UNIVERSITY OF PUNE

First Year Syllabi For The

Three-Year Integrated Bachelor of Science (B.Sc.) In

Home Science Degree Course

To be introduced from

Academic Year 2006-2007

UNIVERISTY OF PUNE

Syllabi for the Three-Year Integrated Bachelor of Science (B.Sc.) in Home Science Degree Course

Eligibility: -

The **B.Sc. in Home Science** degree course will consists of **six semesters** in three years.

Candidate passed the higher secondary school certificate examination H.S.C. in **science or commerce or arts** stream / or Home Science / Vocational Course / Diploma in Engineering / Pharmacy / Homoeopathy or equivalent exam. from any recognized Board or University.

Intake Capacity : -

120

Duration of B.Sc. :-

Degree Course – **3 Years.**

Medium of the course:-

English / Marathi.

Course Structure : -

A) The B.Sc. Home Science degree course curriculum is designed under two separate categories viz.

1) B.Sc. Home Science **Special** &
2) B.Sc. Home Science **Composite.**

B) Course duration is of **six semesters** in **three years**. Papers, Syllabus & course structure of semester I & semester II at first year will be same for **both** special & composite degree courses.

C) **Second year** of course consisting semester **III & IV** comprises same course structure for Special & Composite degree but the subjects & practical courses are different to suit the students **desire & interests.**

D) Students completed Special course at third year shall select any one subject from the following two specializations.

1) **Textile**
2) **Food & Nutrition**

Curriculum Structure: -

Semester	No. of Papers (T)	No. of Practical (P)	Theory	Practical	Total	Workload		
I	5	2	375	125	500	5Tx5*=25 2Px2*=04	29	29
II	5	2	375	125	500	5Tx5*=25 2Px2*=04	29	
III	4	2	400	100	500	4Tx6*=24 2Px3*=06	30	30
IV	4	2	400	100	500	4Tx6*=24 2Px3*=06	30	
V	4	2	400	100	500	4Tx6*=24 2Px3*=06	30	30
VI	4	2	400	100	500	4Tx6*=24 2Px3*=06	30	
Total	**26**	**12**	**2350**	**750**	**3000**		**178**	**89**

*** Weightage - periods of 45 minutes per Week.**

The student joining the first semester at the first year B.Sc. in Home Science & second semester there after shall offer four compulsory theory courses of maximum 500 marks and compulsory practical courses of maximum 125 marks in each semester.

Second Year – Special & Composite Course

Students who have passed all the theory & practical courses at the end of First Year of B.Sc. Home Science shall eligible to join 3rd semester in the second year of B.Sc. composite course. Students shall also allowed to keep the terms for maximum three titles of first year (A.T.K.T. for three subjects) at second year.

Eligible students joining 3rd semester and there after 4th semester at 2nd year shall offer compulsory three theory courses of maximum 400 marks and practical courses of maximum 100 marks at each semester of special and composite B.Sc. degree course.

Third Year – Special & Composite Course

Students who have passed all the theory & practical courses at the of second year B.Sc. in Home Science shall eligible to join 5th semester at the third year of special B.Sc. in Home Science respectively.

Students shall also **allowed to keep the terms (A.T.K.T.)** for maximum 3 titles of the second year at the third year on the condition that he/she will **not be allowed** to take admission in the third year before he/she passes in **all the subjects / titles** of the first year.

University shall conduct the supplementary annual examination in October for the repeater student for each semester.

Eligible students joining 5th semester and 6th semester thereafter at 3rd year shall offer compulsory three theory courses of maximum 400 marks and two practical courses of maximum 100 marks at special or composite degree course.

As per eligibility students joining special degree course at 5th semester at the third year shall select any one subject as a principle subject from their special second year subjects and shall continue for 6th semester.

As per eligibility students joining composite 5th semester at the third year shall continue with 6th semester of composite degree course only.

Examinations:

The University shall conduct theory examinations at the end of each semester while practical examinations of both the semesters of each year shall be conducted at the end of each year (Annual).

Theory exam. of both semesters (first and second) and annual

practical examination of F.Y.B.Sc. shall be conducted at each center by college (Internal); while semester end theory and annual Practical examinations of S.Y. & T.Y.B.Sc. Shall be conducted by University, appointing internal and external examiners.

Standard of Passing:

1. The candidate who has secured at least 30 marks out of 75 , 40 marks out of 100 and 10 marks out 25 in the Theory Examination and Practical examination respectively shall be declared to have passed in the paper.
2. The candidate failing to secure minimum marks in the Examination shall have to appear for subsequent Examination in the paper.
3. The candidate passing in all the subjects at the First Year will be admitted to Second Year. A candidate failing in one or more subjects to the maximum of three at the First Year will be allowed to keep the terms for Second Year on the condition that he/she will not be allowed to take the admission in the Third Year before he/she passes in all the subjects of the First Year.
4. The University shall conduct the Supplementary Annual Examination in October for the repeater student.

The University Terms:

The dates for the commencement and conclusion for the first and second terms have been determined by the University authorities. The terms can be kept by only duly admitted students. The present relevant ordinances pertaining to grant of term will be applicable.

Award of Class:

The class will be awarded to the student on the aggregate marks obtained during the second and third year in the Principal subject only. The award of the class shall be as follows:

1) Aggregate 70% and above **First Class with Distinction.**
2) Aggregate 60% and above **First Class.**
3) Aggregate 55% and more **Higher Second Class**
   But less than 60%
4) Aggregate 50% and more **Second Class**
   But less than 60%
5) Aggregate 40% and more **Pass Class**
   But less than 50%
6) Below 40% **Fail**

Practical Work:-

For first year there shall be a batch of 15 students for practical; while for the second and third year there shall be batch of 12 students.

Candidate shall perform one project wherever prescribed in lieu of one or two practical courses at the second & third year.

Teaching Programme: -

There shall be five period each of 45 minutes for each theory course out of which four periods shall be for lectures and one period for tutorial for first year.

There shall be six periods of 45 minutes for each theory course out of which five periods shall be for lecturers and one period for tutorial for second & third year.

For the first year of B.Sc. for each practical course, there shall be two periods of 45 minutes each laboratory work per week. The tutorial periods shall not be converted into theory class.

For the second & third year of B.Sc. for each practical course, there shall be three periods of 45 minutes each laboratory work per week. The tutorial periods shall not be converted into theory class.

At each year of B.Sc. there shall be 24 clock hours work per week.

The tutorial batch shall consist of not more than 30 students.

Workload: -

The present norms of work-load of lectures / tutorials in respect of teachers for B.A., B.Sc., B.Com. course shall continue.

Teaching Staff Qualification: -

M.Sc. in Home Science / M. H. Sc. in the related subject with qualification required as per Pune University, Govt. of Maharashatra and UGC rules and regulations.

B.Sc. Home Science

First Year – Composite Course

First year B.Sc. Home Science curricular includes two semesters.

Semester – I

Sr. No.	Sub. No.	Subject	Exam Scheme							
			Theory		Practical		Total		Exam.	
			Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks	At	By
1	1	English	75	30			75	30	The End of Sem.	The College
2	2	Psychology	75	30			75	30		
3	3	Human Anatomy & Physiology.	75	30			75	30		
4	4	Home Management	75	30			75	30		
5	5	Principles of Nutrition	75	30			75	30		
6										
7	Pract-I	Based on Sub. 1	-	-	25	10	25	10	The End of Year	The College
8	Pract-II	Based on Sub. 2			25	10	25	10		
	Pract-III	Based on Sub. 3			25	10	25	10		
	Pract-IV	Based on Sub. 4			25	10	25	10		
9	Pract-V	Based on Sub. 5	-	-	25	10	25	10		
		Total	**375**	**150**	**125**	**50**	**500**	**200**		

Semester – II

Sr. No.	Sub. No.	Subject	Exam Scheme							
			Theory		Practical		Total		Exam.	
			Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks	At	By
1	6	Introduction to Textile & Clothing	75	30			75	30	The End of Sem.	The College
2	7	Child Development/Human Development	75	30			75	30		
3	8	Agriculture	75	30			75	30		
	9	Health,Hygine & microbilogy	75	30			75	30		
4	10	Extension Education	75	30			75	30		
5	Pract -Vi	Based on Sub.6	-	-	25	10	25	10	The End of Year	The College
5	Pract -VII	Based on Sub. 7	-	-	25	10	25	10		
5	Pract -VIII	Based on Sub. 8	-	-	25	10	25	10		
5	Pract -IX	Based on Sub. 9	-	-	25	10	25	10		
6	Pract -X	Based on Sub. 10	-	-	25	10	25	10		
		Total	**375**	**150**	**125**	**50**	**500**	**200**		

Semester – I

Paper No. 1 English

Theory - 4 lec/ week
Practical – 2

Theory-75 marks
Practical-25 marks

Unit No. 1	**Remedial Grammar**	**12**
	• Advanced exercises on preposition, Articles. • Tense Usage • Passive Voice • Degree of comparison • Appropriate form of verb.	
Unit No. 2	**Study Skills**	**12**
	• Comprehension • Note Making • Summarizing • Use of Graphics, tables, diagrams • Understanding & interpreting facts. • Drawing inferences.	
Unit No. 3	**Writing Skills**	**12**
	• Letter – complaints, request, apology, personal • Reports – technical and scientific • Applications • News, articles, reviews, writing of books.	
Unit No. 4	**Communications Skills**	**12**
	• Everyday conservation • Interpreting maps, Railway Time tables etc. • Writing instructions, Notice, giving directions, Invitation. • Oral Skills – Description of everybody events, situations, narration skills, Oral expression of news and ideas.	
Unit No. 5	**Introduction to Indian Writers in English**	**12**
	• Rabindranath Tagore (Geetanjali & Kabuliwala) • Kamala Markandeya (Nector in Seive) • Kamala Das (The Old Play House) • Arun Joshi (The Foreigner.)	

References:

1. Living English Structure : Standard Allen : Longmans.
2. Living English Speech : Standard Allen : Longmans.
3. A Practical English Grammar (with exercise books) Thomson and Martinet : ELBS
4. An Advanced Learners Dictionary : Hornby : BLBS
5. An English Pronouncing Dictionary : Daniel Jones : ELBS
6. Drills and Tests in English Sounds; La Hill, Longmans.
7. A Remedial Course in English for Colleges (Book II). CIEFL, OUP.
8. Robert J.D. (1996): Complete course in English, Prentice hall of India Pvt. Ltd. New Delhi.
9. Narayanswami V.R.: Strength your English, Orient Longman Ltd.
10. Brendan C. : English for colleges, Macmillan India.
11. Bellare N. (2000) Reading & Study strategies, OUP
12. Kulkarni S.S.- iwoZ if"pe - Tarun Bharat Prakashan, Solapur.
13. Rabindranath Tagore - Geetanjali & Kabuliwala
14. Kamala Markandeya - Nector in Seive
15. Kamala Das - The Old Play House
16. Arun Joshi - Outsider
17. Short Stories - Rabindranath Tagore
18. Indian writers in English – Iyyengar.
19. Twenty Five Indian Poets – McMillan Publication.

Paper no. 2 Psychology

Theory - 3 lec/ week
Practical – 2

Theory-75 marks
Practical-25 marks

Objectives:

1. To develop an understanding of human behavior.
2. To develop and create an awareness in the students of the various psychological process underlying human behavior.

Unit I	**Introduction**	**(08)**
	• Definition. • Scope and branches	
Unit II	**Behavior**	**(08)**
	• Individual differences – heredity and environment • Motivation • Emotion • Frustration and conflict	
Unit III	**Cognition and its processes**	**(08)**
	• Sensation • Perception • Thinking • Reasoning • Problem solving	
Unit IV	**Intelligence**	**(08)**
	• Definition, • Factors affecting on intelligence	
Unit V	**Learning**	**(08)**

	• Theories of learning	
Unit VI	**Adjustment and Maladjustment**	**(08)**
	• Factors affecting	
Unit VI	**Personality**	**(08)**
	• Definition • Factors affecting • Creativity	

References:

I. Introduction to Psychology – Morgan C. T., King R. A.

Paper Number: 3) Human Anatomy and Physiology

Theory - 4 lec/ week
Practical – 2

Theory-100 marks
Practical-25 marks

Unit No. I	**Introduction to various systems of the body**	**07**
	• Animal Cell: structure, functions of each component (organelle) of the cell. • Tissues: Structure and functions of various types of tissues. • Bones: Various types, functions, structure of bone. • Joints: Classification and movements of various joints.	
Unit No. II	**Digestive System**	**04**
	• Structure and functions of salivary glands, stomach, small intestine pancreas, and liver. • Mechanism of mastication and swallowing. • Digestion and absorption of carbohydrates proteins & fats.	
	2Excretory Systems • Organs of excretion, their structure and functions (Kidneys, uretors and Urinary Bladder) • Mechanism of urine formations. • Normal and abnormal constituents of Urine.	**04**
	Skin • Structure and functions of skin. • Regulation of body temperature.	**05**

Unit No. III	**Cardiovascular system**	**06**
	• Blood – Composition and functions of blood, including functions of each component, coagulation of blood & its significance. Blood groups and Rh factor. • Heart – Structure and functions of Human heart. Cardiac cycle. • Blood Pressure – Systolic and diastolic Blood pressures, its physiological variations. • **Respiratory System:** • Organs, their structure & functions including Tracers. Bronchi & Lungs. • Mechanism of Respiration & its Regulations. • O_2 and CO_2 Transport.	**04**
Unit No.IV	**Female Reproductive System:**	**08**
	• Structure and functions of various, fallopian tubes and uterus. • Menstrual cycle, ovulation and menopause. • Pregnancy, parturition and Lactation. **Male Reproductive System:** • Spermatogenesis. Nervous System: • Structure of Neuron. • Structure and function of cerebrum & cerebellum. • C.S.B. • Reflex arc and Reflex action.	**02** 04
Unit No. V	**Endocrine glands:**	05
	• Structure and function of pituitary gland. • Structure and function of thyroid gland. • Structure and function of Spiro renal glands. **Human Genetics:** • Human Chromosomes, the inheritance and variation in man. • Abnormalities of autosomal chromosomes and chromosome structure. • The genetic basis of human disease like sickle cell anemia, hemophilia, centered blindness and diabetes.	06

References:

1. Guyton A.C., Hall, A. J. – Text Book of Medical Physiology.
2. K. Sembulingam – Essentials of Medical Physiology.
3. Chatterjee – Text Book of Medical Physiology.
4. Chaterjee C. C. Human Physiology.
5. Gardeb W. and sears : Anatomy and physiology for Nurses.
6. Guyton : Functions of Human body.
7. Jacfob and francone : Elements of Anatomy and Physiology.
8. Joglakar V. H. “kjhj foKku
9. Sharpe L. & L. Schafer Histology.
10. Best and Taylerr : Human Body.
11. Rastogee Text Book of Cytology.

Paper Number: 4 : Home Management

Theory - 4 lec/ week — Theory-100 marks
Practical – 2 — Practical-25 marks

Unit No. 1	**Introduction to Management.**	**12**
	• Basic concept of Management. • Purpose of Management. • Management and Change. • Achievement of goals. **Obstacles to the improvement of Management.** • Failure to evaluate results of management. • Seeking ready made answers to problems. • Lack of information.	
Unit No. 2	**Family characteristics influencing management**	**12**
	• Life Style • Type of family • Family size, stages of family, life cycle. **Factors motivating management** • Goals, definition, types and utility. • Values – Importance, sources of values, classification, characteristics, changing values. • Standards – Definition, classification, quantitative, qualitative, conventional and non conventional. • Decision – Role of decision making in management resource availability.	
Unit No. 3	**Money Management, Financial, family Budget - Steps & Types**	**12**
	• Classification of income, income profile. • Planning of financial security. • Savings, insurance, taxation. • Importance, family budget steps & types. • Account keeping, advantages and limitations. • Methods of handling money. • Factors affecting expenditure.	

Unit No. 4	**Time & Energy Management**	**12**
	• Time management – Nature of time as a resource, time cost, tools in the time management, management process applied to time, leisure time. • Energy management – Nature of energy as a resource, classification of household tasks, types of efforts, types of fatigues, causes and remedies, Energy management process, factors affecting energy management.	
Unit No. 5	**Decision making & work simplification.**	**12**
	• Decision Making – importance, types of decision, identifying alternatives. • Work simplification – importance, definition, and classes of change.	

References:

1. Home Management for Std. XI, by M.A. Verghese, N. N. Ogali, K. Srinivasan
2. Elements of Home Science by Premlata Mallick.
3. Household equipment by L. J. Pert and H. S. Pickett.
4. Management in the Home by M. Lilliam Gilberth.
5. Management in Family by Living, Nickill / Dorsey.

Paper Number:5 : Principles of Nutrition.

Theory - 4 lec/ week — Theory-100 marks
Practical – 2 — Practical-25 marks

Unit No. 1 Introduction to principles of nutrition – 18

- Food
  1. Definition
  2. Functions of food.
- Nutrition
  1. Definition
  2. History
  3. Factors affecting Nutrition
- Food Science
  1. Definition
  2. Scope & application.

Unit No. 2 Food Groups 18

- Different Food Groups.
- Nutrients obtained form different food groups.
- Food Pyramid : Types of food pyramid
- Balanced diet : Children, Adults, Athletes, Old age.

Unit No. 3 Nutrients & Sources 08

- Different nutrients (Micro & macronutrients)
- Carbohydrates – Classification ,Energy value, Sources.
- Proteins - Classification ,Energy value, Sources.
- Fats- Classification ,Energy value, Sources.
- Vitamins- Classification ,Energy value, Sources.
- Minerals- Classification ,Energy value, Sources.

RDA

- Recommended Dietary Allowance for different age groups.
- Application of RDA.

Unit No. 4	Nutrition Through Life Cycle	08
	• Infancy, Childhood. • Adolescence. • Pregnancy & lactation • Old age	
Unit No. 5	**Introduction to nutrient deficiency**	

References:

1. Baianu I. C. (Editor) : Physical (Chemistry) of food process, Vol –1 fundamental Aspects, AVI Books, New York.
2. Fennema, O. R. (Editor) : Food chemistry, 2nd Edn. Marcel Dekker inc. New York. (1985)
3. Ronsivali, L. J. & Vierira E. R. (1992) : Elementary food science, 3rd edn. , Chapman & Hall New York.
4. Chartey, H. (1982) : Food Science, 2nd edn. John, wiley & sons.
5. Wong, D.W.S. (1989): Mechanism and Theory in Food Chemisry,AVI Books, Van Nostrand Reinhold, New York.
6. McWilliams,M. (1989):Food: Experimental Perspectives, 2nd ed. MacMillan pulsing co.
7. MacMillans, M. (1984): Experimental Foods Laboratory Manual , subject Publications.
8. Swaminathan M. (1970) Food Science and experimental foods.
9. Grisold P. M. The experimental study of foods, Boston Houghlon Mifflin Co., Hel-1862.
10. Meyer, L.H. Food Chemistry, New York – Reinhold Publishing Corp. 1960
11. Swaminathan M. (1974) Essentials of foods and nutrition Vol. I., Ganesh and Company, Madras – 17.
12. Davidson S., More R., Brock I.F. Trusmell A. S. (1975).
13. Human Nutrition and dietetics, Sixth Ed. The English language book society and churehill livingstone.

14.Whole and Goodharth (1968) Modern nutrition in health and disease, 4th Ed. Tea and Febyer, New York.

15. Robinson and Lawler (1977) Normal and therapeutic Nutrition Macmillan. Publishing company – INC.

16. Kinder F. (1968) Meal Management Third education Macmillan Company, New York.

17. Nutrition in clinical care Rosame Beatrice Howard Narice forvey Herbold.

18.Devidsen S. Passmore R. Brock J.F. Trusmell A. S. (1975) Human Nutrition and dietetics. Sntled. The English Language book society and churetill living stone.

19)Robinson and Lawper (1977) Normal and therapeutic Nutrition, Nutrition Macmillian Publishing Company Ltd.

20)Francies J. Zaman, Denise Mrley. Application of Clinical Nutrition.

21)Frazier (1985) Food microbiology 2nd Ed. Tata McGraw Hills publishing company ltd. New Delhi.

22)Gridharilal, Sidappa and Tadon (1964), Preservation of fruits and vegetables ICAR, New Delhi.

23)Tanner F. (1944), The microbiology of foods, garred press.

24)Potter N. Norman, Hotchkiss Joseph H. (2005): Food Science, 5th Edn. S. K. Jain Publisher & distributors.

25)Srilkashmi B. (2005) : Dietetics, 5th Edn., New Age International (p) Limited.

26)Gopalon C, Rama Sastri B. V. & Balasubramanian S. C. (1971) Nutritive value of Indian foods, 1st edn., National Institut of Nutrition, ICMR, Hyderabad.

27)Singh Mitali (2007) : Food preparation, Shikshan books distributors.

28)Swaminathan M. (1986) : Handbook of food & Nutrition 5th edn.. The Bangalore Press.

Practicals Based on subject 1) English

1. Use of dictionary & thesaurus and study of etiquettes.
2. Spoken English – Phonetics,
3. Review writing of suitable book.
4. Seminar – presentation.
5. Group discussion & debates on current topics.
6. Writing & presentation of technical / scientific reports.
7. Interviewing a suitable person.
8. Visit to nearly English language laboratory.

Practicals Based on subject 3) Human Anatomy & Physiology

1. Determination of blood groups.
2. Estimation of a) Hemoglobin b) Bleeding c) clotting time.
3. Recording heart rate & blood pressure.
4. Physical & chemical examination of Urine.
5. Identification of slides.
6. Study and identification of various bones.

Practicals Based on subject 4) Home Management

1. Preparation of Budget for small unit family.
2. Demonstration of housekeeping by using equipments
3. Introduction to common household requirements & house equipments.
4. A case study of small unit (family, school, college, Institute, village, etc.) with reference to resources, management, problems & solutions.
5. Visit to well known management institutes in Maharashatra.
6. Management of a function (Planning, controlling and evaluation. Ex. i) Celebration of important day.
   ii) Arranging Guest Lecturers.
   iii) Departmental function.

Practical Based on subject 5) Introduction to Food Science & Nutrition.

1. Use and care of Kitchen equipments.
2. Weighing & measuring of food items.
3. Preparation of recipes using cereal & cereal products.
4. Pretreatment & processing of pulses.
5. Preparation of recipes using.
    a) Pulses b) Eggs c) Fruits d) Vegetables.
    e) Fruits f) Meat g) Milk
6. Preparation of frozen & non-frozen desert.
7. Market survey of raw & processes foods available their cost.
8. Standardization & sensory evaluation of recipes made from non-connectional foods.

Semester – II

Paper Number: 6) Introduction to Textile & Clothing.

Theory - 4 lec/ week — Theory-100 marks
Practical – 2 — Practical-25 marks

Unit No. 1	**Introduction to textile science**	**16**
	• Terminology in textiles, History, textile fibers. • Textile fibers & its classification. • Properties & use of different textile fibers – cotton, silk, rayon, polyester, acrylic, polyamide and other miner fibers. • Spinning method. • Method of fabric constructions- weaving, knitting, non-woven, felting, lace making. • Weaves – classification, plain, Twill, satin & sateen and their derivatives.	
Unit No. 2	**Equipments:**	**10**
	• Equipments & accessories used in clothing construction. • Their maintenance with special references to sewing machine, common problems & general remedies.	
Unit No. 3	**Fundamentals of clothing Construction :**	**14**
	• General principles of clothing construction • Drafting & making paper patterns, taking body measurements for different types of garments. • Preparation of Fabrics for garment making layout of patterns cutting & Marketing.	
Unit No. 4	**Clothing Requirement:**	**08**
	• Importance & functions of clothes. • Clothing requirements of infants and toddlers, pre-schoolers & elementary school children.	

Unit No. 5	**Textile Care:**	**12**
	• Use & Care of Textile. • Cleansing agents – water, detergents, soaps, Laundry reagents, bleaching agents & other. • Principles of Dry Cleaning, Laundry Equipments - their use & care. • Disinfection & storage of clothes.	

References:

1. Majory L. Josheph ‘ Essentials of Textiles’
2. Lewis ‘comparative clothing construction Techniqies.’
3. Shoben Aumstrong ‘Pattern cutting and making up’
4. Gohl EPG & Vilensky L.D. ‘Textile Science’ CBS publishers & Distributor, Delhi.
5. Corbman B.P. ‘Textile fiber to fabric Mc. Graw Hill Inc.
6. Natallia Brary, ‘More Dress pattern Designing’
7. Erwin Marbel D. clothing for moderns.
8. Shenai V.A. Technology of Textile finishing.
9. Grosiki Wastons ‘Textile Design and Colour’
10. Shenai V.A. Technology of Printing ; sevak publications
11. Clark W.’An Introduction textile printing Butter worth and Company.

Paper No7. Child Development –I/Human Development-I

Theory - 4 lec/ week — Theory-100 marks
Practical – 2 — Practical-25 marks

Theory- 03/wk

Objectives:

1. To introduce the students to the major concepts of human development.
2. To develop awareness of important aspects of development from conception to adolescence.

Content of Subject

Unit I	**Child Development**	(08)
	• Meaning, • Importance, • Principles of development • Growth and development • Rights of children.	
Unit II	**Prenatal Development**	(10)
	• Conception • Sign and symptoms of pregnancy • Care during pregnancy • Factors affecting prenatal development, delivery process • Types of births- prematurity.	
Unit III	**Neonatal period (Birth to 15 days)**	(10)

	• Stags of neonatal period • Care, features of neonate • Adjustments • Reflexes.	
Unit IV	**Infancy and Toddlerhood (15 days to 2 yrs)**	(10)
	• Infant care and hygiene • Physical, social, emotional, motor, speech and language developments. • Characteristics and developmental task • Importance of family (Erik Erikson).	
Unit V	**Early childhood period (2 to 6 yrs)**	(10)
	• Characteristics ,developmental task • Physical, motor, emotional , intellectual. • Importance of family (Erik Erikson) . • Play – importance, types, values of play.	
Unit VI	**Late childhood period (6 to 12 yrs)**	(10)
	• Characteristics, developmental tasks. Peer group –importance and influence on personality. Cognitive development, moral development (Discipline)	

Reference:-

I. Developmental Psychology – Hurlock B. E. 5th edition

Paper Number: 8) Agriculture

Theory - 4 lec/ week
Practical – 2

Theory-100 marks
Practical-25 marks

Unit No. 1	**Soil & Soil Types**	**12**
	• Study of soil profile • Physical & Chemical properties of soil. • Soil sampling & testing. • Soil types, Humus formation. • Soil Degradation. • Nutrients, availability & deficiency • Soil fertility & productivity. • Use of fertilizers & their types.	
Unit No. 2	**Introduction to Botany**	**12**
	• Branches of Botany • Study of Plant cells & tissues • Structure of typical plant. • Classification of Plants – flowering & non-flowering. • Introduction to photosynthesis, respiration, water absorption. • Reproduction in plants.	
Unit No. 3	**Agricultural Biotechnology**	**12**
	• Introduction to plant Biotechnology • Tissue Culture • Mushroom Cultivation • Biofertilizers & Biopesticides Production • Genetically Modified Plants	

Unit No. 4	**Plant Protection**	**12**
	• Equipments, maintenances • Principles & types • Introduction to plant pathogens – Bacterial, Viral, Fungal, & insect pests. • Prevention & Control	
Unit No. 5	**Cultivation Practices**	**06**
Unit No. 6	• Introduction to Agricultural climatology • Soil cultivation practices • Seeds & seed processing. • Organic farming, Fertilizer & weed management. **Water Resources** • Types of Precipitations, • Need of Irrigation, Methods of irrigation, Humidity – relative	**06**

Reference:

1. Soil Science - Shukhla & Chandel.
2. Biotechnology – Keshav Trehan.
3. Biotechnology – Bilgrami & Pande
4. Plant Pathology – G.N. Agrios.
5. Plant Pathology – R. S. Mehrotra.
6. Class book of Botany – S.C. Dutta.
7. A hand book of systematic Botany – S.C. Dutta.
8. College Botany – Das, Dutta & Gangulee.
9. College Botany – Gangulee & Kar - Vol.I-III
10. Basic concepts of soil – A.K.Kolay
11. Plant Tissue culture – Kalyan kumar De
12. Plant Tissue culture – Narayanswamy S.
13. Cultivation of Field Crops – Gupta
14. An Introduction to Mycology – Mehrotra R. S. & Aneja K. R.

Paper Number: 9) Health, Hygiene & Microbiology

Theory - 4 lec/ week — Theory-100 marks
Practical – 2 — Practical-25 marks

Unit No. 1	**Health**	**10**
	• Definition, meaning • Concept – Holistic, Sociological, Ecological, Psychological, Biomedical. • Dimension – social, mental, spiritual, emotional, vocational. • Determinants – Heredity, environments, Life style, Socio-economic conditions, Health & family welfare services available. • Indicators – Mortality, Morbidity, Disability rates, Nutritional status, Health care delivery. Utilization rates.	
Unit No. 2	**Hygiene**	**10**
	• Definition, meaning • Importance of personal Hygiene in life. • Control of Micro-organisms – Sterilization & Disinfection. • Maintenance of Hygiene • National & International Health Agencies like WHO, UNICEF. • National Health Programme – NTCP, NMEP	
Unit No. 3	**Introduction to Yoga**	**08**
	• Concept, Importance, Advantages, Types • Yoga during reproductive cycle in women (Gynec. Yoga) & men) • Anxiety – Causes & control measures	
Unit No. 4	**Introduction & Classification of Micro-organisms**	**08**
	• Bacteria • Viruses • Yeasts • Mold	

Unit No. 5	**Air & Waterborne Diseases**	**12**
	• Airborne diseases – Measles, Chicken pox, Whooping coughs. • Waterborne diseases – Dysentery, Cholera, Typhoid.	
Unit No. 6	**Infection, Prevention & Control**	**12**
	• Concept of Disease • Diseases transmitted by Mosquitoes, Housefly, Lice; their life cycle & control methods. • Study of Parasites – Entamoeba, Hookworm, Tapeworm, Threadworm, with references to structure, life cycle, mode of infection & harmful effects.	

References :

1. Peleczar, J.M. Chan, E.C.S. and Kreig, N. R. (1993) Microbiology, Ed. 5th Tata MacGraw Hill.
2. Stanier R. Y., Adelberg, E.A. and Ingraham, J.L. (1989) General Microbiology. MacMillan, London.
3. Atlas R. M. (1988) Microbiology, fundamentals and application. Micmillon N. Y.
4. Schlegel, General Microbiology . Fd. 7th Ed. Univ. Cambridge.
5. Marathe R. J., Sathe S.J., Gajbhiye M. H. & Pharande S., 2004 Microbiology, 1st Ed. Career Publication.
6. Harold J. Benson (1985) Microbiological Applications a laboratory manual in general Microbiology W.C. Brown publishers.
7. Frobisher M., Fundamentals of Microbiology W. sayenders co.
8. N. Kannan, " Laboratory Manual in General Microbiology." Panima publishing corporation, New Delhi.
9. Text book of Medical Parasitology, C.K. Jayram Panikar 4th Ed.n JAYPEE Brothers medical publishers (P) Lted. New Delhi.
10. Tortora G. J. Funke B. R. & et. al. 1992, Microbiology : An Introduction, 5th ed. Bgjamin Publication co. NewYork.

11. Ananthnarayan R. & C.E. Jayram Panikar, 1996, textbook of Microbiology 5th ed. Orient Longman.
12. Park & Park, Prementive & Social Medicine.
13. Chakraborthy, P. 2003, A Textbook of Microbiology, 2nd ed. New Central Book Agency, India.
14. American College of Physicians complete medical Home Gide – Editor David R. Goldman, D.K. Publishing Inc. New York. 1999, 1st edn.
15. Gregory P.H., et. al. Airborne microbes, Cambridge Uni. Press
16. Manuals, Prospects, Bulletins & journals from – WHO, UNICEF & Maharashatra & Central Govt. Health Ministry.

Paper Number: 10) Extension Education

Theory - 4 lec/ week — Theory-100 marks
Practical – 2 — Practical-25 marks

Unit No. 1	**Introduction to Extension Education**	**12**
	• Meaning & relationship with other sciences. • Contribution of Extension Education • Historical Development • Philosophical foundation of Extension -Education, principles, objectives & selected concepts.	
Unit No. 2	**Communication**	**12**
	• Origin, meaning, definition, functions & problems in communication. • Media – functions, limitation & classifications • Different types of audio-visual aids – types, advantages, limitations & use.	
Unit No. 3	**Adult & Non-formal Education**	**12**
	• Concept, meaning, need • Distinction between formal & non-formal education. • Nature of non-formal education. • Development and non-formal education in India, Literacy Scenario in India. • Adult & non-formal education through for year plans- Gram Shikshan Mohim, Farmers functional literacy project, NAEP, RFLP, NLM, etc.	

Unit No. 4	**Programme Development for Rural families.**	**12**
	• Concept, scope, principles, & objectives. • Steps – planning, organizing, supervising, monitoring & evaluations. • Leadership development - Meaning, qualities of leader.	
Unit No. 5	**Role of extension education.**	**12**
	• Role in planning & implementing programmes with special references to rural families. • Role in community building.	

Reference:

1) Introduction to Home Science/New Delhi, Metropolitan Book Co. (Author – A. Chandra)
2) Home Economics education / Boston, Houghton Miflin Co. (Author – Blankenship M. L.)
3) Communication for Development/ New Delhi, Oxford & IBH publishing Co. (Author, Dahama O. P. & Bhatnagar O. P. 1991)
4) Extension education in community Development / New Delhi, Ministry of food and Agricultural Govt. of India. (Directorate of extension / 1961)
5) Methods of teaching Home Science / New Delhi, NCERT (Author Devdas R. P. / 1978)
6) Home Economics, carrers & Home making / New Delhi, John Wiley & Sons. Inc (Author – Hall O. A. / 1988)
7) A text book of extension education / Ludhiana, Sahitya Kala Prakashan (Author – Singh Ranjit / 1987)

Practicals

Practicals Based on subject 6) Introduction to Textile & clothing

1. Introduction to Sewing equipments and tools, sewing machine & its Care.
2. Preparation of Samples of basic hand stitches, & machine stitches.
3. Embroidery – i) Basic embroidery stitches. ii) Seams – a) basic b) Decorative c) Durable.
4. Cutting & Stitching of different children garments.
5. Identification of textile fibers – visual tests, microscopic tests, burning tests.
6. Study of common fabrics available in the market.
7. Demonstration on laundry equipments.
8. Knitting – Any four types of knitting designs.

Practicals Based on subject 7) Agriculture

1. Study of soil profile.
2. Examining color, temp, & texture of soil.
3. Determination of pH & E.C. of soil.
4. Preparation of Biofertilizers.
    a. Azotobacter b) BGA
5. Study of flower & its parts.
6. Visit to tissue culture & micro propagation laboratories.
7. Preparation of Bordeaux Mixture
8. Introduction to weeds.
9. Mushroom cultivation.
10. Mapping of agro climatic zone of Maharashatra & India.

Practicals Based on subject 9) Health, Hygiene & Microbiology

1. Introduction to laboratory equipments – Autoclave, incubator, Oven, refrigerator, U.V. Chamber, L.A.F. Cabinet.
2. Staining methods of Bacteria – Monochrome, Negative, Gram staining.
3. Slide Preparation & staining of molds.
4. Study of permanent slides of parasites.
5. Effect of soap or other disinfectant on normal flora of skin.
6. Visit to PHC, District Tuberculosis Center.

Practicals Based on subject 10) Extension Education

1. To familiarize students with different types of accessories used for preparing communication media.
2. To select plan, prepare & use of different audio-visual aids.
3. Monitoring & evaluation of the programme.
4. Household surveys & organizing group demonstrations
5. Project work on – i)adult education ii) family planning
   iii) Health & Hygiene. iv) or any related areas.
6. Visit to EMRC Pune or any suitable related institute.