

Maharaja Ganga Singh University

Bachelor of Science (B.Sc.) Home Science

Department of Home Science

Undergraduate Programme

(Effective from Academic Year 2025-26)



Syllabus

Scheme of Examination and Courses of Study

Disclaimer: The CBCS Syllabus has been approved by the Academic Council and Board of Management. Any query may kindly be addressed to the concerned Faculty.

Syllabus Prepared and Checked by:

S.N o.	NAME	DESIGNATION	DEPARTMENT	INSTITUTION/ AFFILIATION
1	Dr. Abhilasha Alha	Professor, Convener, BOS	Home Science	Govt. M S College for Women, Bikaner
2	Dr. Nidhi Agarwal	Professor Member, BOS	Home Science	Govt. M S College for Women, Bikaner
3	Dr. Kamal Jeet Kaur	Professor Member, BOS	Home Science	Govt. BRG Girls College, Sriganganagar
4	Dr. Abha Ojha	Professor Member, BOS	Home Science	Govt. M S College for Women, Bikaner
5	Ms. Sunita Gahlot	Associate Professor Member, BOS	Home Science	Govt. M S College for Women, Bikaner
6	Dr. Vimla Dunkwal	Professor External Member	Dean, CCS, Food & Nutrition	College of Community Sc., SKRAU, Bikaner
7	Dr. Neena Sareen	Professor External Member	Extension & Communication	College of Community Sc., SKRAU, Bikaner

Preamble

Considering the curricular reforms as instrumental for desired learning outcomes, Maharaja Ganga Singh University made a rigorous attempt to revise the curriculum of undergraduate programmes in alignment with National Education Policy-2020 and UGC Quality Mandate for Higher Education Institutions. The process of revising the curriculum could be prompted with the adoption of Comprehensive Roadmap for Implementation of NEP*. The roadmap identified the key features of the Policy and elucidated the Action Plan with well-defined responsibilities and indicative timeline for major academic reforms. The University Grants Commission (UGC) has devised a series of regulations and directives over time with the intention of enhancing the higher education system's quality and enforcing minimum standards in Higher Educational Institutions (HEIs) throughout India. The recent academic reforms suggested by the UGC have contributed to an overarching enhancement of the higher education system.

With NEP-2020 in background, the revised curricula articulate the spirit of the Policy by emphasizing upon- integrated approach to learning; innovative pedagogies and assessment strategies; multidisciplinary and cross- disciplinary education; creative and critical thinking; ethical and constitutional values through value-based courses; 21st century capabilities across the range of disciplines through life skills, entrepreneurial and professional skills; community and constructive public engagement; social, moral and environmental awareness; exposure to Indian knowledge system, cultural traditions and classical literature through relevant courses offering 'Knowledge of India'; fine blend of modern pedagogies with indigenous and traditional ways of learning; flexibility in course choices; student-centric participatory learning; imaginative and flexible curricular structures to enable creative combination of disciplines for study; offering multiple entry and exit points, integration of extracurricular and curricular aspects; exploring internships with local industry, businesses, artists and crafts persons; closer collaborations between industry and higher education institutions for technical, vocational and science programmes; and formative assessment tools to be aligned with the learning outcomes, capabilities, and dispositions as specified for each course. The University has also developed consensus on adoption of Blended Learning with component of online teaching and face to face classes for each programme.

Choice Based Credit System (CBCS)

The Choice Based Credit System (CBCS), as a part of academic reforms to enhance quality of education and facilitate transferability of students from one University/Institution to another at the national and international level, provides substantive autonomy to teachers to formulate their own curricula and enable them to introduce innovations in teaching and learning process and upgrade overall quality of higher education. The CBCS provides scope for Comprehensive and Continuous Evaluation (CCE) of students and encourages them to learn. The CBCS provides a cafeteria type approach in which the students

can take courses of their choice, learn at their own pace, undergo additional courses, and acquire more than the required credits, and adopt an interdisciplinary approach to learning.

The grading system is widely regarded as an improvement over the traditional marks system, which is why leading institutions in India and abroad have adopted it. Thus, there is a strong rationale for establishing a consistent grading system. This would facilitate seamless student mobility among institutions within the country and abroad, while also allowing prospective employers to accurately assess students' performance. To achieve the desired standardization in the grading system and the method for calculating the Cumulative Grade Point Average (CGPA) based on students' examination results, the UGC has devised these comprehensive guidelines.

1. Core Course: A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.

2. Elective Course: Generally, a course which can be chosen from a pool of courses, and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope, or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

2.1 Discipline Specific Elective (DSE) Course: Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).

2.2 Dissertation/Project: An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher/faculty member is called dissertation/project.

2.3 Generic Elective (GE) Course: An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective. A core course offered in a discipline/subject may be treated as an elective by other discipline/subject and vice versa and such electives may also be referred to as Generic Elective.

3. Ability Enhancement Courses (AEC): The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill

and Skill Enhancement Courses (SEC). 'AECC' courses are the courses based upon the content that leads to Knowledge enhancement; (i) Environmental Science and (ii) English/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/ or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.

3.1 Ability Enhancement Compulsory Courses (AECC): Environmental Science, English Communication/MIL Communication.

3.2 Skill Enhancement Courses (SEC): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

4. Research Component in Under- Graduate Courses

Project work/Dissertation is considered as a special course involving application of knowledge in solving/ analyzing/ exploring a real-life situation/ difficult problem. A Project/Dissertation work would be of 6 credits. A Project/Dissertation work may be given in lieu of a discipline specific elective paper.

- **Pre-requisites and requisites of the course :**

Student enrolled and registered in UG Programme first semester. He/she should have passed XII class from CBSE, RBSE or recognized board and admission eligibility as per Commissionerate of College Education, Government of Rajasthan and Maharaja Ganga Singh University, Bikaner's rules and regulations.

- **Objectives of the course :**

The Course is designed with the broad objective of developing professional skills in various dimension of Home Science. However, the specific objectives of the programme are as follows :

- To provide learning about the science and technology that contribute to improving the quality of life of people.
- To acquire professional and entrepreneurial skills for socio –economic empowerment of students.
- To develop professional skills in areas of food and nutrition, textiles Home management, Extension and communication and Human development .
- To understand and appreciate the role of Home Science in the development and overall well – being of individual families and communities.
- To provide practical training regarding basics of normal and therapeutic nutrition, cooking, clothing construction, textiles, home management, human development, extension teaching and communication.

- **Programme Learning Outcomes:**

After the completion of the course, the student will be able to

1. Learn the basic concept and the various dimensions of the discipline (Home Science)
2. Identify major challenges and opportunities related to Home Science.
3. Demonstrate the professional, managerial and behavioral skills for effective job performance and career mobility.
4. Improve interpersonal skills and demonstrate better interaction and persuasion skills while working with teams/communities.

Structure of Program: B.Sc. Home Science

Instructions for Internal Assessment/Evaluation

Internal evaluation will be of 30 marks in a Semester. Continuous Comprehensive Evaluation process shall be adopted to find out each course level learning outcome, i.e., assignment, test, quiz, seminars etc. that includes logical thinking, knowledge and skill acquired during the course. The institution/college may also include online quizzes/assignments/tests/seminar participation for the purpose of Internal Assessment or Continuous Assessment/Evaluation. The institution/college shall decide the process of Internal/Continuous Assessment or Project work.

- **Scheme of End-of-Semester (EOS) examination:**

The bachelor's in Home Science is a full time Programme of 6 semesters' duration. There will be two Semesters in an Academic Year. Each semester will consist of not less than 90 actual teaching days (15-18 weeks of academic work). 'Course 'or 'Paper' is a component of the Programme. Each course is identified by a unique course code.

The programme will have core courses, core elective, skill development, and elective open papers, a dissertation/project/training/ review/clinical project/internship/case study in the 6th semester. The dissertation/project/training/review/clinicalproject/internship/casestudy will be evaluated by an examiner.

1. English/Hindi shall be the medium of instruction and examination.
2. There will be semester end examination. The semester end examinations, evaluation, publication of results, award of marks statements and award of diploma shall be undertaken by MGS University, Bikaner.
3. The system of evaluation shall be as follows:
 - 3.1 The evaluation scheme shall comprise External Evaluation and Internal Evaluation/Assessment or Continuous Assessment. The Internal Evaluation will carry 20% marks in each course except DECC. Each theory paper & Practical Paper will carry marks (as per distribution of credit table given below). Any student who fails to participate in classes, viva-voce will be debarred from appearing in the end semester examination.
 - 3.2 The duration of written examination for each paper shall be of three hours or as per the instructions of the University.
 - 3.3 The minimum attendance required by a candidate will be as per rules.
4. With regards to the Dissertation/Project/Term Paper/Training /Review/ Clinical Project/Internship/ Case study /Report, the scheme of evaluation shall be as follows:
 - 4.1 The candidate must submit report/thesis/dissertation/case study in spiral-bound format in three copies which would be evaluated by an external examiner. Total marks for Project/case Studies/training/dissertation/internship, etc. shall be as per MGSU rules and regulations.
5. Award of degree, grading, scope for improvement/appeal –shall be as per Maharaja Ganga Singh University rules and regulations/ordinances (CBCS/Semester).

Pass Criteria

For passing in each theory examination, a candidate is required to obtain 36% marks in all theory papers and 36% marks separately in the internal assessment and dissertation/project/report, etc. Pass Marks shall be as per University Guidelines.

Scheme of Examination

Time: 3 hrs.

Maximum Marks: 80

There will be one theory paper and practical in each Semester. This will be of 6 credits of **6 hours per week**. A course will contain 5 units. The question paper shall contain three sections.

- 1. Section A (10 marks)** shall contain 10 questions, two from each Unit. Each question shall be of 1 marks each. All questions are compulsory. Section A will be prepared such that question i to v are multiple choice questions while questions vi to x will be fill in the blank questions.
- 2. Section B (25 marks)** shall contain 05 questions (two from each unit with internal choice). Each question shall be of 05 marks. The candidate is required to answer all 05 questions. The answers should not exceed 150 words.
- 3. Section C (45 marks)** shall contain 5 questions, one from each Unit. Each question shall be on 15 Marks. The candidate is required to answer **any three** questions by selecting these three questions from different units. The answers should not exceed 400 words.

Note : The candidate is required to obtain 36% marks to pass in the Theory, Practical internal assessment separately in aggregate the candidate is required to score minimum 36% marks.

Structure of Programme B.Sc. Home Science

Semester- I

- **Course Code: Semester 1** **Paper 1 BHSC4.5DCCT12**
 Paper 2 BHSC4.5DCCT13
 Paper 3 BHSC 4.5DCCT14
- **Type of the course :** Discipline Specific Core Course of Semester I
- **Title of the Course :**
 - **Paper-1** Community Health & Human Physiology
 - **Paper-2** HUMAN DEVELOPMENT-I (Life span development)
 - **Paper-3** FOODS AND NUTRITION-1 (Fundamentals of Foods and Nutrition)
- Level of the Course: **NHEQF Level 4.5**
- Credit of the Courses: 6
- Delivery sub-type of the course: **Theory(3) Tutorial (1) Practical (2)**

Course Code	Course Title	Code	L	T	P	Total Credits	Maximum Marks		Total Marks	Minimum Passing Marks
							Internal Marks	External Marks		
H.SC4.5DCCT12	Community Health & Human Physiology	DCT	3	1	-	4	30	80	150	29 (36%) 14 (36%) 11 (36%) 36% each theory practical & internal Assessment.
H.SC4.5DCCP12	Community Health & First Aid	DCC	-	-	2	2		40		
H.SC4.5DCCT13	Human Development-1(Life span Development)	DCC	3	1	-	4	30	80	150	
H.SC4.5DCCP13	Human Development-1(Life span Development)	DCC	-	-	2	2		40		
H.SC4.5DCCT14	Food and Nutrition-(Fundamentals of Foods and Nutrition)	DCC	3	1	-	4	30	80	150	
H.SC4.5DCCP14	Food and Nutrition-(Fundamentals of Foods and Nutrition)	DCC	-	-	2	2				
Total Credit						18	90	360	450	

***Lecture(L)** includes Lecture Sessions

***Tutorial(T)** include lesson at college or university for an individual student or a small group of students consisting of Participatory Discussions/Term Papers/Assignments or Self-Study/Presentations or a combination of some of these.

***Practical (P)** stands for practice session. It consists of Laboratory Experiments/Field work/Project work/Outreach activities/Case Studies, etc.

Semester- II

- **Course Code:** **Paper-1 H.SC4.5DCCT22**
 Paper-2 H.SC4.5DCCT23
 Paper-3 H.SC4.5DCCT24

- **Type of the course :** Discipline Specific Core Course of Semester II
- **Title of the Course :**
Paper-1 Extension Education and Communication- I (Introduction to Extension Education)
Paper 2- Family Resource Management–I(Introduction to Family Resource Management
Paper-3 Introduction to Biochemistry and Food Microbiology

- Level of the Course: **NHEQF Level 4.5**
- Credit of the Course: **6**
- Delivery sub-type of the course: **Theory(3) Tutorial (1) Practical (2)**

Course Code	Course Title	Code	L	T	P	Total Credits	Maximum Marks		Total Marks	Minimum Passing Marks
							Internal Marks	External Marks		
H.SC4.5DCCT22	Extension Education and Communication-I (Introduction to Extension Education)	DCC	3	1	-	4	30	80	150	29 (36%) 14 (36%) 11 (36%) 36% each theory practical & internal Assessment.
H.SC4.5DCCP22	Extension Education and Communication- I (Introduction to Extension Education)	DCC	-	-	2	2		40		
H.SC4.5DCCT23	Family Resource Management–I (Introduction to Family Resource Management)	DCC	3	1	-	4	30	80	150	
H.SC4.5DCCP23	Family Resource Management–I (Introduction to Family Resource Management)	DCC	-	-	2	2		40		
H.SC4.5DCCT24	Introduction to Biochemistry and Food Microbiology	DCC	3	1	-	4	30	80	150	
H.SC4.5DCCP24	Introduction to Biochemistry and Food Microbiology	DCC	-	-	2	2		40		
Total Credit						18	90	360	450	

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Semester- III

- **Course Code:** H.SC5 DCCT32
H.SC5 DCCT33
H.SC5 DCCT34
- **Type of the course :** Discipline Specific Core Course of Semester III
- **Title of the Course :**
 - **Paper-1** Food & Nutrition -II (Biochemistry Nutritional)
 - **Paper-2** Human Development-II
 - **Paper-3** Textiles & Clothing - I
- Level of the Course: NHEQF Level 5
- Credit of the Course: 6
- Delivery sub-type of the course: **Theory(3) Tutorial (1) Practical (2)**

Course Code	Course Title	Code	L	T	P	Total Credits	Maximum Marks		Total Marks	Minimum Passing Marks
							Internal Marks	External Marks		
H.SC5DCCT32	Food & Nutrition-II (Biochemistry Nutritional)	DCC	3	1	-	4	30	80	150	29 (36%) 14 (36%) 11 (36%) 36% each theory practical & internal Assessment.
H.SC5DCCP32	Food & Nutrition -II (Biochemistry Nutritional)	DCC	-	-	2	2		40		
H.SC5DCCT33	Human Development-II (Principal of Early Childhood Care & education 2 Special Child)	DCC	3	1	-	4	30	80	150	
H.SC5DCCP33	Human Development-II (Principal of Early Childhood Care & education 2 Special Child)	DCC	-	-	2	2		40		
H.SC5DCCT34	Textiles & Clothing – I	DCC	3	1	-	4	30	80	150	
H.SC5DCCP34	Textiles & Clothing – I	DCC	-	-	2	2		40		
Total Credit						18	90	360	450	

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***Practical (P)** stands for practice session. It consists of Laboratory Experiments/Field work/Project work/Outreach activities/Case Studies, etc.

Semester- IV

- **Course Code:** H.SC5 DCCT42
H.SC5 DCCT43
H.SC5 DCCT44
- **Type of the course :** Discipline Specific Core Course of Semester IV
- **Title of the Course :**
 - **Paper-1** Extension Education & Communication – II (Community Development Perspective & Approaches)
 - **Paper-2** Family Resource Management - II
 - **Paper-3** Food & Nutrition - III (Food Science)
- Level of the Course: **NHEQF Level 5**
- Credit of the Course: **6**
- Delivery sub-type of the course: **Theory(3) Tutorial (1) Practical (2)**

Course Code	Course Title	Code	L	T	P	Total Credits	Maximum Marks		Total Marks	Minimum Passing Marks
							Internal Marks	External Marks		
H.SC5DCCT42	Extension Education & Communication – II	DCC	3	1	-	4	30	80	150	29 (36%) 14 (36%) 11 (36%) 36% each theory practical & internal Assessment.
H.SC5DCCP42	Extension Education & Communication – II	DCC	-	-	2	2		40		
H.SC5DCCT43	Family Resource Management. – II (Consumer Economics)	DCC	3	1	-	4	30	80	150	
H.SC5DCCP43	Family Resource Management. – II (Consumer Economics)	DCC	-	-	2	2		40		
H.SC5DCCT44	Food & Nutrition - III (Food Science)	DCC	3	1	-	4	30	80	150	
H.SC5DCCP44	Food & Nutrition - III (Food Science)	DCC	-	-	2	2		40		
Total Credit						18	90	360	450	

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***Practical (P)** stands for practice session. It consists of Laboratory Experiments/Field work/Project work/Outreach activities/Case Studies, etc.

Semester- V

- **Course Code:** H.SC5.5 DCCT52
H.SC5.5 DCCT53
H.SC5.5 DCCT54
- **Type of the course :** Discipline Specific Core Course of Semester V
- **Title of the Course :**
 - **Paper-1** Food & Nutrition - IV (Nutrition Management in health & disease)
 - **Paper-2** Human Development –III (Family Dynamics)
 - **Paper-3** Textile & Clothing – III (Apparel Making & Traditional Textiles)
- Level of the Course: **NHEQF Level 5.5**
- Credit of the Course: **6**
- Delivery sub-type of the course: **Theory(3) Tutorial (1) Practical (2)**

Course Code	Course Title	Code	L	T	P	Total Credits	Maximum Marks		Total Marks	Minimum Passing Marks
							Internal Marks	External Marks		
H.SC5.5DCCT52	Food & Nutrition - IV (Nutrition Management in health & disease)	DCC	3	1	-	4	30	80	150	29 (36%) 14 (36%) 11 (36%) 36% each theory practical & internal Assessment.
H.SC5.5DCCP52	Food & Nutrition - IV (Nutrition Management in health & disease)	DCC	-	-	2	2		40		
H.SC5.5DCCT53	Human Development – III (Family Dynamics)	DCC	3	1	-	4	30	80	150	
H.SC5.5DCCP53	Human Development – III (Family Dynamics)	DCC	-	-	2	2		40		
H.SC5.5DCCT54	Textile & Clothing – III (Apparel Making & Traditional Textiles)	DCC	3	1	-	4	30	80	150	
H.SC5.5DCCP54	Textile & Clothing – III (Apparel Making & Traditional Textiles)	DCC	-	-	2	2		40		
Total Credit						18	90	360	450	

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Semester- VI

- **Course Code:** H.SC5.5 DCCT62
H.SC5.5 DCCT63
H.SC5.5 DCCT64
- **Type of the course :** Discipline Specific Core Course of Semester VI
- **Title of the Course :**
 - **Paper-1** Extension & Communication – III (Extension Programme Management)
 - **Paper-2** Family Resource Management – III (Housing Interiors & Space Design)
 - **Paper-3** Institutional Management
- **Level of the Course:** NHEQF Level 5.5
- **Credit of the Course:** 6
- **Delivery sub-type of the course:** Theory(3) Tutorial (1) Practical (2)

Course Code	Course Title	Code	L	T	P	Total Credits	Maximum Marks		Total Marks	Minimum Passing Marks
							Internal Marks	External Marks		
H.SC5.5DCCT62	Extension & Communication – III (Extension Programme Management)	DCC	3	1	-	4	30	80	150	29 (36%) 14 (36%) 11 (36%) 36% each theory practical & internal Assessment.
H.SC5.5DCCP62	Extension & Communication – III (Extension Programme Management)	DCC	-	-	2	2		40		
H.SC5.5DCCT63	Family Resource Management – III (Housing Interiors & Space Design)	DCC	3	1	-	4	30	80	150	
H.SC5.5DCCP63	Family Resource Management – III (Housing Interiors & Space Design)	DCC	-	-	2	2		40		
H.SC5.5DCCT64	Institutional Management	DCC	3	1	-	4	30	80	150	
H.SC5.5DCCP64	Institutional Management	DCC	-	-	2	2		40		
Total Credit						18	90	360	450	

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***Practical (P)** stands for practice session. It consists of Laboratory Experiments/Field work/Project work/Outreach activities/Case Studies, etc.

Signature of Dean

Signature of Convener

H.SC4.5DCCT12
COMMUNITY HEALTH & HUMAN PHYSIOLOGY
(Fundamentals of Human Physiology & Community Health)

Duration of Exam: 3 hrs.

Max.Marks–80

Min. Marks-29

UNIT – I

- **Structure & functions of various systems.**
- 1. Structure and functions of human cell.
- 2. Cardiovascular System: -
 - A. Blood & its Composition
 - B. Blood Groups
 - C. Coagulation of Blood
 - D. Structure and functions of human heart.
 - E. Circulation of blood: types & mechanisms.
 - F. Heart rate, pulse rate, blood pressure & its Regulation.
- 3. Skeleton System and Joints: -
 - A. Types and functions of Bones
 - B. Classification of joints
 - C. Structure of Synovial Joint

UNIT II

- 1. NERVOUS SYSTEM: -
 - A. Structure of Neuron.
 - B. Structure and functions of different parts of the brain.
- 2. ENDOCRINE SYSTEM
 - A. Structure & functions of Endocrine glands
 - B. Impact of hypo & hyper functioning: -
 - C. Hypothyroidism & Hyperthyroidism.
 - D. Diabetes Mellitus
 - E. Hypo & hyperparathyroidism
 - F. Cushing's Syndrome
 - G. Addison's disease
 - H. Prolactinoma
 - I. Graves' disease

UNIT III

- 1. Structure and functions of digestive system: -
 - A. Structure of stomach
 - B. Structure of small intestine
 - C. Structure of liver
 - D. Structure of Pancreas
 - E. Structure of Gallbladder
- 2. EXCRETORY SYSTEM:
 - A. Structure and functions of Kidney& Nephron.
 - B. Formation of Urine
 - C. Structure and functions of Skin.
- 3. RESPIRATORY SYSTEM:
 - A. Structure and functions of Respiratory System.
 - B. Structure of Lungs.

UNIT-IV

- 1. Health Concept
 - A. Health (Physical, mental, social and Spiritual Health improving Factors) Positive Health, Community Health, Determinants of Health, Factors affecting Health, causes of poor health
 - B. Yoga & Meditation - Concept, Meaning and Importance
- 2. Health Education- Concept, content of health education, objectives principles, role of communication in health education.

UNIT- V

1. Causes, mode of transmission, incubation period, sign & symptom, life cycle, care and preventive measures of the following diseases:
 - A. Water, food and milk borne diseases- cholera, Typhoid, diphtheria.
 - B. Air borne and viral infections- small pox, chicken pox, Whooping Cough, Tuberculosis poliomyelitis
 - C. Disease caused by insect- Malaria.
 - D. Diseases caused by direct- contact- Hydrophobia, venereal disease, Tetanus, trachoma, Scabies, Acquired Immuno Deficiency syndrome (AIDS)
2.
 - A. Immunity- Classification of immunity,
 - B. Types of immunization, routine immunization schedule, hazards of immunized immunization.

Community Health and First Aid PRACTICAL Credit Hours (02)

Max. Marks: 40

Min. Marks: 14

Duration of Exam: 3 hrs.

I. Aims, Scope and rules of First Aid.

II. General Principles of First Aid in :

- a. Burns and Scalds.
- b. Cuts, Wounds and Haemorrhages.
- c. Sprains, fractures and dislocations, use of splint.
- d. Simple unconsciousness
- e. Electric shock and fire
- f. Heat stroke and frost bite
- g. Animal bite-dog and snake bite
- h. Foreign bodies in the eye, nose and throat.
- i. Common poisoning.

III. First Aid Box

- a. Room for the sick, Bed making procedures for the patient.
- b. Essential items for the sick room, bed pan, urinal, bed table, hot water bottle, ice cap, back rest, air ring, glass, measuring glass, spittoon, feeding cup and thermometer.
- c. Basic Knowledge about

1. Recording of temperature (making chart) and pulse rate, blood pressure

2. Applications of moist inhalations Hot and cold fomentation

3. Types of enema.

4. Patients rate of breathing & Patients Discharges (Knowing the condition of patient) examining about patient stool urine respiration vomiting.

REFERENCES:

1. Textbook of Anatomy and physiology for nurses - P.R. Asha Latha
2. Anatomy and physiology for nurses by Evelyn Pearce
3. Anatomy & Physiology by Dr. Kamaljeet Kaur Mann
4. डॉ. कमलजीत कौर मान : शरीर रचना एवं क्रिया विज्ञान – दिल्ली पब्लिकेशन
5. कान्ति पाण्डेय, प्रमिला वर्मा : शरीर क्रिया विज्ञान – हिन्दी ग्रन्थ अकादमी
6. पाण्डेय एवं अग्रवाल : शरीर रचना एवं क्रिया विज्ञान
7. वृन्दा सिंह : शरीर रचना एवं क्रिया विज्ञान – पंचशील प्रकाशन
8. डॉ. सत्यदेव आर्य : स्वास्थ्य विज्ञान, हिन्दी ग्रन्थ अकादमी, जयपुर।
9. डॉ. डी.एस. भरारा: प्राथमिक चिकित्सा, सेंट एम्बुलेंस एसोसिएशन, नई दिल्ली
10. मनोरमा बैद, डॉ. निधि सिंघल : प्राथमिक सहायता एवं गृह परिचर्या, अजमेरा बुक डिपो, त्रिपोलिया बाजार जयपुर।
11. बेला भार्गव : जन स्वास्थ्य एवं परिवार कल्याण, जैना पब्लिकेशन, जयपुर।
12. डॉ. वृन्दा सिंह, जन स्वास्थ्य एवं परिवार कल्याण, पंचशील प्रकाशन, जयपुर।
13. डॉ. सुधा नारायण। स्वास्थ्य एवं परिवार कल्याण, मातृ एवं शिशु कल्याण कालेज बुक डिपो।

H.SC4.5DCCT13
PAPER -II HUMAN DEVELOPMENT-I
(LIFE SPAN DEVELOPMENT)
Credit Hours (04)

Duration of Exam: 3 hrs.
INTERNAL ASSESSMENT: 30 Marks

Max. Marks: 80
Min. Marks: 29

Unit-I

Introduction to Human Development :

Definition, Scope Concept of Growth & Development, Role of Heredity& Environment on development, Importance, need & scope of life Span Development.

1. Stages, Principles of Human Development , Methods of Studying, Human Development , Conception to birth .
2. Genetic & Environmental influences on Development , Stages of Human development.

Unit-II

3. Early Childhood Years : Development in Infancy and Preschool Physical Development - Meaning, Importance, Stages, Factors affecting Development.
4. Motor Development-meaning , importance stages, factors, Hand & Leg skills & Handedness, Reflexes(from Infancy to Maturity)
5. Speech and Language development: Pre speech & speech forms of communication, Major tasks in learning to speak , Hazards in Speech development

Unit-III

6. Social Development: Meaning, Importance, Pattern, Hazards of social development.
7. Emotional development: Meaning, Importance, Pattern, Preschool and Play, Role of Family and Society
8. Moral Development-Moral behavior, Morality, Pattern, Importance, Stages, Factors affecting Moral Development, Meanings essentials of discipline.

Unit – IV

9. Cognitive Development -definition, stages, characteristics, cognitive abilities in childhood, factors affecting cognitive development.
10.
 - a) Play Development: Meaning, importance, Contributions & Characteristic, types of play activities.
 - b) Development of Creativity: Meaning, Values & Development Expressions & Hazards of Creativity.

Unit –V

11. Adolescence:
 - a) Introduction, Characteristics Physical & Psychological changes
 - b) Transition in family relations, Problems during adolescence, Counseling for adolescents.
12. Personality Development:
 - a) Meaning, Development, Determinants
 - b) Changes in interests (from Infancy to old age)

**PRACTICAL
HUMAN DEVELOPMENT-I
(LIFE SPAN DEVELOPMENT)
Credit Hours (02)**

Duration of Exam: 3 hrs.

**Max.Marks: 40
Min. Marks: 14**

1. Assessment of Growth and Development through Anthropometry.
2. Use of different methods of studying Human Development.
3. Preparation and use of teaching aids for promoting various developments.
4. Report Writing on Different Stages of life span Development (Any Two)
 - a.) Early Childhood , School Age, Adolescence, Adulthood ,Old Age
5. Report Writing /file making .

Distribution of Marks:

1.) Methods of studying Human Development	05 Marks
2.) Report writing	05 Marks
3.) Teaching Aid	05 Marks
4.) Activity planning & Implementation	05 Marks
5.) File & Record	15 Marks
6.) Viva Voce	05 Marks
Total	40

References:

1. Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient Black Swan.
2. Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata a. McGraw- Hill.
3. Berk, L. E. (2007). Development through the lifespan. Delhi: Pearson Education.
4. Baal Manovigyan : Baal Vikas by Dr. Preeti Verma & Dr. D.N. Shrivastava, Shri Vinod Pustak Mandir.
5. Manav Vikas Avam Parivarik Sambandh : Dr. Brinda Singh , PUNCHSHEEL PRAKASHAN.

Samester I

H.SC4.5DCCT14

Paper III - FOODS AND NUTRITION-I
Fundamentals of Foods and Nutrition
Credit Hours (04)

Duration of Exam: 3 hrs.

Max.Marks: 80
Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT I

1. Concept and definition of the terms- nutrition, food, nutrients, malnutrition and health, Relationship between food, nutrition, health and disease. Brief history of nutritional science. Scope of Foods and Nutrition.
2. Functions of Food-Physiological, psychological and sociocultural functions.
3. Concept of Balanced Diet, Basic Food Groups and Exchange lists.
4. Factors affecting selection of food & related behaviour of families -availability, agricultural production, food cost and economy, environment, socio-cultural, psychological and religious factors, role of industrialization, urbanization, work pattern, mass media etc. Acceptability of foods- sensory qualities, likes & dislikes, knowledge, attitude & practices regarding food-fads, fallacies and beliefs.

UNIT II

1. Nutrients: Macro and Micronutrients:

Classification, composition, chemistry, properties, functions, sources, digestion, absorption and utilization, Recommended Dietary Allowances, Deficiency and excess of

- (a) Carbohydrate
- (b) Fat
- (c) Protein (including - protein quality-definition, biological & chemical methods of assessment, factors affecting protein quality & methods of improving protein quality of diets.)

UNIT-III

1. Minerals & Trace elements

calcium, phosphorous, magnesium, iron, zinc, fluorine, iodine, sodium and potassium.

2. Vitamins

- (a) Fat soluble vitamins-A, D, E, & K
- (b) Water soluble vitamins- Thiamine, riboflavin, niacin, pyridoxine, pantothenic acid, folic acid, cynocobalamin and ascorbic acid.

3. Phyto chemicals

UNIT IV

1. Food Preparation

- (a) Basic terminology used in food preparation
- (b) Reasons of cooking food
- (c) Principles of food preparation
- (d) Methods of cooking-classification, procedure, merits & limitations

UNIT V

1. Water Balance
2. Regulation of water balance in the body
3. Electrolyte balance

PRACTICAL
Credit Hours (02)

Marks: 40
Min. Marks: 14

Duration of Exam: 3 hrs.

OBJECTIVES:

- Develop skill in food preparation techniques.
- Develop skill in methods of cooking for preparation of specific food products.
- Learn proper handling, preparation and service of foods.
- Be familiar with evaluation of food products for their quality characteristics.

Contents:

1. Use and care of kitchen equipment
2. Controlling techniques :
 - a. Weights and Measures- Standard and household measures for raw and cooked foods.
 - b. Recipe standardization technique.
 - c. Evaluation of food product for quality characteristics as a sources of specific nutrients.
3. Categorization of foods as rich, moderate and poor sources of energy and nutrients.
4. Preparation, serving and evaluating food items.
 - a. Beverages-tea, coffee, cocoa, fruit juice, punches, milk shakes etc.
 - b. Cereals- breakfast cereals-upma, pohae, variation in paranthas, chapati, rice, pulao, biryani, sandwiches, pastas, pancakes, biscuits, cookies, cakes, etc.
 - c. Pulses- using whole, dehusked and sprouted pulses-chana, rajmah, vadas, dhokla, kadi etc.
 - d. Vegetables- dry vegetables, curries, koftas, baked vegetables, cutlets, etc.
 - e. Salads, Soups and Stews
 - f. Milk, cheese and Khoa preparation- puddings- custards, kheers, ice creams
 - g. Eggs-hard and soft boiled, poached, scrambled. Omelette and egg-nogs, etc.
 - h. Meat, fish and poultry (Optional)
 - i. Desserts-halwas, souffles, baked and steamed desserts, other hot and cold desserts.
 - j. Snacks-Savoury: mathri, kachories, pakoras, etc. Sweets: ladoos, gunjias, malpuas.

Distribution of Marks

a) Preparation of two dishes	20 Marks
i) Quality characteristics	05 Marks
ii) Method of work & cleanliness	05 Marks
iii) Serving	03 Marks
b) Files and Records	05 Marks
Viva-voce	02 Marks
Total	40 Marks

References:-

डॉ. मुक्ता अग्रवाल : भोजन एवं पोषण – अजमेरा बुक डिपो, जयपुर।
डॉ. निधि अग्रवाल, संगीता धौलपुरिया – आहार एवं पोषण विज्ञान, अग्रवाल साहित्य सदन, श्रीगंगानगर
सी.गोपालन, भारतीय खाद्यान्नों का पोषण मान, आहार विज्ञान
तरला दलाल : पूर्ण सैट भोजन बनाने की विधि, वकील एण्ड फेफेयर्स, मुम्बई
अंजली शरण : व्यंजन कोश तीन खण्ड, अचार मुरब्बे एवं कन्फेक्शनरी, स्वादिष्ट व्यंजन – बजरंग प्रकाशन, नई दिल्ली

SEMESTER II

H.SC4.5DCCT22

Subject: Extension and Communication- I
Paper I : Introduction to Extension Education(Theory)
Credit Hours (04)

Duration of Exam: 3 hrs.

Max.Marks: 80

Min. Marks: 29

INTERNAL

ASSESSMENT: 30 Marks

UNIT - I

1. Home science and Extension Education:
 - a) Definition of Extension Education with special reference to Home Science. Concept, need and importance of Extension Education. Introduction of home science association of India.
 - b) Philosophy, objectives, principles and scope of Extension Education.
 - c) Need and role of Home Science Extension Education for the development of society.

UNIT-II

2.
 - a) Community Development programme - Concept, objectives, organization, activities, achievement and failure. Duties and skills required in community worker.
 - b) Panchayati Raj Institutions - Concept, objectives, structure and functions.

UNIT-III

3. Extension Teaching Methods & approaches.
 - a) Classification of Extension Teaching Methods.
 - b) Concept, use, importance and limitations of various types of Extension Teaching Methods.
 - c) Factors affecting the use and selection of teaching methods.

UNIT- IV

4. Rural Development programmes:- NEGP, DWCRA, IRDP, TRYSEM, SGSY, WDP, ICDS. Role of voluntary agencies and rural Institutions in Rural Development

UNIT - V

Motivation and Learning: Teaching & learning

- a) Definition, principles, types and role of motivation in Extension Education.
- b) Definition, principles and process of learning, factors affecting learning.
- c) Principles of teaching and learning in Extension and their implications in Extension Education, adult learning.
- d) Difference in teaching in formal and informal situations.

EXTENSION EDUCATION & COMMUNICATION (Practical)
PRACTICAL
Credit Hours (02)

Max.Marks: 40

Min. Marks: 14

Duration of Exam: 3 hrs.

1. Planning and use of following teaching methods.
a) Demonstration b) Dramatization c) Exhibition d) Home visit
2. Puppet making
3. Chart & poster making
4. Flash Card Making

References:

1. Rogers, Alan, Teaching Adults in Extension Education for Development, West wood Proce:, Tilehurst, Reading Rg 316 LT England, Woodmans, 1989.
2. Rogers, A., Teaching Methods in Extension Education for Development, Westwood Row, Tilehurst, Reading RG 316 LT, England, Woodmans, 1989.,
3. Reddy, A., Extension Education, Bapatia India, Sreelakshmi Press, 1987
4. Extension Education in Community Development, Directorate of Extension Ministry of Food and Agriculture, Government of India, New Delhi, 1961.
5. Supe, S.V., An Introduction to Extension Education, Oxford and IBH Publishing Co.Pvt. New Delhi, 1980.
6. Waghmare, S.K., teaching Extension Educatin, Prashant Publishers, Vallabh Vidyanagar, 1980.
7. Parlikar, K.P., The Art of Teaching Home Science, Exvira Publications, Baroda, 1990.
8. Devadas, R.P., Methods of Teaching Home Science, National Council of Educational Research and Training, New Delhi, 1978.
9. Singh, R., Textbook of Extension Education, Sahitya Kala Prakashan, Ludhiana, 1987.
10. बी डी हरपलानीरूप्रसारशिक्षाए स्टारपब्लिकेशनए आगरा।
11. कमलेशशर्मा, गृहविज्ञानप्रसारशिक्षण, साहित्यभवन, आगरा।

Subject: Family Resource Management – I

Paper 2 : Introduction to Family Resource Management (Theory)
Credit Hours (04)

Duration of Exam: 3 hrs.

Max.Marks: 80
Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT - I

1. Introduction of family resource management : Basic concepts, Objectives, Process, Management Functions, Obstacles.
2. Objective and principles of Management.
3. Family Life Cycle - Stages and factors affecting them-money, time & energy Management.

UNIT - II

4. Motivating factors in Management.
 - (a) Goals - definition, importance, types
 - (b) Values definition, importance, sources, classification, characteristics,
 - (c) Standards - definition, classification.
 - (d) Interrelatedness of values, goals and standards.

UNIT - III

5. Decision making - Meaning, Importance, types, steps, tools, role of decision making in Management.
6. Management process applied to energy concept, fatigue causes, types and measures to relieve fatigue, process of energy management, effective use of body.
7. Work simplification-Definition, Importance, techniques, Mundel's classes of change.

UNIT - IV

8. Management of specific resources,
 - (a) Family Resources - definition, types, characteristics, factors affecting resources, Guidelines to increasing satisfaction from resources.
 - (b) The use of Management process applied to time-philosophy of time, tools of time management, process of time management.

UNIT - V

9. Management of Family Income;
 - (a) Types of income, sources, family budgeting & its importance, methods of handling budget, steps in making budget, factors affecting the budget
 - b) Savings & investments - Meaning, importance and types.

PRACTICAL

FAMILY RESOURCE MANAGEMENT IN THE FAMILY

Credit Hours (02)

Max.Marks: 40

Min. Marks: 14

Duration of Exam: 3 hrs.

1. Study of time management practices of selected families.
2. Application of managerial process for various events e.g. organizing party, official meeting etc.
3. Work simplification techniques and Mundel's Classes of change.
4. Budgeting - Planning & Implementation of Seven days expenditure of the students.
5. Pot decoration & flower arrangement.

References:

1. Gross and Crandall E. (1963) - Management for Modern Families, Appleton Cenary Craft, New York.
2. Nickel and Dorsey J.M. (1970) - Management in family living, wiley Eastern Ltd., New Delhi.
3. Mullick, Premlak (2000) Textbook of Home Science Kolyani Publishers, New Delhi.
4. Steidal R.E. & Bratton E.C., Work in Home.
5. Gross I.H. Crandall, E.W. Crandall and Knoll, N.M. 1980 Management for Modern Families.
6. Donnelly J.H., Gibson, J.L. and Francerich, J.M. 1995 Fundamentals for Management, Chicago.
7. Fisher C.D. 1997 Human Resource Management, Chennai, All Indian Publisher and distributors.
8. Kole M.G. (1998) Management and human resources.
9. डॉ. बैलाभार्गव : 2001. गृह प्रबन्ध, साधन व्यवस्था एवं आन्तरिक सज्जा, युनिवर्सिटी बुक हाउस, जयपुर।
10. डॉसिंह वृन्दा ., 2005, गृह प्रबन्ध एवं आन्तरिक सज्जा पंचशील प्रकाशन, जयपुर।
11. मंजूपाटनी, गृहप्रबंध, विजयबुकसेंटर, जयपुर।

PAPER-III: INTRODUCTION TO BIOCHEMISTRY & FOOD MICROBIOLOGY

Duration of Exam: 3 hrs.

Max.Marks: 80

Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT-I

1. Introduction to Biochemistry – Definition, objectives scope and inter-relationship between biochemistry and other biological science.
2. Water Balance : Positive and Negative water balance, regulation of water balance in the body, Dehydration, ORT & ORS.
3. Fluid : Electrolyte and acid-base-balance.

UNIT-II

4. (a) Molecular aspects of transport : Passive diffusion, facilitated diffusion and active transport.
(b) Definition of digestion and absorption.
(c) Digestion and absorption of proteins, carbohydrates and lipids.

UNIT-III

5. Carbohydrates : Definition, classification, structure & Functions.
6. Lipids : Definition, Classification, structure & Functions.
7. Proteins : Definition, classification, structure & Functions.

UNIT-IV (Introduction to food Microbiology)

8. Microbiology : Brief history, classification of microorganisms-Moulds, yeasts, bacteria, protozoa, fungi & algae.
9. Structure of typical bacterial cell and virus, useful and pathogenic micro- organisms.
10. Economic importance of bacteria.

UNIT-V

11. Microbiology of food : microorganisms responsible for spoilage of fresh meat, processed meat, fish, eggs, fresh fruit and vegetables, pickles, sugar products honey and syrups, bread, ghee & butter.

REFERENCE BOOKS :

1. Principles of Biochemistry by Lehninger
2. Textbook of Biochemistry by U. Satyanarayana & U. Chakrapani
3. General Microbiology : Volume II, Dr. C.B. Power & Dr. H.F. Daganawalal Himalaya Publishing House Mumbai.
4. Mycology, Microbiology & Plant Pathology by Dr. Gyanprakash Sharma. Sakshi Publishing House, Jaipur
5. Fungi, Microbiology and Plant pathology by C.B. Gena, B.L. Choudhary & K.C. Sharma, Alka Publication, Ajmer.

PRACTICAL

INTRODUCTION TO BIOCHEMISTRY & FOOD MICROBIOLOGY :

Duration of Exam: 3 hrs.

Max. Marks: 40

Min. Marks: 14

1. Qualitative tests for carbohydrates.
2. Qualitative tests for protein.
3. Qualitative tests for lipids.
4. Identification of Blood groups.
5. Estimation of Hemoglobin by sahli's Hemoglobinometer.

Distribution of Marks

- | | | |
|--------------------------|---|--------------------------|
| 1. Two qualitative tests | = | 10 Marks (05 Marks each) |
| 2. One quantative tests | = | 20 Marks |
| 3. Record | = | 5 Marks |
| 4. Viva Voice | = | 5 Marks |

SEMESTER III

H.SC5DCCT32

PAPER I - FOODS AND NUTRITION-II

(Nutritional Biochemistry)

Duration of Exam: 3 hrs.

Max.Marks: 80

Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT I

1. Introduction to biochemistry- Definition, objectives scope and interrelationship between biochemistry and other biological science.
2. Carbohydrates-properties of mono, di and polysaccharides
3. Lipids
 - (a) Physical and chemical properties with reaction of different functional group of lipids.
Hydrogenation of fats. Significance of acid value, iodine value and saponification value.
 - (b) Classification and structure of phospholipids, glycolipids and sterols.
 - (c) Lipoproteins-types, composition, role and significance in diseases.

UNIT II

4. Proteins-properties of amino acids essential and non-essential, peptides and proteins. Function of proteins.
5. Enzymes- Definition, types and classification of enzyme kinetics including of coenzymes, specificity of enzymes, isohyets, Enzyme kinetics including factors affecting velocity of enzyme/catalysed reactions. Enzyme inhibition.
6. Molecular aspects of transport-passive diffusion, facilitated diffusion and active transport.

UNIT III

7. Vitamins- Chemistry and biochemical role of vitamins-fat soluble- A, D, E and K and watersoluble-B1, B2, niacin, B6 and vitamin c.
8. Mineral-Biochemical role of inorganic elements calcium, phosphorus, magnesium, iron, copper, sodium, potassium, iodine, fluorine and zinc.

UNIT IV

9. Intermediary metabolism- General considerations, Elementary study of intermediary metabolism of carbohydrates, lipids and proteins-glycolysis, gluconeogenesis, glycogenesis, glycogenolysis, regulating blood glucose level, oxidation and biosynthesis of fatty acid, synthesis and utilisation of ketone bodies, ketosis, cholesterol metabolism, general reactions of amino acid metabolism-deamination, transamination, decarboxylation and entry of amino acid into TCA cycle, urea cycle, Citric acid Cycle (TCA)

UNIT V

10. Biological Oxidation, electron transport chain, oxidative phosphorylation energy conservation, high energy phosphate bonds.
11. Introduction to genetic control of metabolism-Nucleic acids-types, composition and structures. Replication, transcription, genetic code. Elementary knowledge of biological of proteins.
12. Hormones-biological role of hormones-Pituitary, adrenal Cortex and Medulla, thyroid, Parathyroid and Pancreas.

PRECTICAL
H.SC5DCCT32
FOODS AND NUTRITION-II (Nutritional Biochemistry)
P-32

Duration of Exam: 3 hrs.

Max. Marks: 40

Min. Marks: 14

1. Qualitative analysis of carbohydrate.
2. Qualitative analysis of amino acid.
3. Estimation of lactose in milk.
4. Determination of Acid value, Saponification value and Iodine number of natural fats and oil.
5. Estimation of Hemoglobin by colorimetric method.
6. Estimation of blood glucose by colorimetric method.
7. Estimation of albumin by colorimetric method.

Distribution of Marks

i. Files, Record etc.	10marks
ii. Quantitative analysis(two)	
a) Principals & methods	10marks (05marks each)
b) Observation & calculation	10marks (05markseach)
c) Results & precautions	10marks (05markseach)
Total	40marks

Note: At least one observation of each experiment should be checked by one of the examiners.

Reference Books:

1. Bell, GH, Davidson, JN and Smith, DE: Text Book of Physiology and Biochemistry, ELBS & Churchill living stone.
2. Berry, A.K. :A Text Book of Biochemistry, Tata Megraw Publishing Co. Ltd. New Delhi.
3. Conn, E.E. Stumpf P. K. Brueing, G. and Doi, R.H.: Outlines of Biochemistry, John Willy & Sons, N. York Devlin, T.M. (1986): 2nd Ed. Textbook of Biochemistry with Clinical Correlations, John Wiley and Sons.
4. Indian Standards Institution, (1985): ISI Handbook of Food Analysis, Parts I-XI, Manak Bhawan, New Delhi.
5. Lehninger, A.L., Nelson, D.L and Cox, M.M. (1993): 2nd Ed. Principles of Biochemistry, CBS Publishers and distributors.
6. Mazur, A. and Harlow, B.: Text Book of Biochemistry, WBS aunders Co, Philadelphia.
7. Murray, R.K., Garnner, D.K., Mayes, P.A. and Rodwell, V.W. (1993): 23rd Ed. Harper's Biochemistry. Lange Medical boot's.
8. Oser, B.I. (1965): 14th Ed. Hawk's Physiological Cherrrstry, McGraw Hill Book Co.
9. Rao, K.R.: Textbook of biochemistry, Pentice 4 Hall of India Pvt. Ltd. New Delhi.
10. Stryer L. (1995): Biochemistry, Freeman W Hand Co.
11. Sundararaj, P. and Siddhu, A., (1995): Qualitative Tests and Quantitative Procedures In Biochemistry-A Practical Manual, Wheeler Publishing.
12. Varely, H., Gowenlock, A.H. and bell, M. (1980) 5th Ed. Practical and Clinical Chemistry, Vol 1, William Heinemann Medical Books Ltd.
13. West, I.S, Todd, W.R, Mason, H.S. and Van Bruggen, J.T. (1974): 4th Ed Text book of Biochemistry, Amerind Publishing Co. Pvt. Ltd.
14. White, A., Handler P., Smith E.L., Stelten, D.W (1959): 2nd Ed. Principles of Biochemistry, MC Graw Hill Book Co.
15. William, S.: 16th Ed. JAO AC, Official method of analysis of the Association of Official Analytical Chemists.

16. Swaminathan, MS (1985): Essentials of Food and nutrition VI: Fundamentals Aspects
VII: Applied Aspects. Bangalore Printing Co. Ltd.

SEMESTER III

H.SC5DCCT33

PAPER II - HUMAN DEVELOPMENT-II

Principles of Early Childhood Care and Education (ECCE) and Special child

Credit Hours (04)

Duration of Exam: 3 hrs.

Max. Marks: 80

Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT I

1. Early Childhood Education

(a) Nature and meaning

(b) Need and importance of ECCE, Objectives of Early Childhood Care and Education

2. Contribution of Great Educators & Psychologists (Western & Indian) toward Early Childhood Education.

(a), Rousseau, Dewey, Jean Piaget, Benjamin Bloom, Montessori, Susan.

(b) Swami Dayanand, Swami Vivekanand, Rabindranath Tagore, Gandhi, Aurobindo, Gijubhai, Tarabai etc.

3. Types & Curriculum Models of Early Childhood Education.

(a) Kindergarten, Montessori, Nursery, Open, Pre-basic & Balwadi.

(b) Child Development, Verbal/Cognitive, Sensory/ Cognitive, Verbal/ Didactic Models.

UNIT II

4. Organization of Early Childhood Care & Education Centers.

- Site, Building, Classrooms, Staff
- Curriculum, Equipments
- Records & Registers, Supervision & Evaluation
- Parent Participation & Parent Education
- Early Childhood Education Training Programmes.

5. Educational Media, Materials and Aids of ECCE

- Play materials. Learning materials
- Media & Aids
- Art Education and Activities for the Pre-school Child.

UNIT III

6. Child with Special Needs

i. a) Introduction and scope of special education, Meaning and concept of children with special needs

b) Classification and conceptual foundations of education of exceptional children.

c) Organizations working for children with special needs

d) Normalization and Attitudes towards exceptional children.

ii. The Mentally challenged and the gifted Children-

a) Introduction, definition, classification

b) Causes, characteristic, prevention,

c) Educational considerations, management, intervention and rehabilitation.

iii. Children with sensory disabilities-The visually and Aurally impaired and children with communication disorders-

a) Introduction, classification

b) Causes, characteristics, prevention

c) Educational considerations, management

d) Intervention and rehabilitation.

UNIT IV

7. The Learning Disabled, Emotionally disturbed and Children with Behavioral Disorders

- (a) Introduction, Classification
- (b) Causes, Identification, characteristics
- (c) Treatment, prevention
- (d) Educational and special considerations
- (e) Intervention, management and rehabilitation.

UNIT V

8. Children with physical disabilities and neurological impairments-

- (a) Introduction & Classification
- (b) Causes, characteristics & identification
- (c) Educational, and special considerations
- (d) Management, intervention, rehabilitation and treatment.

PRACTICAL

H.SC5DCCT33

Principles of Early Childhood Care and Education (ECCE) and Special child

Max. Marks: 40

Duration of Exam: 3 hrs.

Min. Marks: 14

1. Preparation of Creative Albums, Picture Books and Children's Literature for Early Childhood Education.
2. Story Telling Techniques & Aids
3. Daily, Weekly & Monthly Planning for an ECCE center.
4. Planning & Implementing of developmental activities for Preschool children & Children with special needs.
5. Visits & Report presentation of
 - Early childhood Care & Education Centers
 - Nursery Schools
 - Anganwadi
 - Institutions of Children with special needs.

Distribution of Marks

1. File & Record	10
2. Preparation of creative Albums, Picture, Bookstand Children's Literature	05
3. Story Telling	05
4. Planning of ECCE center	05
5. Developmental Activities	05
6. Visits & Report presentation	05
7. Viva-voce	05
Total	40

References:

1. Grewal, J.S. (1986) Early Childhood Education, Foundations & Practice 1984, National Psychological Corporation Agra.
2. Kaul, V. Bhatnagar, R. (1992): Early Childhood education A trainer's handbook, New Delhi, NCERT.
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SEMESTER III

H.SC5DCCT34

PAPER III - TEXTILES AND CLOTHING- II

(Textiles and Clothing)

Credit Hours (04)

Duration of Exam: 3 hrs.

Max. Marks: 80

Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT I

1. Fabric construction
 - a. Weaving:-Terms used in weaving.
 - (i) Loom and its Part (ii)Types of Weaves-Construction, properties and usage-plain, twill, satin and sateen
 - (iii) Introduction to complex weaves-huckaback, honeycomb. Leno, mock leno, color and weave effect.
 - b. Knitting Technology, Types of knits, Designing of knits
 - c. Blends: Definition, properties and stages of blending
 - d. Felting
2. Fabric Finishes
 - a. Introduction and need
 - b. Preparatory processes-Singeing, desizing, scouring, bleaching, heat setting.
 - c. Routine finishes-beetling, calendaring, carbonization, permanent setting, mercerization, sizing,\ softening, anti- shrink, weighing.
 - d. Special purpose finishes-flame retardant, water repellent, antistatic, moth proofing, permanent press.

UNIT II

- 3.Dyeing and printing
 - a. Theory of dyeing
 - b. Classification of dyes on the basis of substrates
 - c. Stages of dyeing, equipment used, advantages and limitations
- 4.Printing
 - a.Dyeing Vs printing
 - b. Styles of printing
 - c. Methods of printing

UNIT III

- 5.Laundry Science
 - a. Classification & introduction to laundry process
 - b. Wet and Dry Cleaning
 - c. Water - Hard and soft water - Temporary and permanent hardness, Problems caused by hard water, Methods of Softening Water for laundry purposes
 - d. Soap and detergents-Classification, chemical nature, manufacturing, prosperities and their cleansing action.

UNITIV

6. Bleaches: blues, stiffening agents, solvents and absorbents their types, methods of preparation and uses.
7. Tie and dye textiles-techniques of dyeing and used in different states bandhani, patola, ikkat, pochampali
- 8.Painted and mordant dyed textile techniques of printing pichhwai, patta, madhubani

UNITV

9. Introduction to family clothing:-

Biological, psychological, sociological aspect of clothing influence the need and environment on clothing behavior, Appearance and personality, Clothing and family budget, Wardrobe planning - factors to be considered and clothing needs for different age groups.

PRACTICAL
H.SC5DCCT34
TEXTILES AND CLOTHING- II

Duration of Exam: 3 hrs.

Max. Marks: 40

Min. Marks: 14

1. Identification of weaves and their design, interpretation on graph.
2. Evaluation of color fastness
3. Preparation of samples and article of tie and dye, batik and printing techniques.
4. Preparation of knitting samples by various methods and pattern reading and prepare an article for child or adult
5. Preparation of starches by various stiffening agents and their uses.
6. Drafting, cutting and stitching of Jhabla, bib, panties, Payajama, salwar, Kurta etc.
7. Introduction to computer aided designing for weaving software's.
8. Visit to textiles mills, museums and garment factories.

Distribution of Marks:

1.Record&File	10
2.Identification of weaves	05
3.Tie & Dye/block Printing/Batik(anyone)	05
4. Evaluation of color fastness	05
5. Preparation of Knitting samples	05
6.Stitching of one garment	15
Total	40

References:

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2. Wintage, Isabel B.: Textiles Fabrics and Their Selection Prentice Hall, Inc. Englewood Cliffs, N.Jersey.
3. Joseph. Marjory L: Essentials of Textiles Hold. Rinehart and Winston, NewYork.
4. Hess, Katherine Paddock : Textiles Fabrics and Their Uses Oxford & IBH Publishing Co. N. Delhi.
5. Corbman Bernard: Textiles fiber to Fabric: McGraw Hill Book Company NewYork.
6. Hollen Norma, Saddle Jane, Angford Anna-Textiles; Macmillan Publishing Co.Inc. N.York.
7. Deulkar Durga: House hold Textile and Laundra Work: Atma Ram & Sons N. Delhi.
8. Dhattyagi:Sushella:FundamentalofTextilesandTheirCareOrientLongmans,Bombay.
9. Smith Betty F.and Block Ira-Textile in Perspective-Prentice Hall INC Engle wood life Jersey.

**SEMESTER IV
H.SC5DCCT42**

Paper I -EXTENSION AND COMMUNICATION- II

Community Development- Perspectives and Approaches

Duration of Exam: 3 hrs.

Max. Marks: 80

Min. Marks: 29

INTERNAL ASSESSMENT: 30 Marks

UNIT I

1. Communication
 - a) Meaning and objectives, types of communication.
 - b) Models, key elements of communication and role in communication process
 - c) Barriers in communication ways to overcome them

UNIT II

2. Teaching Method
 - a) Classification of teaching method
 - b) Concept, use, importance & limitation of teaching method
 - c) Selection of teaching method

UNIT III

3. Community Development
 - a) Meaning and Definition of Community Development.
 - b) Objectives, Philosophy and Community Development work in India since independence.
 - c) Scope and organizational setup of community development/ extension programmes in India.
4. Panchayati Raj In India-Concept, Philosophy, objective & Challenges, Problems, structural organization, History and role in community development.

UNIT IV

5. CommunityDevelopment program approach
 - (a) Multipurpose
 - (b) Growth Centered
 - (c) Minimum needs
 - (d) Integrated
6. Critical reflection and method of socio- economic analysis.
 - (a) Rapid Rural Appraisal
 - (b) Participatory Rural Appraisal
 - (c) Survey, Case studies, Observations By participant & C.D. worker

UNIT V

7. Women and Development Approaches
 - (a) Welfare approach-women's role as wives and mothers emphasized.
 - (b) Anti-Poverty approach-women's income generation programmes integrating women in development.
 - (c) 'Efficiency' approach-emphasis on women's key role in production.
 - (d) "Equity" approach- combating, patriarchy exploitation, subordination and oppression of women.
 - (e) "Empowerment" approach- process of women discovering in power within themselves to tackle the problems in their life situations.
8. Scope of Home Science Extension Education in Women Development and Community Development.

PRACTICAL
H.SC5DCCT42
Community Development- Perspectives and Approaches

Duration of Exam: 3 hrs.

Max. Marks: 40
Min. Marks: 14

1. Assess following from the point of view of developing awareness among people regarding health standard of living and other aspect
 - T.V. programme, radio program- educational, recreational
 - Social and commercial advertisement
 - Article of magazine
 - Develop a script as above mention aspect and media.
2. Developing skill in using handling and care of various instrument/equipment used for communication:-
 - Over head projector(O.H.P.)
 - Slide projector
 - Public speaking equipment
 - Television
 - V.C.R./V.C.D/LC.D
 - Computer
3. Planning; preparing and presentation of the following-
 - Demonstration-method and result demonstration
 - Puppet show
 - Roleplay/Dramatization
4. Visit to place where computer is used for offset printing and screen printing for leaflet folder or cards.
5. Prepare transparencies, slides for slide projector and L.C.D. Slides.

Distribution of Marks

1.File&Record	10
2.Demonstration	10
3.Roleplay/PuppetPlay	08
4.Developascriptwrite&article	08
5.Viva-Voce	04
Total	40

References:

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10. Devidas. R.R: Text Book of HomeScience, NCERT, NewDelhi,1980
11. Mukherjee N.: Villagers' Perception of Rural Poverty Through the Mapping Method of Participatory Rural Appraisal or Participatory Learning Methods: PRA/PALM Series, No.2.Service Road, Domlurayont. Banglore-56007111 MVRAD.1992

SEMESTER IV
H.SC5DCCT43
Paper II- FAMILY RESOURCE MANAGEMENT II
(Consumer Economics)

Duration of Exam: 3 hrs.

Max. Marks: 80
Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT I

- A. Family as an economic unit.
1. Economic goals of family.
- a) Consumer Economics
 - i). Meaning and definition.
 - ii). Consumer-definition consumerism, rights and responsibilities of consumers.
 - b) Measures of living and consumption.
 - i). Place of living, level of living, standard of living; plane of consumption. Level of consumption, standard of consumption, cost of living.

UNIT- II

1. Income –
 - a) Definition, types and sources of income, real money, psychic, contributors to family income, national, personal and disposable income, (only definitions)
 - b) Factors influencing variation in family expenditure.
 - c) Management of income-Budget-definition, importance, steps in making budget, type of budget.
 - d) Saving and investment-Meaning, objective, type, characteristic, Criteria for judging good investment and saving.
 - e) Credit-meaning, sources, types and cost of credit
2. Market –
 - f) Definition, Types of markets-segmentation and characteristics, functions, channels of distribution.
3. Consumer in the market
 - g) Consumer buying habits: Convenience goods, specialty goods.
 - h) Buying motives-selective, rational, emotional patronage.
 - i) Factors affecting consumer decisions in the market-good buymanship.
 - j) Consumer product and promotion, packing.

UNIT- III

1. Consumer buying Problems.
Adulteration, faulty weights and measures, other malpractices in market pricing, brand, labeling, installment buying. Legal problems in buying and paying for goods and service-Guarantee and warrantee contracts, installment buying contracts, cash and credit buying
2. Consumer Protection Services-
Role of different organizations/ agencies towards consumer-Ministry of law and justice, Consumer Guidance Society of India, Consumer cooperatives, Govt. and municipals agencies, Educational institutions, Consumer education and research center.
3. Standards- benefit to consumer & manufacturer, Certification-Role of certification.

UNIT- IV

1. Consumer Protection- legislation and law- Introduction to consumer protection movement, importance and scope of law in consumer protection.
2. Important laws for consumer protection Consumer representation. Basic Social and statutory laws and their implications.
3. Taxation-Need, types, Principles, basic calculation of income tax filling of tax returns. Insurance its types & function.
4. Saving & Investments

UNIT- V

1. Principles of Art and elements of design, application in life, Color Schemes and its importance in interior design
2. Selection, care and maintenance of furniture and furnishing
3. Flower Arrangement: different types.

PRACTICAL
H.SC5DCCT43
FAMILY RESOURCE MANAGEMENT II
(Consumer Economics)

Duration of Exam: 3 hrs.

Max. Marks: 40

Min. Marks: 14

1. House hold equipment- Market survey of equipment in terms of availability brands, performance and cost. Survey of Consumer using the above product with regards to problems the experience and their view in relation to equipment use. Identification of materials and finishes of different equipment and their characteristics. Prepare budget for families of various income groups.
2. House Keeping- Setting for Indian traditional (North India South Indian style) and continental meals- formal table setting. Buffet arrangements Setting for Indian traditional meals.
3. Napkin folding: napkin: Selection of size, material and enrichment principles for napkin folding types of napkins for different occasions.
4. Flower arrangement
 - (a) Basic equipment
 - (b) Vase and containers.
 - (c) Preparing plant material
 - (d) Shaping an arrangement
5. Basic of scale and perspective drawings
6. Preparation of wall hanging.

Marks Distribution

Files and reports for exercise.	10Marks
Minor Problem	
(i) Budgeting of different income group	5Marks
(ii) Napkinfolding/Flowerarrangement	5Marks
(iii) Rangoli/Alpana	5Marks
MajorProblem	
(ii)Pot painting	05Marks
(iii)Color schemes its application in design	05Marks
(iv) Viva-voce	05Marls
Total	40Marks

Reference:

1. Leiland, J. Gordon Stewart, M. Lee (1974) Economics and Consumer. 7th ed. D.V. on Nostrand Co. N. York Om Welers (1974):
 2. Who Buys-A study of the consumer Sherlekar, S.A. (1986): Track Practices and consumers, Himalayan Publishing house (Unit I, VI)
 3. Kotler Philip, Armstrong Gray (1992): Principles of Marketing 5th ed Prentice Hall of India, N Delhi. David H. Bangs, Jr: The market planning guide 3rd Ed. Gangotera Pub
 4. Sarkar A: Problems of Consigner in Modern India, Discovery Publishing House.
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SEMESTER IV
H.SC5DCCT44
PAPER-III FOOD AND NUTRITION-III
(Food Science)

Duration of Exam: 3 hrs.

Max. Marks: 80
Min. Marks: 29

INTERNAL ASSESSMENT: 30 Marks

UNIT I

1. Introduction to Food Science and chemistry
 1. Physio-chemical properties of foods-colloids, osmotic pressure, hydrogen ion concentration (pH), bound water in foods.
 2. Sensory Evaluation- Definition, use of Sensory analysis in product evaluation, methods of sensory evaluation (in brief).
2. Carbohydrate foods.
 - (a) Starchy foods-
 - (i) Structure of starch cell
 - (ii) Changes produced in starch cell during cooking
 - (iii) Factors requiring control during starch cookery.
 - (iv) Various preparations using starchy foods.
 - (b) Cereals
 - (i) Structure and composition
 - (ii) Processes done before cooking-milling, polishing, parboiling, flaking and parching, roasting.
 - (iii) Various ways of using cereals-wholegrain, flour-coarse, fine & refined, convenience foods, cereal food products.
 - (c) Sugars-
 - (i) Various types of sugar products-composition, manufacturing processes and use.
 - (ii) Properties of sugar.
 - (iii) Sugar cookery-behavior of sugars in concentrated solutions, uses and various preparations.

UNIT II

3. Protein foods-
 - (A) Animal Sources:
 - Milk and milk products: Kinds, composition, nutritive contribution. Preparation of milk products. Processing techniques-Pasteurization, Homogenization. Use of milk in food preparation-effect of heat, acid, enzymes and salt various uses.
 - (B) Eggs:
 - Structure, composition and nutritive value, measures of quality and grading of eggs.
 - Egg Cookery-factor affecting whipping quality of eggs and heat coagulation of egg protein. Uses of egg in cookery. Methods of cooking egg and egg dishes.
 - (C) Flesh foods:(meats, fish and poultry) Kinds, composition and nutritive value, structure of muscle, Postmortem change and aging of meat, factors affecting tenderness. Meat cookery: changes during cooking. Curing process.

UNIT III

4. Vegetable Sources
 - (a) Legumes and Pulses
 - Structure, composition: effect of methods like soaking, germination and fermentation, effect of soda during cooking.
 - Various preparations, incorporation of pulses in high protein vegetable mixes.
 - (b) Nuts and Oil Seeds-Nutritive Value and importance.
5. Fats and Oils:
 - (a) Kinds(edible), composition and properties.

- (b) Manufacturing process-separation/extraction, refining process and hydrogenation.
- (c) Importance in cooking
- (d) Change in fats and oils on heating. Storage of used oils.
- (e) Rancidity of fats.

UNIT IV

- 6. Protective Foods: Fruits and vegetables
 - (a) Classification, composition and importance in diet.
 - (b) Change occurring during maturation and ripening.
 - (c) Pigments present.
 - (d) Cooking of vegetables and change that take place during Cooking: effect of heat, acid and alkali.
 - (e) Pectin, gum and applications in food processing.
- 7. Condiments, spices, herbs, coloring and flavoring agents. Uses in Indian Cookery.
- 8. Beverages: type, nutritive contribution and preparation.
- 9. Introduction to special foods: Novel foods, convenience foods, space foods, uncommon & non-conventional foods.

UNIT V

- 10. Food additives: types and functions.
- 11. Food adulteration: definition, common adulterants and efforts to control food laws and standards.
- 12. Food Safety:
 - (a) Food borne infections, infestations and intoxication-causes
 - (b) Sources of contamination.
 - (c) Preventing spread of diseases through food and handling.
- 13. Food preservation:
 - (a) Definition
 - (b) Causes of Spoilage.
 - (c) Importance of preserving food.
 - (d) Principles of food preservation.
 - (e) Methods of food preservation-at home and commercial.

PRACTICAL
H.SC5DCCT44
FOOD AND NUTRITION-III (Food Science)

Duration of Exam: 3 hrs.

Max. Marks: 40

Min. Marks: 14

1. Principles and method of working in food laboratory or kitchen. Organoleptic valuation of foodstuffs.
2. Appliances, equipments and tools used in food preparation-use and care.
3. Weight and measures of dry ingredients, solid fat, liquids etc. Standard weight and measures, weight and their equivalent measures.
4. Market survey of availability and cost of foods.
5. Determination of percentage of edible portions of food.
6. Cooking methods-various preparations using different cooking methods.
7. Starch and Cereal Cookery:
Various preparations showing.
 - Dextrinization, gelatinization and thickening ability
 - Gluten formation and factors influencing its formation.
8. Sugar-Cookery:
 - (a) Preparation showing syrups of various strengths.
 - (b) Preparation in which:
 - (i) Size of crystals is controlled.
 - (ii) Crystal formation is prevented.
 - (iii) Some functions of sugars are shown.
9. Pulses, Nuts and oilseed:
 - (a) Effect of nature of water, acid and alkali on texture and doneness of pulses, their use and preparation of selected recipes.
 - (b) Ways of making complete proteins.
10. Cooking with fats and oils: studying different factors affecting fat absorption. Suitability of different products.
11. Milk cookery: preparations using milk and milk products.
12. Egg Cookery(optional)
 - (a) Preparation showing functions of egg in cooking-as foaming, coating, binding, flavoring and coloring agent.
 - (b) Effect of time, temperature, salt and acid on coagulation of egg protein.
 - (c) Egg white foam-factor contributing to volume and stability.
 - (d) Various ways of using egg: boiled, poached, fired, scrambled, plain, hand puffy, omelets, egg curry, etc.
13. Vegetable Cookery:
 - (a) Effect of acid, alkali, heating, covering and cooking on the color and doneness of vegetables.
 - (b) Preparation of Selected common recipes.
14. Cooking of Flesh foods; Preparation of selected common recipes using Meat, fish and poultry. (Optional)
15. Frozen desserts: Souffle and Ice creams.

16. Preparation of Jams, Jellies, Pickles, Preserves, sauces etc.
17. Baked Products: Cakes and Biscuits.
18. Food Adulteration: Qualitative testing of some common foods for Adulteration (Demonstration).
19. Visit to food-processing unit.

Distribution of marks:-

1.File & Records	10
2.Planning(2problems)	08
3.Preparation-	05
4.Method of work & Cleaning	03
5.Service	02
6.Identification of(a) starch grains(2)	04
(b)adulterants in given food	04
7.Viva-voce	04
Total	40

Reference:

1. B.(1997): Food Science, New age International(P)ltd. Publishers, N. Delhi.
2. Charley, H.: Food science, John Wiley and Sons.
3. Dowell, P. BaileyA(1980) The Book of ingredients, Dorling Kinderley Ltd. London. Huges 0 Bennion M (1970)
4. Introductory Food, 5th Ed Mac Millan Publishing Co.
LawiesS. (1998) Food Commodities, Heienmenn Ltd. London
5. WillamsM: Experimental Foods laboratory Manual, Surjeet Publication NewDelhi. Me Willams M. Fundamentals, Jon Wiley and Sons.
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7. Padamanabhan, D: The Spice National Council of Education Research and training. Paul P.C. and Palmer, H.H: Food Theory and application, John Wiley and Sons Peckham, 8. G.C.: Foundations of food preparation. Macmillan Publishing Co.

SEMESTER V
H.SC5.5DCCT52
PAPER-I FOOD AND NUTRITION-IV
(Nutrition Management in Health and Disease)

Duration of Exam: 3 hrs.

Max. Marks: 80

Min. Marks: 29

INTERNAL ASSESSMENT: 30 Marks

UNIT I

1. Meal management-Concept and definition-resources, goals and values in meal management. Factors to be considered while planning diet.
 - (a) Nutritional Adequacy-planning of balanced diet.
 - (b) Food cost and economy - matching meals to family income. Characteristics of meals for low, moderate and liberal cost, food budgets, economizing in meal management.
 - (c) Matching meals to available time and energy.
 - (d) Acceptability of meals-
 - (i) Sensory factors-eye appeal, taste, aroma, flavour, texture, temperature etc.
 - (ii) Physiological satisfaction-hunger, appetite and satiety value.
 - (iii) Likes and dislikes.
 - (iv) Other factors-availability, variety, food habits, tradition, culture, religion, food fads and fallacies.

UNIT II

2. Nutrition through the lifecycle.
 - a) Nutrition for adults-at different activity levels and socio economic levels.
 - b) Pregnancy- physiology of pregnancy, factors affecting pregnancy outcome, importance of adequate weight gain during pregnancy, nutritional requirements during pregnancy and modification of diet. Deficiency of nutrition's and its impact. Common problems of pregnancy and their management-nausea, vomiting, pica, food aversion, pregnancy induced hypertension (PIH). Adolescent pregnancy.
 - c) Lactation-nutritional requirements and dietary management. Galactogogues.

UNIT III

- d) Infancy- nutritional requirements. Breast feeding-colostrum- importance in feeding. Advantages of exclusive breastfeeding. Nutritional and other advantages of breast-feeding. Bottle feeding-circumstances under which bottle-feeding is to be given. Care and sterilization of bottles/Preparation of formula-modification of non-human milk for infant feeding. Mixed feeding-breastfeeding and artificial feeding, weaning. Introduction of Supplementary foods, food supplements at various stages.
- e) Nutritional needs and dietary management of infants, preschool, school going children and adolescents. Establishment of good food habits.
- f) Nutrition during old age- physiological changes, nutritional needs and dietary modification.

UNIT IV

3. Basic concept of diet therapy-meaning and importance of therapeutic nutrition. Modification of normal diet for therapeutic purposes. Full/regular diet, bland diet, soft and fluid diets. Methods of feeding patients- normal and artificial. Psychological factors in feeding and the problems involved. Dietitian qualities to be possessed, role and responsibilities.
4. Energy modification and nutritional care for weight management-identifying underweight, overweight and obese. Modifying and controlling weight.
5. Predisposing factors, clinical sign & symptoms of:
 - a) Febrile diseases-acute and chronic
 - b) Gastrointestinal disturbances-
 - I) Gastritis, gastric and duodenal ulcers, constipation and diarrhoea.
 - II) Malabsorption Syndrome-(a)Celiac Sprue and(b)Tropical Sprue.
 - c) Hepatitis, cirrhosis of liver, cholecystitis

UNIT V

- d) Diabetes mellitus
- e) Hypertension, atherosclerosis
- f) Glomerulonephritis-acute and chronic.

- g) Inborn Errors of Metabolism-Phenyl Ketone urea and Maple Syrup Urine disease.
- h) Gout.
- (i) Interaction between Immunity, Nutrition and Infection.

PRACTICAL
H.SC5.5DCCP52
FOOD AND NUTRITION-IV
(Nutrition Management in Health and Disease)

Duration of Exam: 3 hrs.

Max. Marks: 40
Min. Marks: 14

1. Plan and prepare nutritionally adequate diet in relation to age, economic status.
2. Make therapeutic modification of normal diet for common disease condition.
3. Market survey for availability and cost of foods.
4. Calculations and weighing of portions of foods containing same level of a nutrient -energy, protein, retinol equivalent, thiamine, riboflavin, niacin, ascorbic acid, iron and calcium.
5. Finding out the cheaper sources of nutrients, calculating how much of the nutrient a rupee can buy from different sources.
6. Food exchanges for energy, protein, fats and carbohydrates.
7. Food presentation and table setting.
8. Planning and preparation of diets for different age groups at different socioeconomic and activity levels in relation to special nutrient requirements. a) Adult b) Pregnancy c) Lactation d) Infancy e) Preschool child
9. Planning and preparing modified diets
 - Soft (b) Fluid (c) Bland (d) High protein (e) Calorie restricted
10. Planning and preparing modified diets for:

(a) Fever	(b) Diarrhea	(c) Constipation	(d) Hepatitis
(e) Hypertension	(f) Atherosclerosis	(g) Diabetes mellitus	(h) Glomerulo nephritis
(i) Obesity			
11. Planning and preparing low cost nutrient rich dishes.

Distribution of Marks

i. Files, Record setc.	10marks
ii. Planning	
(a) Diet	04marks
(b) Menu for a given occasion	03marks
iii. Preparation of two dishes	10marks
iv. Service	04marks
v. Method of work	04marks
vi. Viva-voce	05marks
Total	40marks

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10. GopalanC:Nutrition-Problems and Programmes in South East Asia, SARC Regional Health Papers No15 WHO Regional Office for south east Asia, N. Delhi

SEMESTER V
H.SC5.5DCCT53

PAPER-II– HUMAN DEVELOPMENT-III

(Family Dynamics)

Duration of Exam: 3 hrs.

Max. Marks: 80
Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT-I

1. Personality development-Meaning, theoretical approaches to personality.
2. Determinants of personality.
3. Development of personality.

UNIT-II

4. Theories of human development.
 - (a) Abraham Maslow: Humanistic theory of personality.
 - (b) B.F. Skinner- Behavioristic learning theory of personality.
 - (c) Alder's theory of personality.
 - (d) Jung's Analytical theory.
 - (e) Freud's psycho-analytic theory.

UNIT-III

5. Family-Definition, characteristics, function & family lifecycle.
6. Marriage-Mate Selection, marital adjustments.
7. Human rights-Introduction.
8. Changing status & future role of women.

UNIT-IV

9. Parent education-meaning
10. Discipline technique of parents.
11. Approaches of parent education.
12. Child-parent relationship

UNIT-V

13. Guidance & Counselling- meaning, Need, importance & types.
14. Agencies working for children & youth-ICCW, NCERT, NIPCCD, UNICEF, SOS, Children Village VHAI, YMCA.
15. Agencies working for women & aged-SEWA, CHETNA-Saheli Helpline India, ISCW, Senior citizens Association.

PRACTICAL
H.SC5.5DCCT53
HUMAN DEVELOPMENT-III (Family Dynamics)

Duration of Exam: 3 hrs.

Max. Marks: 40
Min. Marks: 14

1. Two Teaching Aids on any topic related to family and Child welfare.
2. A study and Seminar Presentation or any relevant issue of Human Development.
3. A Survey and Report Presentation of Agencies working for family and child welfare
4. Use of pre-prepared checklists, interview schedules and standardized tests for study of

Human Development.

Distribution of Marks

1.Preparation of 02Teaching Aids	10
2.Seminar Presentation	05
3.Survey and Report presentation of Agencies For family & child welfare	05
4.Preparation of checklists. Interview Schedule & tests	08
5.File&Record	08
6.Viva-Voce	04
Total	40

References:

1. Landis, J.T. & Landis M.G.: Building a successful Marriage 1968, Prentice Hall London.
2. Kaplan P.S. & Stein J: Psychology of Adjustment 1984,Wadsworth California.
3. Sachdeva D.R.& Bhushan,V: Introduction To Sociology, Kitab Mahal ,Allahabad.
4. Choudhary D.P: Child Welfare and Development, Atma Ram & Sons, Delhi.
5. Pothen's: Divorce its causes and consequences in Hindu Society, 1986,Vikas, NewDelhi.
6. Kalabagh (Edr). Women and Development 1991 ,Discovery, New Delhi: Vikas Publishing House.
7. Augustine, J.N.(Ed.)(1982): The family in Transition, New Delhi: Vikas Publishing House.
8. Coleman, J.C. (1986) : Intimate Relationships, Marriage and the family Chicago: Macmilan Publishing Co.
9. Hutter, Mark (1981): The changing family:Comparative Perspectives, New York : John Wiley & Sons.
10. Antony M.J.(1989):Women's Rights New Delhi: Hind Pocket books Pvt. Ltd.
11. Gupta.J.L.(1988): Challenges to the fair Sex-Indian Women: Problems, Plights and Progress.

SEMESTER V
H.SC5.5DCCT54

PAPER-II– TEXTILE AND CLOTHING-III

(Apparel Making & Traditional Textiles)

Duration of Exam: 3 hrs.

Max. Marks: 80

Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT I

1. Family Clothing
2. Wardrobe Planning
 - a) Clothing Budget according to needs of the family and factors influencing needs
 - b) Selection of suitable fabrics and garments for Children Infant, toddler and School going and for children with special needs

UNIT II

3. (a) Selection of suitable fabrics and garments for Adolescent, men and women
 - Selection and buying fabrics for various uses in the home-Classification, selection, factors and care.
 - Consumer problems and their remedies

UNIT III

4. Design
 - a) Elements of design -line, colour and texture
 - b) Principles of design-balance, proportion, rhythm, emphasis and harmony
 - c) Structural and applied design in relation to fabric and apparel.

UNIT IV

5. Traditional Textiles of India
 - a) Dyed and printed textiles
 - Kalamkaari ii) Patola of Gujrat and Tie & dye of Rajasthan iii) Pochanpally, Telia–rumals of Andhra Pradesh
 - Ikats of Orissa
 - b) Woven textiles of India
 - Brocades
 - Shawls of Kashmir
 - Muslins of Bengal
 - Silk of Karnataka, Kashmir, Murshidabad, Varanasi Assam and Tamilnadu
 - Cotton of Kerala
 - c) Embroidered Designs
 - Kashida of Kashmir, Kantha of Bengal, Kasuti of Karnataka, Phulkari of Punjab, Chikankari of U.P., Embroidery of Kutch and Kathiawar

UNIT V

Paper pattern and layout

- Difference between drafts, design drafts and paper pattern
 - i) Different type of layouts, crosswise, longitudinal, open and combination.
 - ii) Layouts on different fabrics widths and fabric types (directional checks, strips and bold prints)
 - iii) Calculation of material required
- Methods of pattern makings) Drafting, flat patterns
- Draping

PRACTICAL
H.SC5.5DCCT54
Apparel Making & Traditional Textiles

Duration of Exam: 3 hrs.

Max. Marks: 40

Min. Marks: 14

1. Drafting and construction of:-
 - (a) Frock-A line, gathered party wear
 - (b) Skirt of minimum two designs/style
 - (c) Skirt top
 - (d) Saree blouse
 - (e) Churidar/ Salwar
 - (f) Ladies Kameez/ Kurta with different neckline.
 - (g) Nightwear (Nighty/ Night suit)
2. Development of paper-patterns
3. Embroidery-making of samples for Traditional embroideries and anyone household article.
4. Visiting the textile museums.

Distribution of Marks

1. Records and files	10marks
2. Traditional Embroidery sample (any one)	10marks
3. Construction of any one garment (complete)	20marks
Total	40 marks

References:

1. Lewis, Bowers and Keltunen -Clothing construction and wardrobe planning-Macmillan Co. NewYork.
2. Thompson and Rea-Clothing for Children-Johan Wiley & Sons .S
3. Wintage B. Isabel –Textile fabrics and their selection-Prentice Hall, Ney York.
4. Latze, Alpha and Hosletter Helen P-The Wild World of Clothing The Ronald Press Company,NewYork.
5. Dongarkamy, Kamla S. The Romance of Indian Embroidery-Thacker & Co. Mumbai
6. Pandit Savitri- Indian Embroidery- Its Variegalid Charms.

SEMESTER VI
H.SC5.5DCCT62

PAPER-I-EXTENSION AND COMMUNICATION-III
(Extension Programme Management)

Duration of Exam: 3 hrs.

Max. Marks: 80
Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT I

1. Extension Programme Design
 - a) Concept, Objectives and components of extension programme design.
 - b) Principal of extension programme design.
2. Scope of extension programme in development
3. Characteristics of a good programme

UNIT II

4. Programme Planning
 - a) Nature and role of planning.
 - b) Importance of planning.
 - c) Principles of planning.
 - d) Process of planning of an extension programme.
5. Abilities needed by planners

UNIT III

6. Programme Execution/Implementation
 - a) Steps in Programme Execution/Implementation:-
 - i) Publicity
 - ii) Develop a plan of work
 - iii) Evaluation during implementation
 - b) Aspects in programme execution/implementation.
 - c) Problems in programme execution/implementation.

UNIT IV

7. Programme Evaluation:-
 - a) Meaning and Definition of evaluation.
 - b) Objectives and purposes of evaluation.
 - c) Aspects of evaluation.
 - d) Criteria for effective evaluation.
 - e) Steps in evaluation.
 - f) Tools & techniques of evaluation.
8. Programmes for Rural and Urban development
 - a) Five year plans and their focus.

UNIT V

9. Ongoing national, rural and urban development programmes
For women and children- DWCRA, ICDS, WDP, KVK, TRYSEM & others.
10. Role of NGOs in developmental efforts CAPART, CHETNA, CARE, SEWA & others.

PRACTICAL
H.SC5.5DCCT62
(Extension Programme Management)

Duration of Exam: 3 hrs.

Max. Marks: 40

Min. Marks: 14

1. Study development projects in the selected area in terms of their monitoring and evaluation practices & critically examine the process of monitoring and evaluation.
2. Planning, organization, implementation and evaluation of a need based extension programme for women & children in selected community in relation to any one
 - a) Literacy
 - b) Income generation
 - c) Health
 - d) Maternal & Childcare
 - e) Social evils
3. Presentation of the report.

Distribution of Marks

1. File and Records	10 marks
2. Report	15 marks
3. Planning, implementation and	
4. Evaluation of a need based programme	15 marks

Total **40 marks**

References:

- a. Singh ,R, Text Book of Extension Education, Sahitya Kala Prakashan, Ludhiana, 1987.
- b. Supe,S.V.,AnIntroductiontoExtensionEducation,Oxford&IBH,NewDelhi,1984.
- c. Wooford,J.C.G.Edwin,A.andCummines'K.C.,OrganizationalCommunication-Thekeystoneto Managerial Effectiveness, McGraw Hill Tokyo, Japan, Kkgkusha Ltd.
- d. McGrath,E.H.,BasicManagerialSkillsforall,ZavierLabourRelationsInstitute,Jamsedpur1978.
- e. TeamTechnologiesincorporation,aTeams&ProjectDesign,TeamUpworkbook3810,Concorde Parkway Suite 1600, Chantilly P.A. 22021. USA, 1980.
- f. Dhama,O.P.&Bhatnagar,O.P.,ExtensionandCommunicationforDevelopment,Oxford&IBH Publishing Pvt Ltd., New Delhi, 1985.
- g. Extension Edu. in Community Development, Directorate of Extension. Ministry of Food and Agriculture, Government of India, New Delhi, 1961.
- h. Sandhu,A.S.,Extension ProgrammePlanning,Oxford&IBHPublishingCo.Pvt.Ltd.,NewDelhi.1996.
- i. Changing Villages, PPS Gussain for Consortium and Rural Technology, D-320, Laxmi Nagar, New Delhi -11092.
- j. Journal of Rural Development. The National Institute of Rural Development Rajender nagar,Hyderabad- 500029.

SEMESTER VI
H.SC5.5DCCT63

PAPER-II- FAMILY RESOURCE MANAGEMENT-III

(Housing, Interiors and Space Design)

Duration of Exam: 3 hrs.

Max. Marks: 80

Min. Marks: 29

INTERNAL ASSESSMENT: 30 Marks

UNIT I

1. Introduction to fundamentals of art.
 - i) Design-definition types-structural and decorative.
 - ii) Elements of design, colour, texture, pattern, light, space
 - iii) Principle of design-Proportion, balance, emphasis, harmony, rhythm, repetition
2. Residential Space Design
 - i) Functions/need of housing: protective, economic, affectional, social status etc.
 - ii) Factors influencing housing needs- family size. structure,activities, stages of family life cycle, living habits,income, values, standards goals.
 - iii) Factors influencing selection and purchase of site for house building-
 - a) Legal aspects
 - b) Natural features of the site: vegetation, site. Soil types, drainage, contour(shape) orientation.
 - c) External Service : Supply of sewage and electricity, sanitation easy accessibility to work place, school, health care center, fire protection, transportation, proper roads & approach.
3. House Planning/ Space designing
 - (a) Types of houses: tenements, apartment, duplex & row houses.
 - (b) Principles of planning the residential space aspect, prospect, Window- grouping of rooms, privacy, orientation, circulation, flexibility, spaciousness, aesthetics, economy, ventilation, service.

UNIT II

4.
 - a) Types of doors and windows
 - b) Land scape and gardening -important factor and principles of landscape planning.
 - c) Construction materials used in building a house.
 - d) Financial and legal considerations-availability of funds, for housing.
 - (i) Housing development finance corporation, cooperative bank, cooperative housing society, LIC loans from provident fund, finance corporation of India. HUDCOO etc.
 - (ii) State and central Housing scheme.
 - (iii) Housing problems causes and remedial measures

UNIT III

5. Introduction to Interior Designing- Furniture and furnishings.
 - (i) Structure system with relation to interior space, renovation factors to be considered while designing interiorspace.
 - (ii) Basic needs: Ergonomics consideration, psychological, aesthetic, occupational and professional development needs.
 - (iii) Analysis of client specific requirements.
 - (iv) Location
 - (v) Space requirement
 - (vi) Availability of materials
 - (vii) Design Principles
 - (viii) Budget
 - (ix) Various surface treatments for interior space
 - Window treatments
 - Hard-blinds, shades, cornices
 - Soft-curtains and draperies
 - Window accessories: curtains, rods, rings, frills, chords etc.
- (i) Flooring materials-hard and soft floor covering.
- (ii) Walls treatment paints, wallpaper, wood panelling

- (iii) Ceiling treatments false ceiling and decorative ceiling
- (iv) Furniture - furniture design based on anthropometric dimensions constructional features, materials and finishes, selection of furniture for comfort, rest and relaxation. Upholstered furniture - material techniques and design
- (v) Furnishing:- fabrics- types obtain draperies, cushion-covers, slipcovers, bed and table linen, selection and use, window treatment, accessories-types, selection, arrangement and their role in interiors.
Factor influencing furnishing decisions - application of elements of art and principles of design in interior decoration.

Unit IV

- 6. Illumination-purpose, types of light-natural artificial, glare, reflection and inadequate lighting, lining Standards for various tasks, unit of measurement. Lighting interiors-importance, types of lighting. Suitable for various activities, effects created through lighting for different areas, selection, design of fixture, cost and care.
- 7. Computer Aided Interior Designing- Introduction to CAD

UNIT V

- 8.
 - Kitchen Modular Design-Kitchen as an important unit of a house, functions and types of kitchen.
 - Principles of kitchen planning - orientation and location, size, shape, ventilation, light, socio-economic status, type of family, culture, cost and aesthetics, storage needs, work centre and work triangle, colour scheme.

PRACTICAL
H.SC5.5DCCT63
PAPER-II- FAMILY RESOURCE MANAGEMENT-III
(Housing, Interiors and Space Design)

Duration of Exam: 3 hrs.

Max. Marks: 40

Min. Marks: 14

1. Market survey of
(a) building materials (b) furnishings in terms of availability, suitability, material & labor cost.
2. Developing house plans for families with different composition and income with standard specification.
3. Interior space planning for different areas of a house in terms of color, furnishing, furniture, arrangements.
4. Development of design and construction of curtains, draperies, window treatment.
5. Architectural model making of selected layout- work center and storage unit.
6. Orientation to computer software related to interior design-3D Home, Auto CAD.

Distribution of marks

- | | | |
|------|--|------|
| i) | Students are expected to submit project report for exercise 1. | (07) |
| ii) | Architectural model making of selected interior space.
Minor Problem | (07) |
| i) | Development of design and construction of draperies,
Curtains, window treatment (anyone) | (07) |
| ii) | 3D Home, Auto CAD
Major Problem | (07) |
| iii) | Developing house plan for families with different composition and income with
standard specification-with interior space planning in terms of colour, furnishing,
furniture Ornaments. | (12) |

Total

40

References:

- a) Agan Tessler, The house its plan and use. New Delhi, Oxford and IBH Publishing Company.
- b) Broad bent G., Bunt R & Charles Zeks, 1980, Sign, Symbol and Architecture, New York: John Wiley & Sons.
- c) Deshpande 1991 Build Your Homes, Poona, United Book Corporation.
- d) Deshpande 1991 Modern Ideal Homes of India Poona United Book Corporation.
- e) Fredrick, S. Meritt, 1982, Building Design and Construction and Handbook, New Delhi.
- f) Joseph D Falcone, 1987, Principles and practices of Residential Construction, New Jersey: Prentice Hall.
- g) Mills, Edward D (ed) 1985, Planning the Architect 'Handbook' 10th Butterworths.
- h) Raja Rao T.N. Subramanya 2000. Planning of Residential Building New Delhi, Standard Publishers.
- i) Bhatt Pranav and Goenka Shamita (1990) The foundation of Art and Design : Bombay: Lakha Book Depot.

SEMESTER VI
H.SC5.5DCCT64
PAPER-III- INSTITUTIONAL MANAGEMENT

Duration of Exam: 3 hrs.

Max. Marks: 80
Min. Marks: 29

INTERNAL ASSESMENT: 30 Marks

UNIT-I

1. Meaning, objectives & importance of Institutional Management.
2. Management of hospitality Institutes: Planning, organizing, directing, coordinating, controlling & evaluating in Hospitals, hotels, restaurants, café and outdoor catering.
3. Types of Decisions.
4. Principles of Management.
5. Tools of Management:
 - (a) Job description
 - (b) Job specification
 - (c) Work Schedule
 - (d) Job Analysis
 - (e) Production and Service Analysis Statements.

UNIT-II

6. Personnel Management:
 - (a) Personnel Administration
 - (b) Recruitment and Selection
 - (c) Induction
 - (d) Employee Facilities and Benefits.
7. Training and Development: Stages of developmental progress.
8. Leadership Style

UNIT-III

9. Communication in Institutions:
 - (a) Types of Communication: Simple Pattern, Circular manner, Wheel Pattern, Y-Pattern, Grapevine communication.
 - (b) Communication Gap between employees.
10. Management of Social Institutes.
11. Challenges and problems faced by institutions.

UNIT-IV

Book Keeping and Accountancy

- (a) Definition of financial management & management accounting.
12. Books of account:
 - (a) Cash book
 - (b) Ledger
 - (c) Purchase book
 - (d) Sales book
 - (e) Purchase return book
 - (f) Sales return book.
 - (g) Journal
13. Trial Balance
14. Profit and Loss Account.

UNIT-V

15. Food Service

- Styles of service: Waiter service, Self service, Vending.
16. Menu Planning: Types of Menus.
 17. Equipment and layout.
 18. Purchasing: Purchasing methods.
 19. Types of contacts between the buyer and seller.

PRACTICAL
INSTITUTIONAL MANAGEMENT
Credit Hours (02)

Duration of Exam: 3 hrs.

Max. Marks: 40
Min. Marks: 14

- 1 Developing a project for different food service institutions in the city.
- 2 Planning & preparation of different types of Food service menus
- 3 Layout of kitchens of different food service institutions.

References:

1. Foodservice Management by Mohini sethi; New age International Publishers.
2. Food Service in Institutions by Basic Brooks West.
3. College & University food service Manual by Paul Fair brook, John Milano
4. Industrial Food Service and Cafeteria Management by Mickey Larner.
5. Guide to food service management by francescloyd from publications of the National association of college and university food service. Boston.

Course Code	Course Title	Code	L	T	P	Total Credits	Maximum Marks		Total Marks	Minimum Passing Marks
H.SC4.5DCCT12	Community Health & Human Physiology	DCT	3	1	-	4	30	80	150	29 (36%) 14 (36%) 11 (36%) 36% each theory practical & internal Assessment.
H.SC4.5DCCP12										