & sateen, pile, honey comb & dobby weave

### **UNIT-IV: Clothing construction**

- a) Facts about fabric & selvedge
- b) Stitching & measuring equipments
- c) Method of taking body measurement
- d) Layout of cloth.

### **UNIT-V: Basic clothing construction.**

Different types of Seams, tucks, pleats, plackets & pockets, sleeves & collars

## Basics of Textiles and Clothing (Practical)

**Code No. 114**  
**Periods/wk.: 4**

**Max. Marks: 50**

- 1) Introduction to tools and equipment used in clothing construction, sewing machine and its parts, repair, maintenance and care of sewing machine.
- 2) Hazards in sewing process and remedies for the same – Breaking of needle, slipping of stitches, breaking of thread (top & bobbin) Machine working hard, improper stitching, pleats and creases in cloth while stitching.
- 3) Making sample of different types of**
  - a) Seams – Plain, French, Flat and fell, double seam
  - b) Tucks - Pin tucks, crossed tucks, cord tucks
  - c) Pleats – Knife, box, inverted box.
  - d) Pockets – Continuous, simple & Zipper
- 4) Garment**
  - a) Bib
  - b) Diaper/Panty
  - c) Baby frock with yoke or self help feature.
  - d) Romper
  - e) Saree petticoat

### **Books Recommended (Theory & Practical):**

- 1) Household textile and laundry work – Durga Deulkar
- 2) Know about fabric & their manufactures – K. Thomas
- 3) Textiles fiber to fabric – Bernard P. Corbman
- 4) Zarpkar's Stitching & cutting – Part I & II – Zarpkar, Navneet Publications, Mumbai.
- 5) Practical clothing construction- Part I and II, Mary Mathews, Encydopedia of Textiles, Editor of American tabucs Magzine printr hall the U.S.A.
- 6) Basic process and clothing construction- Doongaji, 6<sup>th</sup> Ed. Raj prakashan, New Delhi,
- 7) Sewing book- Baines, S and Huttan, J singer

- 8) A text book of clothing and textile - Gupta Sushma, Garg Neeru, Saini Renu, Kalyani publication, Delhi.
- 9) Handbook for home makers- Mullick Premlata, Kalyani publisher, New Delhi.
- 10) Textiles fabrics and their uses- K.P. Hess, Oxford & IBH – publishing Co. New Delhi.

**Food Science and Nutrition (Theory)**

**Code No.115**

**Max. Marks: 50**

**Periods/wk.: 3**

**UNIT-I: - Introduction to Foods and Nutrition**

- a) Concepts of Foods and Nutrition – Definition of Food, Nutrition, Balanced diet, RDA, Functional Food, Novel Food, Basic Terminologies etc.
- b) Functions of Food
- c) Food Groups – Their nutritional significance

**UNIT-II: - Cooking Methods**

- a) Traditional – Boiling, Parboiling, Roasting, Frying
- b) Advanced - Pressure Cooking, grilling, baking, microwave cooking, solar cooking.
- c) Improving nutritional quality- Germination, Fermentation, Supplementation, Fortification, Enrichment.

**UNIT-III: Relation of nutrition to Health**

Nutrients- Carbohydrates, Proteins, Fats, Vitamins, Minerals  
Water- their functions, sources RDA, deficiency, excess

## **Food Science and Nutrition (Practical)**

**Code No.115**  
**Periods/wk.: 4**

**Max. Marks: 50**

### **Introduction to Laboratory Rules and Regulations**

1. Use and care of kitchen equipment
2. Weights and Measures – Raw and cooked
3. One serving concept
4. Planning and preparation of nutrient rich recipes by using different cooking methods – Calorie, Proteins, Vit-A, Vit-B<sub>1</sub>, Vit-B<sub>2</sub>, Vit-B<sub>3</sub>, Vit-C, Folic acid, Calcium, Iron (Calculation of nutritive value and cost), Planning for different income groups.

### **Books Recommended (Theory & Practical):**

1. Applied nutrition- R. Rajlaxmi
2. Food Science by B. Sri Lakshmi, New Age International (P) Ltd., New Delhi.
3. Nutritive value of Indian foods – Gopalan C., Ramashastry B.V. & Balasubramanian. NIN, Hyderabad.
4. Food Science-Potter
5. Textbook of Human nutrition-Bamji, M.S. & Rao, N.P.
6. Food Science, Chemistry & Experimental Foods-Dr. M. Swaminathan
7. Essentials of Food & nutrition- Dr. M. Swaminathan
8. Normal & Therapeutic nutrition by Robinson CH & Lawers MR
9. Text book of Food Science, Nutrition and Dietetics- Begum. R. utrition science- Srilakshmi. B., III edition, New Age International publishers, New Delhi.
10. Text book of Nutrition-Chintapalli Vidya, New Delhi: Discovery publishing house.



## Family Resource Management-I (Theory)

Code No. 116  
Periods/wk.: 3

Max. Marks: 50

**UNIT-I :**        **Management** – Meaning, Definition, Concept, Importance, General Principles, functions, Qualities of Manager, hurdles in the improvement of management.

**UNIT-II :**        **Management process** – Definition, importance, Steps:  
a)     Planning – definition, steps, guidelines.  
b)     Controlling  
c)     Evaluation  
Correlation among planning, controlling, evaluation, management cycle

**UNIT-III :**         
i)     Values  
ii)    Goals  
iii)   Standards  
iv)    Decision making –Definition, types, steps, role in home management  
v)     Family Resources – definition, types, characteristics

**UNIT-IV :**        **Management of Human Resources – Process & Importance**  
**i) Time management:**  
• Tools in time management  
• Time costs of home making activities  
• Time demands in different stage of family life cycle  
• Process of managing time  
• Leisure time & Recreation  
**ii) Energy management:**  
• Energy demands in different stages of family life cycle  
• Energy cost of home making activities  
• Fatigue –Most Fatiguing tasks, Physiological fatigue, psychological fatigue  
• Solar energy  
**iii) Work simplification:**  
• Meaning & Importance  
• Mendel’s laws of changes  
• Techniques of work simplification

## **Family Resource Management-I (Practical)**

**Code No.116**

**Max. Marks: 50**

**Periods/wk.: 4**

- 1) Preparation of time plans for college going students working & non working women.
- 2) Time plan for alternating light and heavy jobs.
- 3) Activities of working & non working women.
- 4) Comfortable Reaching Heights
- 5) Work – Simplification Techniques applied to different activities – Process chart, operation chart, pathway chart.

### **Books Recommended (Theory & Practical):**

- 1) Gross & Crandall “Management for Modern families, Meredith Publishing Co. Park Avenue South, New York.
- 2) Nickell P & Dorsey J.M. “Management in family living, Laguna Hills, California.
- 3) Mann M.K. “Home Management in Indian Families, Kalyani Publisher, Ludhiyana.
- 4) Ramaswamy, “Principles of Management”, Himalaya Publishing House, Mumbai.
- 5) Goodyear & Klohr, “Managing for Effective living” John Wiley & Sons.
- 6) Swanson Bettye, “Introduction to Home Management”, McMillan Pub. House, Inc. New York.
- 7) Vargese & Oagale, “Home Management”.
- 8) Ruth E, Family Resource Management – Principles & Application.
- 9) Erma H. Gross, Elizabeth, “Management for Modern Families.

# **Syllabus of B. Sc. (Home Science)**

## **Semester II**

### **Compulsory English (Theory)**

**Course No.CL1**

**Max.Marks : 50**

**Periods / wk. : 5**

#### **Unit I: PROSE 15 MARKS**

- |                                  |   |                  |
|----------------------------------|---|------------------|
| 1) The Bet                       | - | Anton Chekov     |
| 2) The Three Questions           | - | Leo Tolstoy      |
| 3) With the Photographer         | - | Stephen Leacock  |
| 4) National Prejudices           | - | Oliver Goldsmith |
| 5) Playing the English Gentleman | - | Mahatma Gandhi.  |

#### **UNIT TWO: POETRY 15 MARKS**

- |                                   |   |                     |
|-----------------------------------|---|---------------------|
| 1) Where the Mind is Without Fear | - | Rabindranath Tagore |
| 2) The Solitary Reaper            | - | William Wordsworth  |
| 3) Ozymandias of Egypt            | - | P.B.Shelly          |
| 4) Laugh and be Merry             | - | John Masefield      |
| 5) The Toys                       | - | Coventry Patmore    |

PRESCRIBED TEXT: LANGUAGE THROUGH LITERATURE: an anthology of prose and poetry by The Board of Studies in English, Published by Orient Blackswan Pvt. Ltd. Hyderabad, 2012.

#### **UNIT THREE: GRAMMAR 12 MARKS**

- 1) Tenses; the Simple Present, the Present Continuous, and the Simple Past
- 2) The Present Perfect and the Simple Past
- 3) The Past Continuous and the Past Perfect
- 4) The Present Perfect Continuous and the Past Perfect Continuous
- 5) Future Tense
- 6) The Uses of the Tenses

PRESCRIBED TEXT: BASIC ENGLISH GRAMMAR AND COMPOSITION, Edit. By Board of Studies in English, Pub. By Macmillan Publishers India Ltd., Mumbai: 2013.

**UNIT FOUR: PARAGRAPH WRITING 8 MARKS**

Recommended Reading for Grammar Units:

- 1) Contemporary English Grammar Structures and Composition by David Green  
Pub. By Macmillan Publishers India Ltd., 2011 edition.
- 2) Modern English: A Book of Grammar Usage and Composition, By Krishnaswami,  
Pub. By Macmillan Publishers India Ltd. 2009.

## Introduction to Nutritional Biochemistry (Theory)

Code No.127

Max. Marks: 50

Periods/wk.: 3

- UNIT-I:-** Introduction to Biochemistry, Its importance and relationship to food and nutrition.
- UNIT-II:-** CARBOHYDRATES: Digestion, absorption, metabolism.
- UNIT-III:-** LIPIDS: Digestion, Absorption, Metabolism, Oxidation, Rancidity
- UNIT-IV:-** PROTEINS: Digestion, Absorption, Metabolism, Protein quality estimation, enzymes hormones
- UNIT-V:-** Interrelationship of nutrients

### Books Recommended:

- 1) Outlines of biochemistry by E F Corn & P. K. Stumpf
- 2) Text book of biochemistry by A. Lehninger
- 3) Biochemistry of food by Eskin N.A.M, Handerson H.M. Townsend R. J.
- 4) Food chemistry by Fenema O.R.
- 5) Nutrition & diet therapy – Sue Rodwell Williams Times mirror/ Mosby College publication.
- 6) Text book of biochemistry- West, Tod & Mansol
- 7) Food science, Chemistry and Experimental Foods- M. Swaminathan, the Bangalore printing and publishing company Ltd.,
- 8) Hand book of food science and Experimental Foods- M. Swaminathan the Bangalore printing and publishing company Ltd.,
- 9) Essentials of Food and Nutrition- M. Swaminathan Vol. I & II, Ganesh and Company, Madras.

# **Human Development (Theory)**

**(Preschool- Late childhood)**

**Code No.128**  
**Periods/wk.: 3**

**Max. Marks: 50**

## **UNIT-I: Play**

- Definition, meaning, values, types, Theories & Characteristics
- Discipline: Principles, meaning and types.

## **UNIT-II Preschool years: (2-6 years)**

- Characteristics
- Physical Development – height, weight, body proportions.
- Motor skills
- Cognitive development – Perception, concept formation questioning and curiosity.
- Emotional development – Characteristics and common emotions like anger, fear and jealousy.
- Social development – common forms of social behaviour, parents, school and siblings.
- Personality development – sense of initiative V/s guilt
- Development tasks

## **UNIT-III Late Childhood (school years) (6-12 years)**

- Characteristics, development tasks.
- Physical development- Height, Weight and body proportions.
- Motor skills – Common motor skills
- Cognitive Development – Characteristics of thinking
- Language Development – Characteristics
- Personality Development – industry V/s inferiority
- Social Development – Factors affecting (family, role of family and its importance, expectations and sibling relation
- Gang age – Peer influence, sex antagonism.

- Moral Development – Characteristics

**Books Recommended:**

1. Child Development - John W. Santrock, 7<sup>th</sup> Edition, Brown & Benchmark publisher's U.S.A.
2. Human Development - Diane E Papalia & Sally Wendkos Olds, 5<sup>th</sup> Edition, 1981, Tata Mcgraw Hill Publishing Company New Delhi.
3. Development Psychology - Elizabeth Hurlock, 5<sup>th</sup> Edition 1981, Tata Mcgraw Hill Publishing Company, New Delhi.
4. Human Development - Graig G (1999) N.J. Prentice Hall
5. The Development of Children - Cole & Coles (1995) N.Y. Freeman & Co.

## Early Childhood Care & Education-I (Theory)

Code No.129  
Periods/wk.: 3

Max. Marks: 50

**UNIT-I:       Dimensions of development**

- Physical, motor, Cognitive, Language, Social, Emotional, moral and personality.
- Developmental tasks

**UNIT-II:       Creche** – Meaning, Importance, Salient features of a good creche – Setup, Staff, Program planning, Records- Types & maintenance

**UNIT-III       :       Significance of Early Childhood years**

- Historical review- Rousseau, Pestalozzi, Froebel, Montessori, Rabindranath Tagore, Tarabai Modak
- Development of Pre-school education in India-Christian missionaries, Badheka, Tarabai Modak-Gram Bal experiment of Kosbad, Nutan Balshikshan Sangh
- NCERT, ICDS, IAPE, Mobile crèche, Balshikshan Parishad

**UNIT-IV       :       Approaches to Pre-school education:-**

- Formal & Informal, Advantages & Disadvantages
- Types of preschool education- Play group, Nursery school, Balwadi, Anganwadi
- Objectives of early childhood education, Role and Qualities of teacher and other personnel
- Preschool building – Site & Location, Elements of a building, Space allotment for indoor & outdoor play
- Play equipments: Principles & Selection of equipment for various developments, Care and use of play equipment



**Books Recommended:**

- 1) Development Psychology - Elizabeth Hurlock, 5<sup>th</sup> Edition 1981, Tata Mcgraw Hill Publishing Company, New Delhi.
- 2) Human Development - Diane E. Papalia & Sally Wendkos olds, 5<sup>th</sup> Edition 1981, Tata Mcgraw Hill Publishing Company, New Delhi.
- 3) Early childhood Education - (Foundation and Practice): J. S. Grewal 1<sup>st</sup> Edition 1994, National Psychological Corporation, Agra.
- 4) Preschool Education - Dr. G. Pankajam, 1<sup>st</sup> Edition, The Indian - Philosophy and practice Publication.
- 5) Adolescent Development - Elizabeth Hurlock, 5<sup>th</sup> Edition 1981, Tata Mcgraw Hill Publishing Company, New Delhi.
- 6) The Psychology of Adolescent - A.T. Jerslid, 7<sup>th</sup> Edition Prentice Hall INC Englewood Cliffs N. J., U.S.A.
- 7) Theory & Principles of Education - Bhatia & Bhatia, Doaba House, Delhi.
- 8) Early childhood care & Education – Mohati & Mohati, Deep & Deep Publication, New Delhi.
- 9) Children in crèche – Alfred D. Souqa, Intellectual publishing House, Delhi.
- 10) Development Psychology - Vatsayayan, Kedar nath Ram Math, Meerut.

## Textile Science and Basics of Embroidery (Theory)

Code No. 1210  
Periods/wk.: 3

Max. Marks: 50

### UNIT-I : Physical & Chemical Properties of fibers

- a) Cotton
- b) Silk
- c) Wool
- d) Jute
- e) Viscose Rayon
- f) Nylon
- g) Polyester
- h) Asbestos

### UNIT-II: Finishes

- a) Introduction & Aims of finishes
- b) Classification of finishes
  - (i) Mercerizing (ii) Singing (iii) Scouring (iv) Sanforizing, (v) Bleaching (vi) Calendaring (vii) Weighing & Degumming (viii) Tentering (ix) Sizing (x) Waterproof finish (xi) Fireproof (xii) Mothproof (xiii) Shearing (xiv) Crease resistant (xv) Creaping (xvi) Embossing, (xvii) Moiring (xviii) Napping.

### UNIT-III : Embroidery

- 1) History
- 2) Equipments used in embroidery – Threads, cloth, scissors, needle, thimble, tracing wheel, carbon paper.
- 3) Rules of Embroidery
- 4) Selection of design
- 5) Colour combination
- 6) Types of tracing design
- 7) Machine embroidery

## **Textile Science and Basics of Embroidery (Practical)**

**Code No. 1210**

**Max. Marks: 50**

**Periods/wk.: 4**

1. Physical & Chemical testing of different types of fiber  
(1) Cotton, (2) Wool (3) Silk (4) Jute (5) Nylon (6) Polyester
2. Chemical testing of blended fabric.
3. Making a colour combination chart.
4. Embroidery-preparation of samples using different embroidery stitches (Any-10)

### **Books Recommended (Theory & Practical):**

- 1) Deulkar Durga – Household textile and Laundry work, orient Longman Delhi.
- 2) Dantyagi S - Fundamentals of Textile and their care, Orient, Longman, Delhi.
- 3) K.P. Hess - Textile Fabric and their uses.
- 4) Embroidery - Ksynia Marko, Treasure Press London.
- 5) Thomes & Heedson – Manual of Dyes and fabrics.
- 6) Benard P. Cobman - Textile fiber to fabric.
- 7) Marjory Z. Joseph, Introductory Textiles science, holt, Rine Hart, and Winstone, New York.
- 8) Reader's Digest – Complete guide to Needle work
- 9) Verma, Dr. Kapil – Cutting and tailoring (Practical drafting, Asian Publisher)

## Family Resource Management-II (Theory)

Code No. 1211

Max. Marks: 50

Periods/wk.: 3

### UNIT-I : Management of Non human Resources:

- i) **Money Management**- definition, concept of family income, sources, importance. Planning – Budget making – Definition, types, steps, importance, Account keeping
- ii) **Saving** – definition, importance, types, compulsory and voluntary ways to save the income.
- iii) **Investment** – Definition, Guidelines to invest the money, ways to invest mutual fund, shares, stocks, Bonds, deposit etc.

### UNIT-II: Management of material good

- i) **Food management** - Process of planning, controlling & Evaluation
- ii) **Clothing management** – Clothing demands/requirements during different stages of family life cycle, management responsibilities in clothing a family, Process of clothing management.

UNIT-III : **Personnel management** – Meaning, Definition, Selection, Recruitment & training of personal

UNIT-IV : **Entrepreneurship development**

## **Family Resource Management-II (Practical)**

**Code No. 1211**

**Max. Marks: 50**

**Periods/wk.: 4**

- 1) Budget making and actual spending (for any event).
- 2) Budget making for families of low, middle and high income group.
- 3) Seminar presentation on related topics
- 4) Attending seminars/conference- A Report.
- 5) Visit to Exhibitions/Trade Fair – A Report.

### **Books Recommended (Theory & Practical):**

- 1) Gross & Crandall “Management for Modern families, Meredith Publishing Co. Park Avenue South, New York.
- 2) Nickell P & Dorsey J.M. “Management in family living, Laguna Hills, California.
- 3) Mann M.K. “Home Management in Indian Families, Kalyani Publisher, Ludhiyana.
- 4) Ramaswamy, “Principles of Management”, Himalaya Publishing House, Mumbai.
- 5) Goodyear & Klohr, ”Managing for Effective living John Wiley & Sons.
- 6) Swanson Bettye, “Introduction to Home Management”, McMillan Pub. House, Inc. New York.
- 7) Vargese & Oagale, “Home Management”.
- 8) Ruth E, Family Resource Management – Principles & Application.
- 9) Erma H.Gross, Elizabeth, “Management for Modern Families.

## **Principles of Food Processing (Theory)**

**Code No.1212**

**Max. Marks: 50**

**Periods/wk.: 3**

### **Unit-I**

Introduction to food micro-organisms, their classification, growth curve, contamination & spoilage of foods, causes and factors affecting food spoilage, importance of microbial cultures, its cultivation and preservation.

### **Unit-II**

Importance and scope of food preservation, Basic principles and various methods of food preservation, Food preservation by salt and sugar

### **Unit-III**

Food preservation by use of low temperature – Principle, equipments and effect on quality (Chilling, cold storage, freezing etc.)

### **Unit-IV**

Food preservation by use of high temperature (thermal processing) – Principle and equipments: Canning, Blanching, Pasteurization, Sterilization, Evaporation etc., Food preservation by drying, Dehydration and Concentration

### **Unit-V**

Preservation by Radiation, Chemicals and Preservatives: Definition, Methods, Effect on Microorganisms, Effects on Quality of Foods. Preservation of food by fermentation- Definition, Advantages, Disadvantages, Types, Equipments etc.

### **Unit-VI**

Recent methods in food preservation: Pulsed electric field processing, Microwave heating, High pressure processing, processing using ultrasound, Dielectric, Holmic and Infrared heating.

## **Principles of Food Processing (Practical)**

**Code No.1212**  
**Periods/wk.: 4**

**Max. Marks: 50**

- \* Microscopy & Microscopic examination of bacteria, yeast & mold  
Demonstration of various machineries used in food processing.
- \* Preparation of ready-to-serve beverages, squashes, cordials, syrups etc.
- \* Preparation of jams, Jellies, marmalades, preserves, Chutneys, pickles  
ketchup/sauces, etc.
- \* Preparation of fruit bars, candies, toffees etc.
- \* Drying and dehydration of fruits and vegetable e.g. raisins, green leafy  
vegetables
- \* Preservation of food by fermentation (Sauerkraut, idli, tempeh, curd, dhokla
- \* Preservation of milk by condensation/concentration.
- \* Identification of types of spoilage & microbial count of spoiled foods
- \* Demonstration on canning and bottling of fruits and vegetables.
- \* Visit to food processing industry/unit.

**Books Recommended (Theory & Practical):**

1. Microbiology by Prescott, Harley & Klein.
2. Food Microbiology by Frazier W.C.
3. Basic Food Microbiology by Banwart George, J.
4. Technology of Food Preservation- N. W. Desroiser and N.W. Desrosier, AVI Publishing Co.  
Inc London.
5. Introductions to Food Science and Technology- G.P. Stewart and M.A. Amerine.
6. Food Processing Operations- Vol. III, M.A. Joslyn and J.J. Heild.
7. Preservation of fruits & Vegetables by Giridharilal, Sidhappa and Tondon, ICAR,  
Publication, New Delhi.
8. Hand book of Analysis of Fruits & Vegetable products- Ranganna, S., Tata McGraw Hills  
Pub. Co., New Delhi.
9. Food Processing and Preservation- Subbulaksmi G., and Udipi S.
10. Principles of Food Science, Vol. II by G. Borgstron, The Mc. Millan Co. Ltd.  
London.
11. Principles of food preservation part I & II by Owen R. Fenemma.
12. Food Science- Potter, CBS publishers.

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