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SCHEME OF EXAMINATION

&

SYLLABUS

of

M.Sc. (Home Science) Semester Exam

UNDER

FACULTY OF HOME SCIENCE

Session 2023-24

(Approved by Board of Studies)

Effective from June 2023

30/5/2023

30/5/23 30.5.23

30.5.2023

30/05/2023

Hemchand Yadav Vishwavidyalaya, Durg (C.G.)

M.SC. (HOME SCIENCE)

SYLLABUS OF SEMESTER SYSTEM

FOOD SCIENCE AND NUTRITION

1st SEMESTER

Marking Scheme:

PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper I	Research methodology	80	10	10	100	04
Paper II	Physiology	80	10	10	100	04
Paper III	Food Microbiology	80	10	10	100	04
Paper IV	Problems in Human Nutrition	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical I	Nutrition & Food Microbiology	100

PAPER - I
RESEARCH METHODOLOGY

Max. Marks: 80

Objectives:

To understand the significance of research methodology in Home Science research. To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.

UNIT-I **1. Science, scientific methods, scientific approach.**

Role of research in Home science discipline. Objectives of research: Explanation, control and prediction. Types of research: Historical, Descriptive, Experimental, case study, Social research and survey: Meaning, definition, nature, scope, objects, types. distinction between social survey & research. Pre-testing and pilot survey.

UNIT-II **7. Definition and identification of research problem.**

Selection of research problem.

Justification.

Fact, Theory and concept.

Hypothesis : Definition, sources, characteristics, importance, main difficulties in formation of hypothesis, disadvantages, Limitations and Delimitations of the problems.

Types of variables.

UNIT-III **11. Basic principles of research design:**

Purposes of research design: fundamental, applied and action, exploratory, and descriptive, experimental, ex-post facto. Longitudinal and cross sectional, co-relational.

Data gathering instrument.

Observation,
Questionnaire,
Interview,
Scaling method,
Case study,
Home visits,
Reliability and validity of measuring instruments.

UNIT-IV **13. Theory of probability:** Non-probability sampling: purposive,
Quota and volunteer sampling/snow ball sampling

Sampling : Population and sample, Meaning, Characteristics, advantages and disadvantages.

Types :

Probability sampling
Random sampling (Simple random, systematic random sampling,)
Purposive sampling
Stratified sampling
Other sampling methods (two stages and multistage sampling, cluster sampling.

UNIT-V 15. Classification and tabulation of data.

Analysis and interpretation of data

Preparation of report

Diagrammatic presentation of data

References:

Edwards: experimental design in psychological research.

Kerlinger: Foundation of educational research.

Bhandarkar P.L. and Wilkinson T.S. (2000) methodology and techniques of social research, Himalaya publishing house, Mumbai.

Bhatnagar G.L.(1990) research methods and measurements in behavioral and social science Agri Cole publishing agency, New Delhi.



PAPER - II
PHYSIOLOGY

Max. Marks 80

Objectives :

This course will enable students to:

Advance their understanding of some of the relevant issues and topics of human physiology. Enable the students to understand the integrated function of all systems and the grounding of nutritional science in Physiology. Understand alterations of structure and function in various organs and systems in disease conditions.

UNIT-I **1. Cell structure and functions**

Levels of cellular organization and function - organelles, tissues, organs and systems brief review. Cell membrane, transport across cell membrane and intercellular communication. Regulation of cell multiplication. Nervous system Review of structure and function of neuron, conduction of nerve impulse synapses, role of neurotransmitters Organization of central nervous system structure and function of Brain and spinal cord, Afferent and efferent nerves, Hypothalamus and its role in various body function, obesity, sleep, memory.

UNIT-II **3. Endocrine system**

Endocrine glands- structure, function, role of hormones, regulation of hormonal secretion, Disorders of endocrine gland. Emphasis on physiology of diabetes and stress hormones. Sense Organs Review of structure and function, Role of skin, eye, ear, nose and tongue in perception of stimuli.

UNIT-III **5. Digestive system**

Review of structure and function. Secretary, Digestive and Absorptive function. Role of liver, pancreas and gall bladder and their dysfunction. Respiratory system Review of structure and function. Role of lungs in the exchange of gases, Transport of oxygen and Co2. Role of Hemoglobin and buffer systems. Respiratory quotient, hypoxia, and asthma

UNIT-IV **7. The circulatory system**

Structure and function of heart and blood vessels. Regulation of cardiac output and blood pressure, heart failure, hypertension. Blood formation, composition, blood clotting and homeostasis: Formation and function of plasma proteins, Erythropoesis, Blood groups and his to compatibility. Blood indices. Use of blood for investigation and diagnosis of specific disorders Anemia. The Musculo skeletal system Structure and function of bone, cartilage and connective tissue, Disorders of the skeletal system. Types of muscles structure and function

UNIT-V **10. The excretory system:**

Structure and function of nephron. Urine formation. Role of kidney in maintaining pH of blood. Water, electrolyte and acid base balance, diuretics. Immunity system Cell mediated and hormonal immunity. Activation of WBC and production of antibodies. Role in inflammation and defense Physiological changes in pregnancy.

References :

Ganong W.F. 1985: Review of Medical Physiology 2nd Edition, Lange Medical Publication.
Moan Camcell E.J. Dickinson C.J.... Edwares C.R.N. and Sikora K. (1984): Clinical Physiiology, 5th Edition .... Publication. Guyton A.C. (1985):
Guyton, A.C. and Hall, J.B. (1996) Text Book of Medical Physiology, 9th Edition, W.B. Saneers Company... Books Pvt. Ltd. Banglore.
Wilson KTW and Waugh A (1998): Ress and Wilson Antony and Physiology in Health and .... 4th Edition
Mc. W.D. Karen F.J. and Katch, V.L. (1996): Excericise Physiology, Energy ,.....perfor-mance, 4th Edition, Williams and Wilkons Batimere Jain A.K. Text Book of Physiiology, Vol I and II Avichal Publishing Co. New Delhi.

PAPER - III
FOOD MICROBIOLOGY

Max. Marks: 80

UNIT-I

1. Bacterial morphology, structure, staining, culture media, culture method and identification of bacteria.

Growth and Nutrition of Bacteria : Intrinsic and extrinsic parameters that affect microbial growth.

UNIT-II

3. Microorganism important in food microbiology - Mold, yeast, bacteria.
4. **Spoilage of different groups of foods:**

Cereals and cereal products
Vegetables and fruits
Fish and meat products
Meat and meat products
Eggs and poultry
Milk and milk products
Canned foods

UNIT- III

5. **Contamination of foods.**

Food Preservation :

General principles of food preservation: Asepsis, removal of micro-organism, maintenance of anaerobic conditions.
Preservation by use of high temperature.
Preservation by use of low temperature
Preservation by drying.
Preservation by food additives
Preservation by radiation.

UNIT-IV

7. **Foods in relation to disease :**

Food borne illness: Bacterial and viral food borne disorders. Food borne important animal parasites, mycotoxins.

Fermented Foods :

Role of microbes in fermented foods –
Fermented dairy products
Fermented vegetables
Fermented meat
Fermented fish
Beverage and distilled products.

UNIT-V

9. **Indices of Food Sanitary Quality:**

Microbial criteria of food.
Microbial standards and food safety
Controlling the microbial quality of foods -
Quality control using microbial criteria.
The HACCP (Hazard Analysis and Critical Control Point) system

PAPER - IV
PROBLEMS IN HUMAN NUTRITION

Max. Marks: 80

UNIT-I **1.** Nutritional screening and assessment of nutritional status of hospitalized and outdoor patients. Identification of high risk patients. Assessment of patient needs based on interpretation of patient data (Clinical, biochemical, biophysical, personal etc.)

Nutritional support: Recent advances in techniques and feeding substrates.

Stress and trauma : Diet in surgery, bums, fracture.

UNIT-II **4. Diet and drug interaction:** Effect of drugs on ingestion, digestion and metabolism of nutrients.

5. Neurological disorders:

Neuritis - Etiology, nutritional care.

Migraine - Diet management

Anorexia Nervosa - Etiology, treatment.

Childhood problems : Inborn errors of metabolism and their nutritional management.

Maple syrup urine disease - Tyrosenemia, Galactosemia, Phenylketonuria.

UNIT- III **7. Musculoskeletal disorders:**

Arthritis - Nutritional care

Gout - Characteristics, nutritional care

Cancer : Types of cancer, Nutritional effect of cancer, Nutritional disorders related to treatment, diet in cancer.

UNIT-IV **9.** Historical background, prevalence, etiology, biochemical and clinical manifesta-tion, preventive and therapeutic measures for the following –

I. P E M
   Nutritional anaemia
II. Vitamin A deficiency
III. IDD

UNIT-V **10.** Osteomalacia and osteoporosis Etiology, symptoms and nutritional care,
Rickets

Dental carries: Etiology, nursing bottle carries.

Nutrition in AIDS.

References:

1. Atlas, M. Ronald (1995) principles of Microbiology, 1th Edition Mosby-year Book, Inc., Missour, U.S.A.
2. Topley and Wission's (1983) Principles of Bacteriology, Virology and Immunity, Edited by S.G. Wilson, A. Miles and M.T. Parkar, Vol.I
3. General Microbiology and Immunity, II: Systematic Bacteriology, 7th Edition, Edward Arnold Publish.
4. Block, J.G. (1999) Microbiology Principles and Exportations, 4th Edition John Wiley and Sone Inc. Jay, James, M. (2000) Modern Food Microbiology, 6th Edition, Aspen publishers, Inc., Maryland. Bansart, G. (1989) Basic Food Microbiology, 2th Edition, CBS Publisher.
5. Garbutt, J (1977) Essentials of Food Microbiology, 1st Edition, Arnold International Students Edition.
6. Doyle, P. Benehat, L.R. and Mantville, T.J. (1977): Food Microbiology, Fundamentals and Forntiers, ASM Press, Washington DC.
7. Bensaon, H.J. (1990) Microbiological applications, C. Brown Publishers U.S.A.
8. Roday, S. (1999) Food Hygiene and sanitation, 1st Edition, Tata Mcgraw Hilll, New Delhi. Venderzant, C and D.F. splitts Toesser (1992): Compendium of Methods for the Microbiological Examination of Foods 3rd Edition. American Public Health Association, Washington D.C.
9. Frazier, W.C. and Westhoff, D.C. (1998) : Food Microbiology. Tata McGraw Hill Book Company, New Delhi, 4th Edition.
10. James, M.J. (1987) : Modern Food Microbiology, CBS Publishers, New Delhi, 3rd edition.
11. Pelezar, M.I. and Reid, RD. (1993) : Microbiology, McGraw Hill Book Company, New York, 5th edition.
12. Adams, M.R., Moss, M.O. (1995): Food Microbiology, New Age International (P.) Ltd., Delhi.

16. Banwart G.J. (1987) : Basic Food Microbiology, CBS Publishers and Distributors, Delhi.

PRACTICAL - I

NUTRITION & FOOD MICROBIOLOGY

Max. Marks: 100

Objectives:

The aim of the course is to:

Familiarize students with basic techniques used in Studies and Research in Nutritional Sciences. Acquaint students with the methods of estimating nutrient requirements. Orient students towards planning of metabolic studies.

Note: Any 10 practicals from 'Part I' and any 5 practicals from 'Part II'.

PART-I

Estimation of protein quality using different methods PER, B.V., N.P.U., NDP-Cal% Estimation of energy value of food stuffs using bomb calorimeter. Estimation of Energy Requirements.

B M R

Energy expenditure on physical activities.

Factorial approach

Balance studies – Nitrogen bance

Assessment of micronutrient status

Iron

Vitamin 'C'

Vitamin 'A'

Vitamin from 'B' Complex group.

Planning diets and formulating dietary guide lines

Fitness and health

Prevention of chronic degenerative disorders

Obesity management

Management of diabetes mellitus and CVD

Review of existing alternative diet related systems for physical fitness and health. Planning and preparation of diets for the elderly in health and sickness.

Part II

Preparation of common laboratory media and special media for cultivation of bacteria, yeast and moulds.
Staining of bacteria- grams staining, spore, capsule, motility of bacteria, staining of yeast and moulds.
Identification of important moulds and yeasts (slides).
Study of environment around us as source of transmission of micro organisms in food. Assessment of surface Sanitation of food preparation units.
Bacteriological analysis of milk.
Demonstration of available rapid methods, diagnostic kits used in identification of microorganisms or their products.
Visits to food processing units or any other organization dealing with advance methods in food microbiology.

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M.SC. (HOME SCIENCE)
FOOD SCIENCE AND NUTRITION
M.SC. PREVIOUS - 2ND SEMESTER
MARKING SCHEME:
PART I - THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper V	Statistics and Computer Application	80	10	10	100	04
Paper VI	Food Science	80	10	10	100	04
Paper VII	Food chemistry	80	10	10	100	04
Paper VIII	Therapeutic Nutrition	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical II	Food Science and Therapeutic Nutrition	100

PART III - INTERNSHIP / FIELD PLACEMENT

The student will be required to undergo an internship/field placement for a total duration of six to eight weeks in their chosen area of interest after IInd semester which will facilitate their pursuing a professional career in same field.

This programme could be taken up either as a single block or in two different blocks. It is mandatory that the organization / institution (public/private) participating in the field.

Placement programme will be of good professional standing. The list may include Hospitals, state run NGO, Food industry, etc.. The student will be required to submit and present a report of the internship/field placement project after its completion. It is also envisaged that participating organization/institution will give their performance appraisal of the student work. Grade A (60% and above), Grade B (48% to 59%), Grade C (40% to 47%) should be given to the student after evaluation of field placement/ internship report by the department. The grade will be mentioned in the mark sheet of the IVth semester of the student.

Excursion trip/field visits should be arranged regularly by the department for the up liftment of the knowledge of the students. This programme is designed with the following objectives:

I. To enable the students to acquire an in-depth understanding of the practical aspects of knowledge and skills acquired during the course in the relevant subject/subjects.

I. To gain hands on experience for higher proficiency in their selected area of expertise To help the students to develop and have their analytical abilities for situation and analysis and bringing about improvements.

PAPER - V
STATISTICS AND COMPUTER APPLICATION

Max. Marks: 80

To understand the significance of statistics and research methodology in Home Science research. To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design. To understand and apply the appropriate statistical technique to the measurement scale and design. To understand the role of statistics and computer application in research. To apply statistical techniques to research data for analysis and interpreting data meaningfully

UNIT-I

1. Conceptual understanding of statistical measures – meaning, definition, scope, importance, characteristics, distrust of statistics.
Classification and tabulation of data.
Measurement of central tendency
Mean
Median
Mode

UNIT-II

4. Graphic presentation of data
Frequency distribution
Histogram
Frequency polygons
Frequency curve
Ogive
Binomial distribution
Parametric and non-parametric tests

UNIT- III

5. Methods of Dispersion and variation
Mean deviation
Standard deviation
Quartile deviation
Independence of attributes 2×2 and r×c contingency tables
Analysis of variance – one way method Direct and short cut. What is computers characteristics components of computer system, block diagram of computer, CPU, I/O devices and memory (RAM and ROM) second storage devices (hard disk Floppy disk, Magnetic tape etc.)

UNIT-IV

7. Computer generations – Classification of computers; Analog digital hybrid general and special
Types of computers- Micro, Mini, Mainframe and super computerChi square test Goodness of it
Application of student 't' test for small samples

UNIT-V

9. Correlation-definition, meaning and types.

10. Methods of determining coefficient of correlation

Product moment correlation

Rank correlation.

Working with MS Word

Getting started with word, formatting text and paragraph.

Applying text and language tools, designing pages, with columns and tables, using graphics.

References:

Garrett, Henry E. 1971: statistics in psychology and education, David and co.

PAPER - VI
FOOD SCIENCE

OBJECTIVES: **Max. Marks 8**

This course is designed to: Provide an understanding of composition of various foodstuffs. Familiarize students with changes occurring in various foodstuffs as a result of processing and cooking. Enable students to use the theoretical knowledge in various applications and food preparations.

UNIT-I Introduction to Food Science:

Water: Physical properties of water and Ice, chemical, nature, structure of the water molecule.

Absorption phenomena, types of water solutions and collidative properties.

Free and bound water. Water activity and Food spoilage.

Freezing and Ice structure.

Food Dispersions-Colloidal solutions, stabilization of Colloidal systems, Rheology of food dispersions.

Gels: Structure, formation, strength, types and permanence. Emulsions: Formation, stability, surfactants and emulsifiers. Foams: Structure, formation and stabilization.

UNIT-II Polysaccharides, Sugars and Sweeteners

Starch: Structure, gelatinization, methods for following gelatinization changes. Characteristic of some food starches. gelatinization. Modified food starches. Non-starch Polysaccharides: Cellulose, hemicelluloses, pectins, gums, animal polysaccharides. Sugar and Sweeteners: Sugar, Syrups, potent sweeteners, and sugar products. Sweetener chemistry related to usage in food products: Structural relationships to sweetness perceptions, hydrolytic reactions, solubility and crystallization, hydroscopicity, fermentation, non- enzymatic browning.

UNIT- III Cereals and Cereal Products

Cereal grains: Structural and composition.

Cereal products. Flours and flour quality. Extruded foods, breakfast cereals, wheat germ burger, puffed and flaked cereals.

Fats, Oils and Related Products Sources, composition, effects of composition on fat properties. Functional properties of fat and uses in food preparations. Fat substitutes. Fat deterioration and antioxidants..

UNIT-IV Proteins: Classification, composition, denaturation, non- enzymatic browning and other chemical changes.

Enzymes: Nature of enzymes: stability and action. Proteolytic enzymes oxidizes, lipases, enzymes decomposing carbohydrates and application. Immobilized enzymes.

UNIT-V Milk and Milk Products: Composition. Physical and functional properties De-naturation. Effects of processing and storage. Dairy products, Cultured milk,yoghurt, butter, whey cheese, concentrated and used products, frozen desserts,dairy product substitutes.

Journals:

Journal of Food Science Published by the Institute of Food Technologist, Chicago lu U.S.A.

Journal of Food Science and Technology published by Association of Food Sciencetists and Technologist (India) CFTRI- MYSORE.

Food Technology Published by the Institute of Food Technologist, Chicago lu, U.S.A.

PAPER - VII
FOOD CHEMISTRY

Max. Marks: 80

UNIT-I **Meat and Poultry:** Muscle composition, characteristics and structure. Post mortem changes processing, preservation and their effects. Heat induced changes in meat variables in meat preparation, Tenderizing treatments, meat products.

Eggs : Structure and composition, changes during storage. Functional properties of eggs, use in cookery. Egg processing, low cholesterol egg substitutes.

UNIT-II **Fish and sea foods :** Types and composition, storage and changes during storage,changes during processing, by-product and newer products.

Pulses and Legumes: Structure, composition, processing, toxic constituents.

Nut and oil seeds: Composition, oil extraction and by-products.

Protein concentrates : Hydrolysates and textured vegetable proteins, milk substitutes.

UNIT- III **Fruits and vegetables :** Plant, anatomy, composition , Enzymes in fruits and vegetables. Flavor constituents, plant phenolics, pigments, post-harvest changes. Texture of fruits and vegetables. Effects of storage, processing and preservation.

Spices and condiments : Composition, flavoring extracts - Natural and synthetic

UNIT-IV Processed foods : Jams, jellies, squashes, pickles, dehydrated products.

Beverages: Synthetic and natural, alcoholic and non-alcoholic, carbonated and non-carbonated, coffee, tea, cocoa, malted drinks

UNIT-V 11. **Traditional processed products :** Fermented food - Cereal based, pulse based, fruit/vegetables based like vinegar, pickle

Leavened products : Leavening agents, biologically leavened and chemically leavened products. Batters and dough, bakery products.

Salt and substitutes.

References:

Charley, H. (1982) Food Science (2nd edition), John Wiley and Sons, New York.

Potter, N. and Hotchkiss, J.H. (1996) Food Science, Fifth edition, CBS Publishers and Distributors, New Delhi. Belitz, H.D. and Grosch, W. (1999) Food Chemistry (2nd edition), Springer, New York.

Abers, RI, (Ed) (1976) Foam, Academic Press, New York.

Cherry, R.J.Ed) : Protein Functionality in Food. American Chemical Society, Washington D.C.

Journals:

1. Journal of Food Science
2. Advances in Food Research
3. Journal of Food Science and Technology
4. Journal of Agricultural and Food Chemistry
5. Cereal Science
6. Journal of Dairy Science
7. Journal of the Oil Chemist's Society.

PAPER - VIII
THERAPEUTIC NUTRITION

Max. Marks: 80

UNIT-I **Etiopatho physiology, metabolism and clinical aberration:** complications,prevention and recent advances in nutritional management of GIT Disorders Gastritis _ Types, dietary modification
Peptic ulcer, etiology, symptoms, dietary modification
Intervals of feeding, bland diet, four stage diet Therapy, prevention of recurrence.Diarrhea – Classification, dietary consideration
Constipation, classification, dietary considerationUlcerative colitis symptom, dietary treatment Sprue types, dietary consideration.

UNIT-II **Disease of liver and gall bladder.**
Diseases of liver and gall bladder
Jaundice – classification and dietary treatmentHepatitis – types and dietary management.
Hepatic coma – causes and dietary management Cirrhosis- Type and dietary management
Cholecystitis- Types and dietary management Cholelithiases- etiology and dietary management
Pancreatic disorders: etiology, pathogenesis and nutritional care.

UNIT- III **Renal diseases**
Basal renal functions, classification of renal disease.
Glomerulonephritis- Acute and chronic- symptoms and dietetic treatmentNephrosis symptoms and principles of nutritional care.
Renal failure- Acute and chronic renal failure, dialysis.
Renal calculi- Etiology, types of stones and nutritional care acid and alkaline ash diet.
Fevers and infections-Types of fever, Tuberculosis, typhoid and malaria dietetic management

UNIT-IV **Cardiovascular diseases:** Classification.
Hyperlipidemia _ Classification and nutritional care.
Atherosclerosis – Etiological factors, pathogenesis dietetic management.Hypertension – Classification, etiology, nutritional care.
Weight Imbalance: Regulation of energy in take
obesity – Types, etiology, treatment, diet and other measures, complication ofobesity
Under weight ness – causes, dietetics management.

UNIT-V Historical background, prevalence, etiology biochemical and clinical manifestation,preventive and therapeutic measures for metabolic disorders.
Diabetic Mellitus.
Incidence and predisposing factorsSymptoms , types and diagnoses metabolism in diabetes
dietary management and meal managementHypoglycemic agents and insulin complications of diabetes
Disorders of thyroid gland: normal thyroid functionHyperthyroidism _ symptoms and treatment

PRACTICAL - II
FOOD SCIENCE AND THERAPEUTIC NUTRITION

Max. Marks: 100

Distribution of Marks:

Sessional	-	20
Viva	-	20
Practical	-	60 (Exercises two of 30 each)

PART- A

1. Market survey of commercial nutritional supplements and nutritional support substrates.
2. Preparation of diet counseling aids for common disorders.
3. Planning and preparation of diets for patients with common multiple disorders and complications and discharge diet plans.

PART-B

Effect of solutes on boiling point and freezing point of water.
Effect of types of water on characteristic of cooked vegetables, Pulses and cereals.

Sugar and Jaggery Cookery: Relative sweetness, solubility and sizes of sugars, stages of sugar cookery, caramelization, crystallization, factors affecting crystal formation.

Starches Vegetables ,Gums and Cereals: Dextrinization, gelatinization, retro gradation, thickeningpower, Factors affecting gels. Gluten formation and factors affecting gluten formation.

Jams and Jellies: Pectin content of fruits, role of acid pectin and sugar in jam and jelly formation, Use of gums as emulsifiers / stabilizers.

Fat and Oils: Flash point, melting point and smoking point, Role of fat and oils in cookery as: Shortening agent, frying medium, Factors affecting fat absorption. Fat crystals. Plasticity of fats Permanent and semi- permanent emulsions.

Milk & Milk Products: Scalding denaturation. Effect of acid, salt, alkali, sugar, heat) enzymes, polyphenols on milk Khoa, curd, paneer. Cheese (ripened and unripened).

Egg: structure assessing egg quality. Use of egg in cookery: Emulsions air incorporation, thickening, binding, and gelling. Method of egg cookery and effect of heat white foams and factors affecting foams:

Pulses: Effect of various cooking and processing methods on various functional properties of pulses and their products.

Gelatin: Gelatin gel strength and factors affecting gelatin.

Fruits and Vegetables: Pigments: Effects of cooking metal ions, ph, effect of various cooking processes on different characteristics of vegetables. Prevention of enzymatic browning.

Leavened Products: Fermentation- Use of microorganisms ((lactic acid yeast). Steam as an agent, Egg as a chemical agent.

Frozen Desserts: Factors affecting ice crystal formation. Quality characteristics of frozen desserts.

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FOOD SCIENCE AND NUTRITION

M.SC. (HOME SCIENCE) FINAL

3rd SEMESTER

Marking Scheme:PART I – THEORY

S. No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper IX	Advanced Nutrition	80	10	10	100	04
Paper X	Nutritional Biochemistry	80	10	10	100	04
Paper XI	Nutrition for Health of Women and Children	80	10	10	100	04
Paper XII	Methods of Investigation	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical III	Nutritional Biochemistry	100

PAPER - IX
ADVANCED NUTRITION

Objectives : Max. Marks: 80

This Course is designed to:

Provide in depth knowledge of the physiological and metabolic role of various nutrients and their interactions in human nutrition.

Enable students to understand the basis of human nutritional requirement and recommendations through the life cycle.

Enable students to understand the pharmacological actions of nutrients and their implications. Familiarize students with the recent advances in nutrition.

UNIT-I **Energy:** Energy content of foods. Physiological fuel value- review. Measurement of Energy Expenditure: BMR, RM rthermic effect of feeding and physical activity, methods of measurement of basal metabolism. Estimating energy requirements of individuals. Regulation of energy metabolism: control of food intake, digestion, absorption and body weight.

UNIT-II **Carbohydrates:** Types, classification, digestion and transport- review, dietary fibre, fructo, oligosaccharides, resistant starch- chemical composition and physiological effects Glycemic index of foods. Sweeteners nutritive and non-nutritive.

UNIT- III **Proteins:** Classification, digestion, absorption and transport- review. Metabolism of proteins: Role of muscle, liver and gastro intestinal tract. in protein metabolism. Protein quality, methods of evaluating protein quality. Protein and amino acid requirements. Therapeutic applications of specific amino acid.

Lipids: Classification digestion, absorption, transport- review – Functions of fat E.F.A. Role of n-3 n-6 fatty acids in health and disease. Requirements of total fat and fatty acids. Trans fatty acids, prostaglandins, phospholipids, cholesterol.

UNIT-IV **Water:** Regulation of intra and extra cellular volume – Osmolality, water balance and its regulation.

Minerals: (Note: For each nutrient sources, bio-availability, metabolism, function, requirements, RDA, deficiency and toxicity, interactions with other nutrients are to be discussed)

Macro minerals: calcium, phosphorus, magnesium, sodium, potassium and chloride.

Micro minerals: Iron, copper, zinc, manganese, iodine, fluoride. Trace minerals: Selenium cobalt, chromium, Cadmium, silicon, boron, nickel.

UNIT-V **Vitamins:** Historical background, structure, food sources, absorption and transport metabolism biochemical function, and assessment of status. Interac-tions with other nutrients. Physiological, pharmacological and therapeutic effects, toxicity and deficiency with respect to the following. Fat soluble Vitamins A,D,E, & K

Water Soluble: thiamine riboflavin, niacin, biotin, pyridoxine, folic acid, pantothenic acid, ascorbic acid, cyanocobalamin, choline, inositol, ascorbic acid.

REFERENCES:

Scrimshaw, N.S. and Gleason, G.R. (1992) Assessment Procedures. Qualitative Methodologies for Planning and Evaluation of Health related Programmes.

International Nutrition foundation for Developing Countries, Boston.

Van Maanen (1983)" Quantitative Methodology, Sage Publication.

Cook, T.D. and Richard, C.S. (1979): Qualitative Methods in Evaluation Research, Sage Publications, and London.

Patton, M.Q. (1980): Qualitative Evaluation Methods Sage Publications.

Pettitti, D.B. (2000): Meta analysis, Decision Analysis and cost- effectiveness Analysis:Methods for Quantitaive Methods in Mecinine. Oxford University Press, New York.

Hunter, J.E. and Shmidt (1990): Methods of Meta- analysis- Correcting Error and Blas in Research Findinge, sage Publications London.

Walker, R. (1983): applied Qualitative Research, gower, London.

Margan, D. (1988): rocus Groups as Qualitative research Sage Publication, London.

Creswell, J. (1994): Research Design: Qualitative and Quantitative Approaches. Thousand Oaks, CA Sage Publications. Margan, D (1993): Successful Focus Groups. Sage Publications.

Mischler, E.G. (1986), Research Interviewing. Context and Narrative, Harvard University Press Cambridge. Denzin, N.K. and Licoin Y.S. (1994): Handbook of Qualitative Research, Sage Publications.

Janesick , V.J. (1993): Stretching Exercises for Cultivative researches, Sage Publications.

Mienert, C.L. (1986): Clinical Trials: Design, conduct and Analysis, oxford, New York

Schlessetman, J.J. (1982): Case control studies: Design Conduct and Analysis. Oxford New York. Bryman, A. and Crame: D (1994) Quantitative Data Analysis for Social Scientists.

Bryman, A. and Crame: D (1996) Quantitative Data analysis with Minitabs, Rutledge, London.

Cameron, M.E. and van Staveren, W.A. (1988): Manual on Methology for Food consumption Studies, Oxford University Press Oxford. Quandt. S.A. and Ritenbaugh, S. (1986): Training Manual in Nutritional Anthropology American Association of Anthropology, Washington, D.C.

PAPER - X

NUTRITIONAL BIOCHEMISTRY

Max. Marks: 80

UNIT-I Hetero polysaccharides- Definition classification structure and properties of glycoprotein, and proteoglycans.
Inter mediatory metabolism- Reactions, standard for energy changes, and regulating, carbohydrates- glycolysis, gluconeogenesis, citric acid cycle, hexose-mono-phosphate pathway.

UNIT-II **Lipids-** Beta oxidation synthesis of fatty acids. Synthesis and breakdown of unsaturated fatty acids, cholesterol, phospholipids and triacylglycerol. Purines and pyrimidines- Synthesis and break down source of various atoms of the purine base. salvage reaction, Biosynthesis of purines and pyrimidines.

UNIT- III Plasma proteins- Nature Properties and functions
Nucleic acids- DNA replication and transcription method of replication fork, okazaki segment, rule of sigma factor and core enzyme, DNA recombinant-Bio medical importance, restriction enzyme clowning, libraries & libraries construc-tion. Protein bio synthesis, initiation, formation of UOS, complex formation of complex, elongation.

UNIT-IV Hormones, general characteristic of hormones classification of hormones, mechanism of action. Assay of hormone, functions of Hormones, Thyroxine,TSH.LH. ACTH and insulin.
Minerals, trace elements, their physiological function sources, absorption, excretions & deficiency of iron, copper, iodine zinc and selenium

UNIT-V Detoxification in the body- Metabolism of foreign compounds oxidation conjugation, reduction hydrolyses.
Major alteration in CHO protein and fat metabolism in chronic nutrition, related generative diseases diabetes, heart diseases.

PAPER - XI

NUTRITION FOR HEALTH OF WOMEN AND CHILDREN

Max. Marks - 80

UNIT-I Role of women in national development.

Women in family and community: Demographic changes menarche, marriage, fertility, morbidity, mortality, life expectancy, sex ratio, aging, widowhood. Women in society: Women's role, their resources, and contribution to family, and effect of nutritional status.

UNIT-II Women and health: Health facilities. Disease pattern and reproductive health.

Policies and programs for promoting maternal and child nutrition and health. Concept of small family. Methods of family planning-Merits and demerits.

UNIT- III Importance of nutrition prior to and during pregnancy- Prerequisites for successful outcome. Effect of under nutrition on mother and child including pregnancy outcome and maternal and child health- Short term and long term effect. Physiology and endocrinology of pregnancy, embryonic and foetal growth and development. Nutritional requirements during pregnancy: Adolescent pregnancy, pregnancy and T.B., TUGR, gestational diabetes.

UNIT-IV Lactation- Development of memory tissue and role of hormones- Physiology and endocrinology of lactation. Synthesis of milk component, let down reflex, role of hormones. Lactational amenorrhea, effect of breast feeding on maternal health. Human milk composition and factors affecting breast feeding. Human milk banking. Management of lactation: Prenatal breast feeding, skill education. Rooming in problems – Sore nipples, engorged breast, inverted breast. Exclusive breast feeding.

UNIT-V Infant physiology: Preterm and low birth weight infant- Implication for feeding and management. Growth and development during infancy, childhood and adolescents. Feeding of infants and children and dietary management.

Malnutrition- Etiology and management.

PAPER - XII

METHODS OF INVESTIGATION

Max. Marks: 80

UNIT-I Electrolytic dissociation: Principle, technique and theory of electrolytic dissociation. Hydrogen ion concentration: Principle and measurement of pH, indicators, buffer. Physiochemical techniques: Principles and methodology of the following - Diffusion Osmosis Filtration Surface tension Adsorption Centrifugation

UNIT-II Chromatography: Principles, techniques and application of the following -
Paper chromatography - Circular, ascending and descending.
Ion exchange chromatography column chromatography
Thin layer chromatography Gas liquid chromatography High performance liquid chromatography

UNIT- III Electrophoresis: Principles and techniques of paper and gel electrophoresis.
Microbiological assay: Principle and methodology of the following - (a) Vitamins (b) Amino acids

UNIT-IV Calorimetry : Principle, colorimeter applications.
Radioactive isotopes: Properties of radioactive isotopes, detection of radiations. Uses of radioactive isotopes in medical science.

UNIT-V Immunological methods: Principle and technique of the following -
Radio Immuno Assay (RIA)
Enzyme Linked Immunosorbent Assay (ELISA) Collection of biological samples.

References ;

Hawk, P.B., Oser, B.K. and Summerson, W.H. Practical Psysiological Chemistry. Tata McGraw Hill. Varley, H. Practical Clinical Biochemistry. The English language Book Society.

Das, Debjyoti Biophysics and Biophysical Chemistry. Academic Publisher, Calcutta.

Okotore, R.O. : Basic Separation Techniques in Biochemistry. New Age International (P) Ltd. Publishers. Manual of Laboratory Techniques. National Institute of Nutrition, Hyderabad.

PRACTICAL - III

NUTRITIONAL BIOCHEMISTRY

Max. Marks 100

Objectives:

This course will enable the students to

Understand the principles of biochemical methods used for analysis of food and biological samples. Perform biological analysis with accuracy and reproducibility

Note: Any ten practical.

PART-A

Calcium: Estimation of calcium in foods and serum.

Phosphorous: Estimation of inorganic phosphorous in foods and serum.

Ascorbic acid: Estimation of ascorbic acids in foods.

Proteins:

Estimation of proteins in foods.

Estimation of albumin, globulin and albumin/globulin ratio in serum and urine.

Estimation of haemoglobin.

Glucose: Estimation of glucose in blood and urine.

Cholesterol: Estimation of cholesterol in blood.

Enzyme assay: Estimation of activity of serum alkaline phosphates and trans aminase.

Urea and creatinine: Estimation of urea and creatinine in serum and urine.

Survey of pathological laboratories.

PART-B

Acids and alkalis: Preparation of dilute solutions of common acids and alkalis and determining their exact normality.

Buffers ; Preparation of phosphate, carbonate-bicarbonate, ascorbic acid, acetate, chloride and pthalate buffers and determination of their pH by the use of indicators and pH meters.

Spectrometer: Beer Lamuert law, absorption maximum, preparation of standard curve and nutrient estimations in UV and visible range, AAS, AES, flame photometry.

Fluorimetry: Estimation of thiamin and riboflavin.

Chromatography: Paper - Identification of amino acid by circular, ascending and descending methods. Ion-exchange - Separation of amino acids. column Separation of proteins. Thin layer - Identification of amino acids, Gas-liquid Estimation of fatty acids, HPLC - Estimation of α-carotene and á-tocopherol.

15. Electrophoresis: Fractionation of plasma proteins.

Hemchand Yadav Vishwavidlaya, Durg (C.G)

FOOD SCIENCE AND NUTRITION
M.SC. (HOME SCIENCE) FINAL

4th SEMESTER
Marking Scheme:
PART I – THEORY

No.	Title	Marks			Credit
		Test	Seminar	Total	
Paper XIII	Nutrition for Health and Fitness	10	10	100	04
Paper XIV	Public Nutrition	10	10	100	04
Paper XV	Geriatric Nutrition	10	10	100	04
Paper XVI	Institution Management	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical IV	Institution Management	100

PAPER - XIII

NUTRITION FOR HEALTH AND FITNESS

Max. Marks - 80

Objective : Course will prepare the student to -

Understand the components of health and fitness and the role of nutrition in these. Make nutritional, dietary and physical activity recommendations to achieve fitness and well-being. Develop ability to evaluate fitness and well- being.

UNIT-I **1.** Definitions, components and assessment criteria of age: specific fitness and health status.
Anatomical fitness
Physiological fitness
Psychological fitness
Physiological fitness; Growth and development, strength, speed skill stamina, or endurance, specific fitness, general fitness, and health status. Holistic approach to the management of fitness and health: Energy input and output. Diet and Exercise, Effect of specific nutrition on work performance and physical fitness, Nutrition, exercise, physical fitness and health inter- relation-ship

UNIT-II **7.** Review of different energy systems for endurance and power activity: Endurance Definition, classification, and factors affecting endurance. Fuels and nutrients to support physical activity: Shifts in carbohydrate and fat metabolism mobilization of fat stores during exercise. Nutrition in Sports: Sports specific requirement.

UNIT- III **9.** Pre-game and post- game meals. Assessment of different mutagenic acids and commercial supplements. Diets for persons with high energy requirements, stress, fracture and injury. Water and electrolyte balance: Losses and their replenishment during exercise and sports events, effect of dehydration, sport drink.

UNIT-IV **11.** Significance of physical fitness and nutrition in the prevention and management of weight control, obesity, diabetes mellitus, CV disorders, bone health and cancer Nutrition and exercise regimes for pre and postnatal fitness.
Nutritional and exercise regimes for management of obesity. Critical review of various dietary regimes for weight and fat reduction. Prevention of weight cycling.

UNIT-V **14.** Defining nutritional goals/ guidelines appropriate or health fitness and prevention and management of the chronic de-genearative disorders
Alternative systems for health and fitness like Ayurveda, Yoga, Meditation, Vegetarianism and Traditional diets.

REFERENCES:

L.K. & Ecott Stump, S.(2000): Krause's Food Nutrition and Diet therapy. Edition, W.B. Saunders Ltd.

Sizer, F & Whitney , E. (2000); Nutrition Concepts & Controversies.

8th Edition, Wadsworth, An International Thomson Publishing Co.

Whitney, E.N. & rolfes, S.R. (1999); Understanding Nutrition, 8th Edition, West/ Wadsworth Thomson learning.

Ira Wokinsky (Ed.) (1998): Nutrition in Exercise and sports, 3rd Edition, CRC Press.

Parizkova, J. Nutrition, Physical activity and health in early life Ed. Wolinsky, I. CRC Press.

Shils, M.E. Olson, J.A. Shike N. and Ross, A.C. (Ed.) (1999): Modern Nutrition in Health & Disease 9th Edition, Williams & Wilkins.

McArdle, W. Katch, F and Katch, V. (1996) Exercise Physiology, Energy, Nutrion and Human Performance, 4th Edition. Williams and Wikins, Philadelphia.

Journals

Medicine and Science in Sports and Exercise.

International Journals of Sports Nutrition.

PAPER - XIV

PUBLIC NUTRITION

Max. Marks: 80

UNIT-I **Concept of Public Health Nutrition :** Relationship between health and nutrition.
Role of public nutritionist in the health care delivery system.
Sectors and public policies relevant to nutrition.
National health care delivery system.

UNIT-II **Population Dynamics:** Demography, demographic cycle, world population trend, birth rates, death rates, growth rates, demographic trends in India, age pyramid, sex ratio.
Environment and Health:
Water : Water pollution, surveillance of
drinking water quality. Air : Air pollution

UNIT- III **Nutritional Status:** Determinants of nutritional status of individual and populations. Factors affecting nutritional status.
Major Nutritional Problems : Etiology, prevalence, clinical manifestations.
Preventive and therapeutic measures of -
Macro and micro deficiencies - LBW, PEM, xerophthalmia, nutritional anaemia.
Other nutritional problems like lathyrism, aflatoxicosis, alcoholism and fluorosis.

UNIT-IV **National Nutrition Policy**
Approaches and strategies for improving nutritional status and health.
Occupational health
Health planning and management

UNIT-V **Communication for Health Education.**
Health planning in India.
Health Care of the Community Concept of health care, health system, levels of health care.

PAPER - XV
GERIATRIC NUTRITION

Max. Marks 80

Objectives :

The course is designed to -

Familiarize the students with the multifaceted aspects of ageing. Make the students competent for nutritional and health care of the elderly.

UNIT-I **1.** Ageing: Definition

(A) Molecular changes during ageing –

(i) Changes in proteins,

(ii) Chromatin,

(iii) Cross linkers,

(iv) Immune response,

(v) Hormones,

(vi) Ageing of cells in culture,

(vii) Age pigment.

Mechanism of Ageing –

(A) Somatic mutation,

(B) Errors in proteins

(C) Gene regulation Socio-psychological aspects of ageing - Especially problems of elderly women.

UNIT-II **4.** Nutritional and food requirement during old age - Progress of ageing, nutritional requirements, food requirements.

5. Nutrition related problems of old age –

(i) Osteoporosis,

(ii) Obesity,

(iii) Neurological dysfunction,

(iv) Anemia,

(v) Malnutrition,

(vii) Constipation.

UNIT- III **6.** Degenerative diseases in old age –

(1) Atherosclerosis,

(2) Hypertension,

(3)Cancer,

(4) Diabetes mellitus,

(5) Arthritis. Common complaints during old age. Dietary guidelines

UNIT-IV **9.** Drug - Food and nutrient reaction in elderly.

(a) Effect of drugs on food intake and absorption.

(b) Effect of various foods and beverages on drug action.

(c) Drug nutritional interaction. Ageing and immunity. Ageing and nutrition, nutrition and longevity, food habits of elderly people, stress during old age.

UNIT-V 12. Exercise, yoga, meditation in old age.

Policies and programmes of the government to the elderly. Policies and programmes of the NGO sector pertaining to the elderly.

References :

Kumar V (1996): Ageing - Indian Perspective and Global Scenario. Proceedings of International Symposium of Gerontology and Seventh Conference of the Association of Gerontology (India). Bagchi, K. and Pun, S. (Ed) (1999) Diet and Aging - Exploring Some Facets. Soc. for Gerontological Research, New Delhi and Help Age India, New Delhi. Chaudhary, A. (Ed) (2001) Active Aging in the New Millennium, Pub. Anugraha, Delhi.

Shils, M.S., Olson, J.A., Shike, M. and Ross, A.C. (Ed) (1999) 9th Edition, Williams and Wilkins. Sharrna, O.P. (Ed) (1999) : Geriatric Care in India - Geriatrics and Gerontology A Text book, MIs, AND Publishers. Aiken, L.R. (1978) The Psychology of Later Life, Philadelphia, WB Saunders Company. Bergmann, Klaus (1972) : Aged Their Understanding and Care, London, Wolfe Pub.

Binstock, R.H. and F. Shanes (eds) (1986) : Handbook of Aging and Social Sciences, V.N. Reinhold Co., New York. Blau, Zana Smith (1983); Old Age in a Changing Society, New York Prints, New York. Bose, A.B. and K.D. Gangrade (1988) : Aging in India : Problems and Potentialities, Abhinav Pub., New Delhi. Cook Alicia Skinner (1983): Contemporary Perspectives on Adult Development and Aging, New York, MacMillan. Desai, K.G. (1985): Problems of Retired People in Greater Bombay, TISS, Series No.27.

Ghosh, B. (1988): Contemporary Social Problems in India, Bombay, Himalaya Pub.

Homban, D. (1978) Social Challenges in Aging, London, Groom Helm.

Johnson Elizabeth (1982) : Growing old: Social Problems of Aging, New York, Holt Rinehart and Winston. Kennedy Caroll (1988): Human Development, New York, MacMillan.

Kimmel Douglas (1974): Adulthood and Aging, New York, Wiley.

Mishra Saraswati (1987) : Social Adjustment in Old Age, Delhi, B.R. Pub. Corp.

Pinkston, P.H. andN.K. Linsk (1984): Care of the Elderly : A family approach, New York, Pergaman Press. Schiamberg Lawrence, B. (1985): Human Development, New York, MacMillan.

Sharma, M.L. and T.M. Dak (1987) : Aging in India: Challenge for the Society, Delhi, Janta Pub. Chowdhary Paul D. (1992): Aging and the aged. Inter India Pub., New Delhi.

Cox Harold (1984): Later life : The Reality of Aging, New Jersey, Prentice Hall.

Watson, R.R. (ed.) (2000) ; Handbook of Nutrition in Aged, 3rd edition, CRC Press, Boca Raton, Nutrition Screening Initiative (1991 and 1992): Nutrition Screening Manual for Profession-also Caring for Older Americans. Washington, D.C. Green Margolis, Mitchell, Burns and Associates. Chernoff, R. (ed) (1991) : Geriatric Nutrition : The Health Professionals' Handbook, Gaitherburg, MD : Aspen.

The Nutrition Screening Initiative (1994) : Incorporating Nutrition Screening and Interventions into Medical Practice: A Monograph for Physicians. Watson, R.R. (ed) (1985): CRC Handbook of vitamins in the Aged. ERC Pre Boca Raton, Florida.

Bock, G.R.and Whelen, J. (eds) The Childhood Environment and Adult Disease. Chichester, U.K., Wiley. Berg, R.L. and Casells, LS. (1990): The Second Fifty Years : Promoting Health and Preventing Debility.

Talwar, G.R : Textbook of Biochemistry and Human Biology.

B. Srilakshmi : Dietetics, New Age International (P.) Ltd. Publishers.

Journals:

American Journal of Clinical NutritionGerontology

Journal of American Geriatric SocietyAge Ageing

Journal of Applied GerontologyAge

Journal of Gerontology

PAPER - XVI

INSTITUTION MANAGEMENT

Max. Marks: 80

UNIT-I Development and scope of food service, History of Food Service.
Food & Economics, Money

UNIT-II Quantity Cookery:
Purchase, Selection. Storage and handling of food in relation to cost and food value Food preparation and different types of service of meals shakes. Drink etc. and their evaluation. Meal planning, various institutions taking into account regional food habits. Comparative study of different food groups.

UNIT- III Organization and Management of food services:
Personnel Management. Selection training. Supervision labour laws.
Organization of work, space, time tables and work simplification.

UNIT-IV Food service planning:
Selection of furnishings and equipment for institution kitchens and dining rooms. Sanitation and cleaning Differences in organization and management problems of hostels, annapurnas, cafeteria, Hospital, School Lunch Programme with reference to foodservices.

UNIT-V Accounting procedure and cost control:
Total budget and its distribution.
Record keeping and accounting.
Selling price and total incomes.
Profit, loss and balance sheet.

PRACTICAL - IV

INSTITUTIONAL MANAGEMENT

Max. Marks 100

Practical work at least in one institution related to the above topics. Field trips Management of a canteen in your institution.

OPTIONAL PRACTICAL - IV

DISSERTATION ON CURRENT TRENDS IN FOOD AND NUTRITION

Max. Marks 100

Dissertation: In any field of food science, nutrition and systematic writing of report along with statistical analysis of data Current trends in food and nutrition: Acquaintance of the students with current trends in the field of food and nutrition. Collection and compilation of latest reviews. (79)

Hemchand Yadav Vishwavidlaya, Durg (C.G)

HUMAN DEVELOPMENT
M.Sc. (HOME SCIENCE) PREVIOUS

1th SEMESTER
Marking Scheme:
PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper I	Research Methodology	80	10	10	100	04
Paper II	Theories of Human Development	80	10	10	100	04
Paper III	Early Childhood Education	80	10	10	100	04
Paper IV	Current trends and issues in Human Development	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical I	Early Childhood Education	100

PAPER - I
RESEARCH METHODOLOGY

Max. Marks: 80

Objectives:
To understand the significance of research methodology in Home Science research. To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.

UNIT-I Science, scientific methods, scientific approach.
Role of research in Home science discipline.
Objectives of research: Explanation, control and prediction.
Types of research: Historical, Descriptive, Experimental, case study,
Social research and survey: Meaning, definition, nature, scope, objects, types.
Distinction between social survey & research. Pre-testing and pilot survey.

UNIT-II Definition and identification of research problem.
Selection of research problem.
Justification.
Fact, Theory and concept.
Hypothesis: Definition, sources, characteristics, importance, main difficulties in formation of hypothesis, disadvantages, Limitations and Delimitations of the problems.
Types of variables.

UNIT- III Basic principles of research design:
Purposes of research design: fundamental, applied and action, exploratory, and descriptive, experimental, ex-post facto.
Longitudinal and cross sectional, co-relational.
Data gathering instrument. Observation, Questionnaire, Interview, Scaling method, Case study, Home visits,
Reliability and validity of measuring instruments.

UNIT-IV Theory of probability: Non-probability sampling: purposive, Quota and volunteer sampling/snow ball sampling
Sampling: Population and sample, Meaning, Characteristics, advantages and disadvantages.
Types: Probability sampling Random sampling (Simple random, systematic random sampling,) Purposive sampling Stratified sampling other sampling methods (two stages and multistage sampling, cluster sampling.

UNIT-V Classification and tabulation of data.
Analysis and interpretation of data
Preparation of report
Diagrammatic presentation of data

References:

Edwards: experimental design in psychological research.

Kerlinger: Foundation of educational research.

Bhandarkar P.L. and Wilkinson T.S. (2000) methodology and techniques of social research, Himalaya publishing house, Mumbai. Bhatnagar G.L.(1990) research methods and measurements in behavioral and social science Agri Cole publishing agency, New Delhi.

PAPER - II

THEORIES OF HUMAN DEVELOPMENT

Max. Marks: 80

Objectives:

To understand the need for theories in Human development.
To see theories in context.
To examine historical perspectives in the evolution of theory.
To understand the practical applications of theories.
To discuss various theories of Human development.

UNIT-I Early theory – Aristotle Freud's psychoanalytic theory, Neo-Freudian-Horney, Sullivan, Eric-fromm , cross cultural relevance.

UNIT-II Learning theory - Pavlov, Watson, Skinner, Thorndike, cross cultural, relevance and current status of learning theory. 5. Social learning theory Bandura's theory

UNIT- III Theory of self - Roger's. Field theory by Kurt Lewin. Jung's Theory

UNIT-IV Cognitive development theory,- Piaget's theory, Rousseaue Theory, Motivational theory by Murray and Maslow, Erikson's theory

UNIT-V Personality theory by All port and Murphy Adler's theory of individual psychology Jhon Locke.

References:

1. Baker, C.(2000), Culturod Studies, London Sage.

Berry.J.W.Poolinga. Y.H. & pandey,J.(Eds.)(1981).Handbook of Cross Cultural Psychol-ogy: Theory Method. Boston: Ally and Bacon. Berry, J.W.Poorlinga, Y.H., Sogull, Mane Dasen P.R. (1992).Crosscultural application Cambridge: University Press. Berry, J.W., Dason, P.R. & Saraswathi, T.S.(Eds.)(1997).Handbook of Cross-cultural psychology : Processes and human development (2 edition) Boston: Ally and Bacon.

PAPER - III
EARLY CHILDHOOD EDUCATION

Max. Marks: 80

OBJECTIVE :

To gain knowledge and insight regarding principles of early childhood care and education. To develop the skills and techniques to plan activities in ECCE centers of different types, to conduct activities in early childhood care and education and to work effectively with parents and community. To understand the relevance and scope of studying creativity. To discuss the concept of creativity and various approaches to its study. To understand the role of the individual, the context and socialization in developing creativity. To become familiar with psychometric measurement and alternate ways of assessing creativity. To understand the, significance of parents role in early childhood programmes. To develop skills to involve parents in early childhood education programmes. To learn to conduct parents education programmes

UNIT-I Principles of Early Childhood Care and Education (ECCE)

Importance, need and scope of ECCE. Objectives of ECCE Types of preschools / programmes: play centres, day care, Montessori, Kindergarten. Balwadi., anganwadi etc. Concept of non-formal, formal and play way methods.

UNIT-II Historical trends (Overview)

Contribution of the following thinkers to the development of ECCE. Their principles, application and limitations in the context of ECCE. Pestalozzi, Rousseou, Frobel, Maria-Montessori, Jhon Dewey, Tarabai Modak, M.K. Gandhi, Rabindranath Tagore.

UNIT- III Organisation of pre-school centres

Concept of organisation and administration of early childhood centers. Administrative set-up and functions of personnel working at different levels. Building and equipment: Location and site, arrangement of rooms, different types and size of rooms, playground, storage facilities, selection of different types of outdoor and indoor equipments, maintenance and display of equipment and material. Staff personnel service conditions and role: Role and responsibilities, essential equalities of a care giver /teacher, other personnel. Record and report: Types, aims and purpose/need, general characteristics anecdotal, cumulative, sample work, medical etc.

UNIT-IV Programme planning: Setting goals and objectives of plans, Long term, short term, weekly and daily planning routine and schedules. Activity for ECCE: Language arts : Goals of language, types of listening and activities to promote listening various activities (Songs, object talk, picture talk, free conversation, book, games, riddles, jokes, stories, criteria and selection of activities, teachers role). Art and craft activities - Creative activities of expression Types of activities - Chalk, crayon, paints, paper work and best out of waste. Role of teacher on planning the activity. Motivating children. Fostering appreciation of art and craft activities.

UNIT-V Music: Songs, objectives of music education, establishing goals, setting the stage and role of the teacher. Three aspects of music, making listening and singing. Mathematics - Goals of mathematical learning, developmental concept at different stages. Principles of teaching mathematics - Firsthand experience, interaction with others, using language, reflection. Mathematical concept like: Classification, conservation, serration, comparison, counting, fraction, one to one correspondence addition and subtraction.

References:

Curran. J. et al (1977): Mass Communication and Society, London.

Banerjee (eds) (1985): Cultural and Communication, Paroit Publishers, Delhi.

Ruloof, M.E. and Miller, G.R. (ods)(1987):Interpersonal Process: New Direction in Communication Research, Sage, USA. Chatterjee, P.C.(1988): Broadcasting in India, New Delhi, Sage Publications

PAPER - IV

CURRENT TRENDS AND ISSUES IN HUMAN DEVELOPMENT

Max. Marks: 80

UNIT-I Trends and issues related to process of development
- Perceptual development
- Cognitive development
- Socio emotional development
- Language development Moral development

UNIT-II Trends and issues related to process of development
- Issues and concerns related to children in difficult circumstances.
- Street children, adopted children, girl child, single parent children.
- Refugee and migrant children, children with disability.
- Issues and concerns related to training of ECCE and accreditation process.

UNIT- III Trends and issues related to life span development Infancy, Early childhood, young adulthood, Adulthood, Old age

UNIT-IV Definition of development and self
- Linking the individual and the group, self-concept and self-esteem.
- Memories of childhood and their influence.
- Family history and its impact on individual

UNIT-V The self in the life span.
- Significance of birth.
- Role of childhood experiences, changing roles and responsibilities.
- With age the sense of self at adolescence, Adolescent and their problems.
- Cultural variations, achieving selfhood and adulthood.
- Influence of family peers and school on the development of self-esteem.

PRACTICAL - I

EARLY CHILDHOOD EDUCATION

Max. Marks: 100

Marks Distribution:

Sessional	-	20
Viva	-	20
Two practical	-	30 each

PART - I

Visits to various centers, which cater to the preschool stage e.g.: Day care Centre, Balwadi, Anganwadi, Mobile Creche etc.
Preparing a resource unit file on the basic of play way method/approach.
Preparing teaching material kit and presentation in mock set up.
Story and their techniques, types of puppets and mobiles? Art and craft portfolio, song booklet and low cost musical instruments. Readiness games and material, picture tails and object talk related materials etc.

PART – II

Tests of creativity: Torrance Test of Creative Thinking (TTCT), Baquer Mehdi's Indian adaptation.
Use brainstorming techniques for problem solving.
Use of parne's 5 stage method creative problem solving.
In 6-10 season, develop a plot of a story with active participation of children and dramatize it with them as role players.
Use of consensual assessment technique to rate the creative work of children and adults (stories, poems and artwork).

PART - III

Conducting home visits and interviewing/ talking to parents. Arranging workshops for parents. Organizing parent education programmes based on parents needs. Conducting parent-teacher meetings. Reports and resource files to be maintained by students.

Hemchand Yadav Vishwavidyalaya, Durg (C.G.)

HUMAN DEVELOPMENT

M.Sc. (HOME SCIENCE) PREVIOUS

2th SEMESTER Marking Scheme:

PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper V	Statistics and Computer Application	80	10	10	100	04
Paper VI	Adolescent Psychology	80	10	10	100	04
Paper VII	Parenting in Early Childhood	80	10	10	100	04
Paper VIII	Management and Project Planning	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical II	Management and Project Planning	100

PART III – INTERNSHIP / FIELD PLACEMENT

The student will be required to under go an internship/field placement for a total duration of six to eight weeks in their chosen area of interest after IInd semester which will facilitate their pursuing a professional career in same field.

This programme could be taken up either as a single block or in two different blocks. It is mandatory that the organization / institution (public/private) participating in the field. Placement programme will be of good professional standing. The list could include hospitals (children ward/maternity ward), child care centre Anganwadi ICDS, Psychotherapy counseling centers, nursery schools, etc. The student will be required to submit and present a report of the internship/field placement project after its completion. It is also envisaged that participating organization/institution will give their performance appraisal of the student work. Grade A (60% and above), Grade B (48% to 59%), Grade (40% to 47%) should be given to the student after evaluation of field placement/ internship report by the department. The grade will be mentioned in the mark sheet of the IVth semester of the student. Excursion trip/field visits should be arranged regularly by the department for the up liftment of the knowledge of the students. This programme is designed with the following objectives:

To enable the students to acquire an in-depth understanding of the practical aspects of knowledge and skills acquired during the course in the relevant subject/subjects.

To gain hands on experience for higher proficiency in their selected area of expertise

To help the students to develop and have their analytical abilities for situation and analysis and bringing about improvements

PAPER - V

STATISTICS AND COMPUTER APPLICATION

Max. Marks: 80

UNIT-I Objectives:

To understand the significance of statistics and research methodology in Home Science research. To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
To understand and apply the appropriate statistical technique to the measurement scale and design.
To understand the role of statistics and computer application in research.
To apply statistical techniques to research data for analysis and interpreting data meaningfully

UNIT-I Conceptual understanding of statistical measures – meaning, definition, scope, importance, characteristics, distrust of statistics.
Classification and tabulation of data.
Measurement of central tendency
Mean
Median
Mode

UNIT-II Graphic presentation of data
Frequency distribution
Histogram
Frequency polygons
Frequency curve
Ogive
Binomial distribution
Parametric and non-parametric tests

UNIT- III Methods of Dispersion and variation
Mean deviation
Standard deviation
Quartile deviation Independence of attributes 2×2 and r×c contingency tables
Analysis of variance – one way method Direct and short cut.

What is computers characteristics components of computer system, block diagram of computer, CPU, I/O devices and memory (RAM and ROM) second storage devices (hard disk Floppy disk, Magnetic tape etc.)

UNIT-IV Computer generations –Classification of computers; Analog digital hybrid generaland special Types of computers- Micro, Mini, Mainframe and super computer
Chi square test Goodness of it
Application of student 't' test for small samples

UNIT-V Correlation-definition, meaning and types.
Methods of determining coefficient of correlationProduct moment correlation
Rank correlation.

Working with MS Word

Getting started with word, formatting text and paragraph.
Applying text and language tools, designing pages, with columns and tables, using g raphics.

References:

Garrett, Henry E. 1971: statistics in psychology and education, David and co.



PAPER - VI
ADOLESCENT PSYCHOLOGY

Max. Marks: 80

UNIT-I **Understanding culture and development**

Pubertal stage – concept and definition, classification, and characteristics.
Importance of language
Social development
Personality development
Cognition Emotion

UNIT-II The adolescent stage

Its link with middle childhood and youth.
The concept of adolescence in India
Developmental task
Health and Psychological Hazards

UNIT- III Physical and sexual development

Puberty, development of primary and secondary sex characteristics
Psychological response to puberty
Gender differences, sexuality, sexual needs and sex education.
Roles and responsibilities

UNIT-IV Important agent of influence

Family, community and culture
Electronic media
Social and emotional development
Interests in adolescents

UNIT-V Delinquency and disturbance

Juvenile delinquency: Causes and prevention
Psychological disturbances
Depression, suicide, substance abuse
Causes of HIV/AIDS and prevention

PAPER - VII
PARENTING IN EARLY CHILDHOOD

Max. Marks: 80

UNIT-I Science — Activities for ECCE

Thinking, observing, inferring, classifying, communicating.
Concept formation - Differentiation, grouping and labeling. Role of science.
Developing scientific outlook by a spirit of inquiry, objectivity and observation.
Role of teacher in some important sciences experiences.
Social studies: - Goals of social studies. Field trips of fostering good self-concept and respect for others. Promoting social studies through celebrations of festivals. Role of teachers.

UNIT-II Definition and concept of creativity

The role of the individual
Cognition, abilities, interests, attitude, motivation, intelligence, knowledge, skills, beliefs, values and cognitive styles.
Relationship between creativity and intelligence.
Influence of child bearing practices, family and culture.
Enhancing creativity: Brain stoning, problem solving, creative dramatics and visualisation Methods of assessing creativity.

UNIT- III Introduction to

The task of parenting and the concept of parenting skills
Changing concept of parenthood and childhood
Being a competent parent

Individual parenting roles

Determinants of parenting behavior
Characteristics of the parenting role.
The mothering role
The fathering role
Concept of family, the family life cycle stages.

UNIT-IV Developmental interaction in early childhood years

Parents role in developing self-awareness in children
Family relations and communication
Helping the child to learn to express and control emotions
Helping children discover personal capabilities
Establishing routines and showing responsible behaviour.
Learning social role and interactions with others
Meeting the family needs during this stage
Meeting the children's needs.

UNIT-V Techniques of parent education in preschool setting

Informal meeting Occasional/accidental meeting, written/printed newsletters.
Circular, notices etc.
Parent library, toy library
Workshop and demonstration center
Parents corner
Open house
Large/small group meeting
Individual meeting Home visits, individual sessions
Working with vulnerable families.

PAPER - VIII
MANAGEMENT AND PROJECT PLANNING

Max. Marks: 80

UNIT-I **Management**

Meaning, importance, Principles, and characteristics of management.
Management skills, review of success and failure of different programmes.

UNIT-II **Programmes for children and family**

Identification of specific programmes for children according to Indian and western educationists.
Types of programmes and their management. Family counseling.

UNIT- III **Maternal and child nutrition**

Feeding, weaning, supplementary food, diet for preschool children.Nutritional problems of children
Diet during pregnancy and lactation.
Need and importance of women and child welfare programmes at government level.

UNIT-IV **Planning**

Basic concepts, need, purpose, feasibility, project, formulation.Functions of planning
Steps in planning, define the objectives, quality, specification and
Outcomes, decide the time frame plan, the cost, dimension, plan implementation details.

UNIT-V **Project identification**

Identification and defining the project goals.Project design and strategic planning
Management of the project

Monitoring and evaluation Supervisory meeting to plan overviewProject appraisal, feedback, follow-up meeting Project report

PRACTICAL - II

MANAGEMENT AND PROJECT PLANNING

Max. Marks: 100

Prepare a project based on the information secured on an existing program in the locality (as a learning exercise on a known case). Prepare short term/long term plan's for enhancing quality of any program/project that exists in the locality. Organize and implement some activities and evaluate impact. Prepare report.Draft action plan for sustainability for any program in the locality, for women and children.

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HUMAN DEVELOPMENT

M.Sc. (HOME SCIENCE) FINAL

3th SEMESTER Marking Scheme:

PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper IX	Principles of Guidance and Counseling	80	10	10	100	04
Paper X	Advanced Study in Human Development	80	10	10	100	04
Paper XI	Childhood Psychopathology	80	10	10	100	04
Paper XII	Child and Human Rights	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical I	Principles of Guidance and Counseling	100

PAPER - IX

PRINCIPLES OF GUIDANCE AND COUNSELING

Max. Marks: 80

UNIT-I **1.** Constructs of guidance, counseling and therapyGuidance Meaning, scope and needs.
Basic differences
Guidance and counseling needs of individuals, families and system. –
Role of culture in influencing counselling needs and practices.

UNIT-II **3.** Principal of counseling and therapy
Approaches to counseling at different developmental stages.
Family therapy approach
Qualities and skills of a counselor.
The process of counseling
First contact, assessment, intervention, closure, follow-up.

UNIT- III **6.** Nature of psychological disorders at different stages that require counseling and therapy
At childhood
At adolescent and youth
At adulthood
In old age
Types of Guidance
Educational guidance
Vocational guidance

UNIT-IV **8.** Basic concepts and facts about HIV/AIDS
Transmission of HIV infection, sign and symptoms of AIDS.
Diagnosis of HIV infection.
Management and care of HIV infected persons.
Prevention of HIV infection.

UNIT-V **10.** HIV/AIDS Counseling
The principles of counseling, goals of HIV/AIDS counseling.
The pre-requisites of counseling, stages of counseling, specific counseling skills.
Assessment of risk behavior
Characteristics and attitude of a counselor, the do's and don'ts in counseling.
Content of communication about HIV/AIDS.

PAPER - X
ADVANCED STUDY IN HUMAN DEVELOPMENT

Max. Marks 80

UNIT-I Principles and concept of development

Principal and growth of development

Developmental tasks

Basic concepts of development: Maturation and learning, sensitive periods, individual differences.

Prenatal Development

Recapitulation of stages in prenatal development, genetic and environmental factors, maternal conditions.

UNIT-II Infancy: (Birth - 2years)

The new born Birth process and the neonate, physical description, sensory capacities and reflexes, becoming coordinated - feeding, sleeping and crying.

Initiation, objects permanence and other cognitive accomplishments.

Early language development

Social relationship during infancy

UNIT-III Early childhood (2 to 6 years)

Transition from infancy to childhood

Physical and motor development

Play and social relationship

Language, cognition and emotions in early years

Early childhood education

Middle childhood

Physical and motor development Changes and challenges

Personality development Social relationship - Peers and parents

UNIT-IV Adolescence (11-18 years)

Transition from childhood to sexual maturity, puberty and its consequences.

Emotional changes

Role of family, peers and community

Conformity Youth / Young Adulthood (20-35 years)

Developmental Needs - Importance of social organization.

Life Cycle Approach - Sexuality, marriage, marital adjustment, parenthood.

UNIT-V Middle Adulthood (35-50 years)

Parenting adult off springs and their marriage

Menopause in women. Health and disease.

Work and career development, gender differences.

Late Adulthood (50-65 years) Continuity and change in personality, the family life cycle.

Gerard parenthood - Inter generational relations.

Occupational continuity and change - Effect on identity

Old Age (65+ years) Physical aspects of ageing Health and disease

PAPER - XI

CHILDHOOD PSYCHOPATHOLOGY

Max. Marks: 80

UNIT-I Normality – Meaning, Concept and criteria's of normality
Cultural differences in normal adaptation
Features of normal adaptation
Normal adjustment changes with age
Meaning and criteria's of abnormality.

UNIT-II Stress and adaptation to stress
Nature of stress
Types of stress
Sources of stress
Effect of stress in psychological functioning
Effect of stress on physical health, responding to stress
Measurement of stress
Theories of stress
Factors of moderating the impact of the stress
Mental health- Definition, concept, and contents. Importance of mental hygiene.

UNIT- III Introduction to psychopathology
History and different models
Etiology of mental disorders - Psycho-social models
Psychopathology of neurotic, stress related and somato form disorders.
Anxiety disorders Dissociative disorders

UNIT-IV Obsessive and compulsive disorder
Phobic anxiety disorders
Adjustment disorders and behavioral syndromes associated with psychophysiology disturbances.

UNIT-V Psychopathology of psychotic disorders.
Schizophrenia, Paranoia.
Mood disorders
Psychopathology of personality and behavioral disorders
Specific —personality disorders.
Habit and impulse disorders
Mental and behavioral disorders

PAPER - XII

CHILD AND HUMAN RIGHTS

Max. Marks: 80

UNIT-I Definition and Evolution of Rights
- Human rights
- Child rights
- Women's rights
- Policy

UNITII Status of Indian children and their rights

Children in difficult circumstances - Children of prostitutes - Child labour - Street children - Refugee children

UNIT-III Status of women and their rights - Status of women in India - Women and human rights

Types of violation of women rights - Violence against women in home, work placeand society

UNIT-IV Types of violation against women
- Sexual harassment
- Rape
- Crime against women

Classification of human rights - Moral rights - Legal rights

UNIT-V Human rights
- Civil and political rights
- Social rights
- Emotional rights
- Cultural rights
- Advocacy of human rights.

PRACTICAL - III
PRINCIPLES OF GUIDANCE AND COUNSELING

Max. Marks: 100

Interaction with practicing counsellor's and therapists through visit to schools, clinics, women centres and hospitals etc. Learn about the counselling process - Role play, mock sessions etc. Observation in various ECCE settings e.g. day care, pre-school, ECCE centres, Anganwadi etc. Planning programmes for various ECCE setting.

Supervising, monitoring and evaluating ECCE programmes in different settings

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HUMAN DEVELOPMENT

M.Sc. (HOME SCIENCE) FINAL

4th SEMESTER

Marking Scheme: PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper XIII	Methods of Studying Human Development	80	10	10	100	04
Paper XIV	Persons with Disabilities	80	10	10	100	04
Paper XV	Study of Family in Society	80	10	10	100	04
Paper XVI	Communication Technologies	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical IV	Methods of Studying Human Development	100

PAPER - XIII
METHODS OF STUDYING HUMAN DEVELOPMENT

Max. Marks 80

UNIT-I Different methods of studying human development.

Introspection method
Experimental method
longitudinal method
Cross cultural method
Survey method
Field study method
Issues and concerns related to children in difficult circumstances ·
Street children, girl child, single parent children, adopted children.

UNIT-II Observation Methods -

Theoretical perspective, use of checklists, establishing reliability in observations, maintaining an observation record, report writing and evaluation.
Cognitive development
Language development
Moral development

UNIT- III Interview Methods –

Theoretical perspectives
Development of different types of interview, protocols, analysis and coding of interviewed data.

Trends and issues related to process of development ·
Perceptual development

UNIT-IV Questionnaire Method –

Theoretical perspectives, development of different types of questionnaire, protocol, analysis and coding of questionnaire data.

Trend and issues related to life span developmentInfancy
Childhood
Adulthood
Old age

UNIT-V Case study method

Theoretical perspectives, development of different types of case study, protocols, analysis and coding of data.
Some Psychometric Methods – The Wechsler Intelligence Scale
Draw a man test
The Kaufman Assessment Battery for children or K-ABC.
Binet Test
Relation between intelligence and creativity
Self esteemed test.
Aptitude test .
Interest test.

PAPER - XIV

PERSONS WITH DISABILITIES

Max. Marks 80

UNIT-I Various approaches to defining and understanding disabilities-
- Physical
- Crippled or orthopedically handicapped child
- Unhealthy handicapped children
- Education of physically handicapped

UNIT-II Sensory handicapped -
- Visually handicapped
- Aurally handicapped
- Speech handicapped
- Emotional

UNIT- III Intellectual Handicapped -
- Nature, causes and classification.
- Characteristics and identification
- Diagnosis of mental retardation
- Formal planning, treatment, educational provision
- Education of mentally retarded children

UNIT-IV The role of context in the meaning of normality and disability, attitudes of people towards disability.
- Welfare and rehabilitation for handicapped.
- Guidance of the disabilities

UNIT-V Physical and social in the development of persons with disabilities.
- Modification of physical and social environment. Participation of persons with disabilities as a contributing member of a society.
- Examples of programmes and policies for persons with disabilities.

PAPER - XV
STUDY OF FAMILY IN SOCIETY

Max. Marks: 80

UNIT-I The family in social context
Family as a component of social system, structure and context.
Family as an evolving and dynamic institution
Functions of family Basic and universal functions of family
Changes in family

UNIT-II Socio-cultural studies of family patterns in India - Family structure: Traditional / Extended / Joint families
Nuclear families: Single parent, childless
Causes and effect of different family structure on changing role of families.

UNIT- III Forms and types of family - Modem family Urban family Rural family
Role of family in the development of personality

UNIT-IV Family and society exchanges / influences
Work and family
Education and family
Health and family
Religion and family
Contemporary Issues and Concerns -
Family violence, battered women, sexual abuse
Dowry and family violence
Child rearing and socialization

UNIT-V Family Disorganization -
Concept and features of family disorganization
Causes of family disorganization
Family tension - Types of family tension Divorce - Types and causes of divorce
Re-marriage.

PAPER - XVI

COMMUNICATION TECHNOLOGIES

Max. Marks 80

UNIT-I Meaning of communication
Concept of communication
Scope of communication
Communication process
Approaches to communication

UNIT-II Elements of Communication: Their significance and characteristics
Introduction to new communication technologies
Development and use of transparencies
Use of video projector, slide and computers.

UNIT-III Innovation
Factors influencing innovation
Diffusion of innovation and communication
Characteristics of innovation
Innovation adoption process

UNIT-IV Mass media of communication: Development of mass communication
Different media, their characteristics and use -
A. Press B. Radio C. Television D. Films E. e-mail
Inter-dependence of mass media on communication
Mass media of communication and advertisement.

UNIT-V Designing -
(a) Leaflets
(b) Pamphlets
(c) Newspaper
(d) Photograph
(e) Posters
(f) Flash card
(g) Slide and film strip
(h) Television
(i) Puppets
Presentation using Power Point

PRACTICAL - IV

METHODS OF STUDYING HUMAN DEVELOPMENT

(Any Six) Max. Marks: 100

Study of social developmental behavior through observation method.

Know about the child through interview method.

Case study based on street children and their problems.

Case study regarding problems behavior of the child.

To study the curriculum and management of pre-primary standard children in your area.

Development and use of transparencies.

Designing - Leaflets/Pamphlets/Cover pages/Posters

Self-concept test.

Personality test.

Vocational interest test.

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TEXTILES AND CLOTHING

M.Sc. (HOME SCIENCE) PREVIOUS

1st SEMESTER

Marking Scheme:

PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper I	Research Methodology	80	10	10	100	04
Paper II	Textile Chemistry	80	10	10	100	04
Paper III	Fashion Retailing	80	10	10	100	04
Paper IV	Textile Designing	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical I	Textile Chemistry	100

PAPER - I

RESEARCH METHODOLOGY

Max. Marks: 80

Objectives:

To understand the significance of research methodology in Home Science research. To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.

UNIT-I Science, scientific methods, scientific approach.
Role of research in Home science discipline.
Objectives of research: Explanation, control and prediction.
Types of research: Historical, Descriptive, Experimental, case study,
Social research and survey: Meaning, definition, nature, scope, objects, types.
Distinction between social survey & research. Pre-testing and pilot survey.

UNIT-II Definition and identification of research problem.
Selection of research problem. Justification. Fact, Theory and concept. Hypothesis : Definition, sources, characteristics, importance, main difficulties in formation of hypothesis, disadvantages, Limitations and Delimitations of the problems. Types of variables.

UNIT- III Basic principles of research design:
Purposes of research design: fundamental, applied and action, exploratory, and descriptive, experimental, ex-post facto. Longitudinal and cross sectional, co-relational. Data gathering instrument.
Observation, Questionnaire, Interview, Scaling method,Case study, Home visits,
Reliability and validity of measuring instruments.

UNIT-IV Theory of probability: Non-probability sampling: purposive, Quota and volunteer sampling/snow ball sampling
Sampling: Population and sample, Meaning, Characteristics, advantages and disadvantages. Types: Probability sampling
Random sampling (Simple random, systematic random sampling,)
Purposive sampling Stratified sampling
Other sampling methods (two stages and multistage sampling, cluster sampling.

UNIT-V Classification and tabulation of data.
Analysis and interpretation of data
Preparation of report
Diagrammatic presentation of data

References:

Edwards: experimental design in psychological research.

Kerlinger: Foundation of educational research.

Bhandarkar P.L. and Wilkinson T.S. (2000) methodology and techniques of social research, Himalaya publishing house, Mumbai. Bhatnagar G.L.(1990) research methods and measurements in behavioral and social science Agri Cole publishing agency, New Delhi.

PAPER - II

TEXTILE CHEMISTRY

Max. Marks: 80

Objectives:

To acquaint the student about the polymers of which the textile fibers are made. To understand the chemistry, production and fundamental properties of natural and synthetic fibers. To familiarize with the chemical processing from desizing to finishing of textiles and x-principal. To acquaint the students with some advance textile technology. To develop an understanding of the methods and techniques used to analyze textile fiber, yarns, and fabric for end-use performance. To acquire knowledge and understanding of various structural properties of textiles and relate them to end fabric performance and product.

UNIT-I Introduction:

Why study of textile chemistry is needed.
Why this subject is related to textile and clothing.
Polymer chemistry: Polymers, Methods of polymerization, polymerization process.
Definition of co-polymer, oligomer, graft-co-polymer.
Degree of polymerization, Molecular weight of polymers and its determination.
Characterization of polymers using chemical and instrumental method.

UNIT-II Orientation and crystallinity of polymers, their influence on fiber properties.

Chemistry of cellulosic fibers:
Introduction to cotton, varieties, properties, longitudinal and cross-sectional view. Molecular structure of cellulose, action of acids and alkalis, hydrocellulose and oxycellulose, mercerization, liquid ammonia treatment. Regenerated cellulosic fibers: viscose rayon, cuprammonium rayon cellulose acetate rayon polynosic-their manufacture, properties and uses.

UNIT- III Protein fibers-Wool and silk

Chemical composition, molecular structure, physical and chemical properties, action of acids, alkalis and other chemicals on protein fibers. Brief description on felting of wool, degumming and weighting silk, shrink proofing of wool.

UNIT-IV Synthetic Fibers-polyester, polyamide and acrylo nitrite fibers.

Chemistry of the fibers- raw material, manufacturing process from polymer to fiber stage. Physical and chemical properties of all the fibers and their uses Examples of commercial production in India.

UNIT-V Blends of different fibers composition and properties and uses in textiles and clothing.

Other natural synthetic fibers-Their chemical composition, properties anduses jute, flex, hemp, tencel, polyethylene, polypropylene, carbon, polycarbonate,metallic, glass fiber and polyurethane fibers

References:

Booth.J.E: Principles of textile testing- newness, butter, worth, London.

Billie. J Coller and Helen H. Epps- Textile testing and analysis- Prentice hall, New Jersey.

John H. Skinkle- Textile testing- Booking, New York.

Grover and Hamby- Hand book of textile testing and quality control Wiles.

ASTM standards.

PAPER - III
FASHION RETAILING

Max. Marks: 80

Objectives :

Focus on design details creation of styles and rendering techniques using the different media. Pencils, Pens, Markers, Charcoal, Brushes, colours, Papers. To understand the dynamics of fashion and role of fashion designers. To develop understanding visual merchandising and its importance in today's consumer market. To gain knowledge about the management aspects of retailing.

UNIT-I The Dynamics of Fashion.

Fashion Terminology, Fashion cycle, Fashion Adoption theories, fashion forecast, the role of designers in merchandising. 2. Famous national and international fashion designers.

UNIT-II The concept of Retailing:

Definitions, role of retailing in merchandising, the retail mix, retail environment, types of retail store

Planning and budgeting for a retail store.

UNIT- III Elements and principles for Art and design:

Elements of design: Colour, texture, line, form space. Principles of design: Rhythm, Balance, Proportion, Emphasis, Unity. Interpretation for designing a retail store.

UNIT-IV Sketching of different action croquis (based on the basic figures learnt earlier).

Maintenance and ordering of stocks, preparation of sales reports

UNIT-V Visual Merchandising.

Plans and schedule –seasons, holiday promotions, sales, themes / ideas. Types and displays –Window displays interior displays. Elements of Display- the merchandise the backdrop walls and shelves mannequins and forms, signage lightings-illuminance levels relation to colour.

References:

Abling Oina, Fashion Sketchbook, Fairchild Publishers, New York.

Mckolvey Kathryn, Illustring Fashion Blackwell Science Munslow Janine.

Seaman Julian, Professional Fashion Illustration, B.T. Batsford Ltd London.

Ireland, Patrick John, Fashion Illustration, B.T. Batsford Ltd London. Allen Anne Seaman Julian Fashion Drawing The Basic principles, B.T. Batsford Ltd. London.

PAPER - IV

TEXTILE DESIGNING

Max. Marks: 80

Objectives :

To develop awareness and appreciation of art and aesthetics in textiles. To impart creative and technical skills for designing textiles with special emphasis on structural design. The course aims at providing in depth working –knowledge of line development and enables a student to use and practice skills and knowledge already acquired and use it to market situation.

UNIT-I Elements used in creating a design.
Composition With one element.
With more than one element.
Colour – Its sensitivity and composition in dress.
Harmony – in form of space coverage to design of the dress.

UNIT-II Design analysis:
Structural and applied design variation in fiber, yarn and fabric construction, embroidery, dyeing printing and finishes. Sources of inspiration for basic sketching and painting: nature, religion and mythology arts and crafts architecture. Understanding the tools and equipment and their appropriate use for sketching, painting and achieving textural effects. Process of designing

UNIT- III Components of fashion:
Silhouette Colour Texture Trims
Details Fabric Seams

UNIT-IV Motif development –geometrical, simplified, naturalized, stylized abstract namental.
Big and small motifs –enlargement and reduction, growth of a motif.
Colour consideration –colour harmonies and colour ways. Creation of patterns and designs Combining motifs
(a) big and small and
(b) different sources. Placement and repeats for all over patterns.

UNIT-V Preparation of fabric for dyeing and printing.
Scouring, bleaching, designing. Reagents used and their application. Specific preparatory steps for cotton, wool, silk and man made fibers. Equipment used at cottage and industrial level for yarn, fabric and price goods.

PRACTICAL - I

TEXTILE CHEMISTRY

Max. Marks: 100

Identification of fibers – cotton, polyester, viscose, polyimide, silk, wool jute, etc use of test microscopic examination, chemical tests solubility and staining tests. Dyeing of cotton (yarn) with direct, reactive and Val dyes (one each) by exhaust method dyeing of wool and silk with an acid dye. Use of natural dyes and mordant.

Study chemical properties of fiber as related to textile finishing Chlorination of wool. Mercerization in cotton. Felting of wool. Weighing of silk. Degumming of silk.

Determination of hardness of water.

Physical Testing of Textile using appropriate standardized procedures. Fibers-Length, diameter, fineness. Yarn –Count, heaviness twist, crimp, strength. Bursting, Water vapour permeability, cover, stiffness, drapability, crease recovery pilling abrasion. Chemical testing Identification of fibers. Binary fabrics –Blend composition. Shrinkage water, oil repellency. Dyes Identification of dye class. Colour Fastness.

Mechanical Testing Seam strength. Identification of fabric weave, Thread count

Inspection of final Garment.

Mill visit to acquaint students with modern chemical processing

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TEXTILES AND CLOTHING

M.Sc. (HOME SCIENCE) PREVIOUS – FINAL

2nd SEMESTER

Marking Scheme:

PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper V	Statistics and Computer Application	80	10	10	100	04
Paper VI	Quality Control in Textiles	80	10	10	100	04
Paper VII	Fashion Illustration	80	10	10	100	04
Paper VIII	Dyeing and Printing	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical I	Textile Designing	100

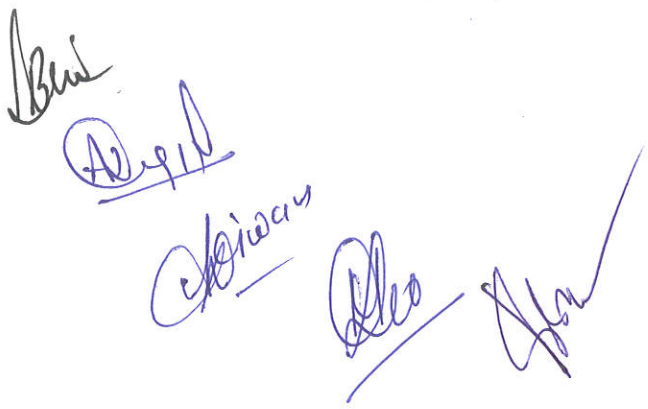
PART - III

INTERNSHIP / FIELD PLACEMENT

The student will be required to under go an internship/field placement for a total duration of six to eight weeks in their chosen area of interest after IInd semester which will facilitate their pursuing a professional career in same field. This programme could be taken up either as a single block or in two different blocks. It is mandatory that the organization / institution (public/private) participating in the field.

Placement programme will be of good professional standing. the list could include government/non-government textile industries small scale industries (handloom), garment manufacturing units, fashion designing institutes, embroidery units etc. The student will be required to submit and present a report of the internship/field placement project after its completion. It is also envisaged that participating organization/institution will give their performance appraisal of the student work. Grade A (60% and above), Grade B (48% to 59%), Grade C (40% to 47%) should be given to the student after evaluation of field placement/internship report by the department. The grade will be mentioned in the mark sheet of the IVth semester of the student. Excursion trip/field visits should be arranged regularly by the department for the up liftment of the knowledge of the students. This programme is designed with the following objectives: I. To enable the students to acquire an in-depth understanding of the practical aspects of knowledge and skills acquired during the course in the relevant subject/subjects.

I. To gain hands on experience for higher proficiency in their selected area of expertise To help the students to develop and have their analytical abilities for situation and analysis and bringing about improvements



PAPER - V

STATISTICS AND COMPUTER APPLICATION

Max. Marks: 80

Objectives :

To understand the significance of statistics and research methodology in Home Science research.
To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
To understand and apply the appropriate statistical technique to the measurement scale and design. To understand the role of statistics and computer application in research.
To apply statistical techniques to research data for analysis and interpreting data meaningfully

UNIT-I Conceptual understanding of statistical measures – meaning, definition, scope, importance, characteristics, distrust of statistics.
Classification and tabulation of data.
Measurement of central tendency
Mean
Median
Mode

UNIT-II Graphic presentation of data
Frequency distribution Histogram Frequency polygons Frequency curve Ogive Binomial distribution Parametric and non-parametric tests

UNIT- III Methods of Dispersion and variation
Mean deviation, Standard deviation Quartile deviation Independence of attributes 2×2 and r×c contingency tables Analysis of variance – one way method Direct and short cut. What is computers characteristics components of computer system, block diagram of computer, CPU, I/O devices and memory (RAM and ROM) second storage devices (hard disk Floppy disk ,Magnetic tape etc.)

UNIT-IV Computer generations –Classification of computers; Analog digital hybrid general and special Types of computers- Micro Mini Mainframe and super computer Chi square test Goodness of it Application of student 't' test for small samples

UNIT-V Correlation-definition, meaning and types.

Methods of determining coefficient of correlation
Product moment correlation Rank correlation.

Working with MS Word Getting started with word, formatting text and paragraph. Applying text and language tools, designing pages, with columns and tables, using graphics.

References:

Garrett, Henry E. 1971: statistics in psychology and education, David and co.

PAPER - VI
QUALITY CONTROL IN TEXTILE

Max. Marks: 80

Objectives:

1. To familiarize with the chemical processing from designing to finishing of textiles and x-principals. To acquaint the students with some advance textile technology. To develop an understanding of the methods and techniques used to analyze textile fiber, yarns, and fabric for end-use performance. To acquire knowledge and understanding of various structural properties of textiles and relate them to end fabric performance and product. To familiarize students with the different testing equipments, their underline principles and the international accepted standards, test methods and the language of measurement. To be able to analyze and interpret the result and predict the general textile testing.

UNIT-I Scientific basis of dyeing and printing of textiles-

Classification of textiles dyes, commercial dyes, C.I. constitution number and C.I generic number. Theory of dyeing. Chemical structures of various classes of dyes. Application of dyes on various substrates including blends.

UNIT-II Textile finishing.

Classification of finishes.
Mechanical finishes.
Chemical finishes-Mercerization, parchmentisation, durable press, wash 'n' wear, wrinkle recovery, chlorination. Resins, their application and chemistry. Special purpose finishes Flame retardant, water repellent, antistatic, stain and soil release, proofing.

UNIT-III Introduction to Testing.

Concept and scope.
Application areas.
Use of statistics in data management.
Sampling procedures.
Standardization.
Standards for fabric performance.
Organization for standardization (National and International)
Quality control of Textile products.

UNIT-IV Properties of textiles at different stages of processing and their principle of measurement.

Quality standards as applicable to various types of textiles (Garments, Yard- age, knits, woven, carpets, processing, dyeing). Fibers-Length, fineness, evenness.
Yarn –strength, evenness, openness, load, elongation, crimp.

UNIT-V Fabrics –strength, elongation, shrinkage, thickness, cover, air permeability crease recovery, weight, comfort, stiffness, flammability, repellency, colour, fastness.
Garment Finishing –colour fastness, shrinkage. Concept of fabric faults as related to stages of manufacture and the remedies.

References:

Booth.J.E: Principles of textile testing- newness, butter, worth, London.

Billie. J Coller and Helen H. Epps- Textile testing and analysis- Prentice hall, New Jersey.

John H. Skinkle- Textile testing- Booking, New York.

Grover and Hamby- Hand book of textile testing and quality control Wiles.

ASTM standards.

PAPER - VII

FASHION ILLUSTRATION

Max. Marks: 80

Objectives:

Focus on design details creation of styles and rendering techniques using the different media. Pencils, Pens, Markers, Charcoal, Brushes, colours, Papers. To understand the dynamics of fashion and role of fashion designers. To develop understanding visual merchandising and its importance in today's consumer market. To gain knowledge about the management aspects of retailing

UNIT-I Garments and garment details:
Necklines and collars Frills, fringes and gathers, cowls and cascades. Sleeve details Hemlines and insertions. Skirts and pants

UNIT-II Lacing, macramé's and patch work
Blouses, coats and jackets Pleats, quilting and ties Drawstring and fastenings Shirring, smoking and zips Tassels and tucks Yokes and underskirts.

UNIT- III Sketching of Accessories
Hats and head gears, Footwear, Bags and purses, Jewellery

UNIT-IV Basic Rendering Techniques:-

- Colour matching using different mediums
- Stripes
- Checks, gingham and plaids
- Patterns and textures
- Reducing a print
- Shading

UNIT-V Theme, Rendering : developing a line of garments based on a theme (any one of the following)
Beachwear, Cocktail wear, Swimwear, Evening wear, Casual wear, Ramp wear, Sportswear, Executive wear, Nightwear, Traditional Indian costume

References:

Abling Oina, Fashion Sketchbook, Fairchild Publishers, New York.

Mckolvey Kathryn, Illustring Fashion Blackwell Science Munslow Janine.

Seaman Julian, Professional Fashion Illustration, B.T. Batsford Ltd London.

Ireland, Patrick John, Fashion Illustration, B.T. Batsford Ltd London.

Allen Anne Seaman Julian Fashion Drawing The Basic principles, B.T. Batsford Ltd. London

PAPER - VIII
DYEING AND PRINTING

Max. Marks: 80

Objectives:

To impart the knowledge about preparation of fabric for dyeing and printing.
To understand the theory of dyeing in relation to various classes of dyes.
Application of various dyes and properties related to it.
To introduce the concept of dyeing at commercial level.
To inculcate awareness of the different methods of printing and appreciate the technical advantages of each. To develop technical competency in printing with different dyes on different fabrics.

UNIT-I Dyes Classification, definition, components. Colour and chemical constitution of dyes. Dyeing with chemical dyes. Direct, reactive, vat, sulphur, azo (for cellulosic).Acid, metal complex, chrome mordent (for protein) Basic, nylomine, disperse (for man-made)

UNIT-I Dyeing with: natural dyes.
Use of pigments. Dyeing machines for fibers, yarns and fabrics. Industrial dyeing practices. Dyeing auxiliaries and their uses. Dyeing of blends.

UNIT- I Textiles design through dyeing.
Tie and dye. Union and cross dyeing. Batik Dyeing defects and remedies.

UNIT-IV Introduction to printing – difference between dyeing and printing.
Methods of printing Historical development of printing –block, stencil, screenroller and rotary.
Screens used at cottage and industrial level.

UNIT-V Printing pastes
Thickening agents and auxiliaries for printing and their suitability to various classes of dyes and fibres. Preparation of printing pastes for different dyes and different fibres. Styles of printing Direct style, resist or reserve style, discharge style and raise style. Style and methods of printing traditionally used in India

PRACTICAL - II

TEXTILE DESIGNING

Max. Marks: 100

Marks Distribution:

Sessional	-	20
Viva	-	20
Two practical	-	30 each

Preparation of fabric for dyeing and printing.

Dyeing of yarns and fabric with different classes of dyes, in fibre and fibre blends (variables- MLR, con, temp, Leveling/exhausting agents) Direct, reactive, vat, sulphur, azo. Basic, disperse. Acid, chrome, metal complex. Natural dyes. Preparation of fabric for printing – different fibre groups with different dyes, different styles of printing Preparation of screens for printing. Printing with blocks and screens on cotton, silk, wool and blends in different dye classes. Direct style

Mordant or dyed style, Azok style

Discharge style

Resist style.

8. Report of visits to processing and printing units (cottage and industrial level).

Hemchand Yadav Vishwavidyalaya, Durg (C.G.)

TEXTILES AND CLOTHING

M.Sc. (HOME SCIENCE) FINAL

3rd SEMESTER

Marking Scheme:

PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper IX	Fabric Construction	80	10	10	100	04
Paper X	Apparel Design	80	10	10	100	04
Paper XI	Historic Textiles	80	10	10	100	04
Paper XII	Textile Industry	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical III	Fabric Construction & Pattern	100

PAPER - IX

FABRIC CONSTRUCTION

Max. Marks: 80

Objectives:

To enable the students to understand and learn methods of developing fabrics, using different fibres, yarn and fabric making techniques. To gain knowledge and understanding of fundamentals of weaving machinery and processes. To analyze different weave patterns and learn principles of creating design through weaving. To enable the student to obtain perfect fit and harmony between the fabric and design of the garments.

UNIT-I Modern developments in yarns at their manufacture.
Modern yarn production – Principles of spinning in production of man made fibre hot and cold drawing, spun yarn, blend yarn and bicomponent yarn.

UNIT-II Texturing yarn technology – Principles method and process of variables in texturing and their effect on properties of textured yarns morphological changes induced by texture core yarns, network and film yarns and laminated yarns.

UNIT- III Principles of fabric manufacture – Basic Principles, Characteristic and significance of different processes –woven knitted, non woven, laces, and braids. Weaving. Parts and functions of handlooms Types of weave –basic decorative.

UNIT-IV Knitting.
Knitting machines, types of knitting. Properties.

Felts and non wovens-different non woven Knotting, braiding and lace making.

UNIT-V Introduction to technical textiles –
Geo textiles Medical textiles-Nano technology in india Fabric faults- Fibre, yarn and fabric defects and their remedies.

Refrences:

Spun yarn technology- Eric oxtoby butterwall publication.

Subodh Kumar Agrawal (1980) Textile Processing and Auxillaries.

Aswani K.T. weaving mechanisms- Mahajan Book Distributors, Ahemadabad.

Amalsar D.M yarn and cloth calculation.

Amalsar handloom Weaving.

Hillhouse, M.S and Mansfield E.A dress Design, Draping and flat Patterned, London.

Helen Theory of Fashion.

PAPER - X

APPAREL DESIGN

Max. Marks: 80

Objectives:

To impart an in-depth knowledge of style readings, pattern making and garment construction techniques. To develop and understand the principles of pattern making through flat pattern and draping. To create awareness of quality assurance norms and evaluating of quality in apparel.

UNIT-I Detailed study of industrial machines and equipment used for-
Cutting the fabric –Objectives, methods of cutting fabric and cutting system Sewing.- Properties, types, sewing machines sewing threads-Type of fiber, thread size, thread package, thread costs, thread properties. Sewing problems- Stitchformation, damage along with seam line, puckering. Finishing

UNIT-II Embellishment
Study the interrelationship of needles, thread. Stitch length, and fabric Stitch Types

UNIT- III Methods of pattern making.
Drafting. Flat pattern. Draping. Coping paper pattern.

UNIT-IV Understanding the commercial paper patter
Layouts on different fabrics, widths and types Buying criteria for-
- Knits, silks, denim and other special fabrics

UNIT-V Readymade garments.
Fitting- factors affecting good fit, common problems encountered and remedies for fitting, defects (upper and lower garments). Fitting problems and pattern correction

References:

Avis M. Dry (1961) The psychology of Jung, Methuen and Co. London.

Natalle Bray Dress Fitting published by Blackwell Science Ltd.

Armstrong, Pattern making for fashion design.
Grate and storm- Concepts of clothing, McGraw Hill Book co., New York.

Bina Abling; fashion Sketch Book, Fairchild Publications, New York.

Slampler, Sharp and donnell: Evaluating.

PAPER - XI
HISTORIC TEXTILES

Max. Marks: 80

Objectives:

To gain knowledge of the significance developments in production of textiles in the world. To assess similarities and dissimilarities in different civilization in terms of fibre production, ornamentation and usage. To develop sensitivity and understanding towards historic silhouettes and designs. To learn about the designers of international fame and their contribution to the fashion of today.

UNIT-I Introduction to textiles: Indian textile development, study of traditional textiles and embroideries of India.

a. Chicken of U.P.
b. Kantha of Bengal.
c. Phulkari of Punjab.
d. Kathi of Gujarat.
e. Manipuri of Manipur.
f. Chamba rumal of H.P.
g. Kasmiri of Kashmir.
h. Kasuti of Karnataka.

UNIT-II Dance costumes of India:

a. Bharatnatyam.
b. Kathak.
c. Odissi.
d. Kuchipudi.
e. Kathakali.
f . Manipuri.

UNIT- III Folk dance costumes of India:

a. Rajasthan.
b. Maharashtra.
c. Gujarat.
d. Chhattisgarh.
Madhya Pradesh.

UNIT-IV Development of different fibers:

Cotton, silk, wool, linen in India in terms of processing, tools and equipment's used, design and ornamentation applied and specialties achievement Development of dyeing and printing since ancient times: dyes, methods of dyeing, decorative dyeing. Methods of styles of printing- tools developed and effects achieved.

UNIT-V Historical textiles of special significance:

Carpets.

a. Tapestries.
b. Brocades.
c. Laces. Shawls.

References:

John and sentence Bryan (1999), World Textiles, Thames and Hudson, London.

Harvey Janet (1996): Traditional Textiles of central Asia, Thames and Hudson, London.

Boucher Francois, A history of Costumes in the West Thames and Hudson.

Paine Sheila (1990): Embroidered Textiles Traditions, Thames and Hudson, London.

Revolution in Fashion: The Kyoto costume institute, Abbeville Presi, New

PAPER - XII

TEXTILE INDUSTRY

Max. Marks: 80

UNIT-I Business Environment of India

Merits and Demerits of textile industry in India Textile Industry-concept, history, Manufacturing unit and importance of knitting ,garment, and testing industry Co-operation ,co-operative societies Building customer satisfaction, value and retention.

UNIT-II Importance of textile and Clothing industry in the Indian Economy in terms of domestic consumption, employment and per capita income, gross national product and International trade

Foreign Trade policy-The mechanism MFA,-History and current status, WTO,

UNIT- III National Textile policy 1986-2001 change in focus over the year in terms of objective function ability regularity mechanism of futuristic trends.

The Textile and Clothing industry in relation to production and consumption pattern. Local employment potential, R and D problem and prospects, cotton, wool, silk, rayon and synthetic industry, hand loom industry, readymade garment industry and technical textiles.

UNIT-IV Marketing and Merchandising core concepts, marketing mix and marketing environment of. India

Demographic economic ,natural .technological ,political, legal ,social, and cultural environment

UNIT-V Analyzing business markets and business buying behavior.

Corporate and division strategic planning. SWOT analysis

PRACTICAL - III

FABRIC CONSTRUCTION AND PATTERN MAKING

Max. Marks: 100

Marks Distribution:

Sessional	-	20
Viva	-	20
Two Practical	-	30 each

Dart manipulation. Development of variation in sleeves. Sleeves an bodice combination. Development of variation in collars. Roll over collar. Collar with bodice (shawl). Necklines and facings. Scooped necklines. Built up necklines. Cowl necklines. Weaving on simple loom, plain, rib, matt, and twill structures. Visit to weaving mills. Fashion sketches.

Hemchand Yadav Vishwavidyalaya, Durg (C.G.)

TEXTILES AND CLOTHING

M.Sc. (HOME SCIENCE) FINAL

4th SEMESTER

Marking Scheme:

PART I – THEORY

No.	Title	Marks				Credit
		Theory	Test	Seminar	Total	
Paper XIII	Knitting technology and Draping	80	10	10	100	04
Paper XIV	Apparel and Its Social, Psychological Aspects	80	10	10	100	04
Paper XV	Historic Costumes	80	10	10	100	04
Paper XVI	Fashion Merchandising	80	10	10	100	04

PART II – PRACTICAL

No.	Practical	Marks
Practical IV	Apparel Designing its Construction and Historic Textiles	100

PAPER - XIII

KNITTING TECHNOLOGY AND DRAPING

Max. Marks: 80

Objectives :

To enable the students to understand and learn methods of developing fabrics, using different fibers, yarn and fabric making techniques. To gain knowledge and understanding of fundamentals of weaving machinery and processes. To analyze different weave patterns and learn principles of creating design through weaving. To enable the student to obtain perfect fit and harmony between the fabric and design of the garments.

UNIT-I Woven: sequence of operations in wrap and weft preparation.
Various types of looms and their drive. Fabric classification and analysis of fabrics for its construction weaves. Basic and decorative weaves plain, twill and satin derivatives. Dobby and jacquard shedding and weaving terry pile

UNIT-II Principle of colour and design in weaving construction of pattern for Dobby and Jacquard looms, brocade, damask, tapestry, warp and weft pile weaving.
New developments in woven fabrics new loom and loom developments. Triaxial weaving, knit and weave construction. Textile design through weaving.

UNIT- III Introduction to draping and silhouette of the individual – Dress Farm, Elements of fabric –Woven knitted. Developments of the ladies block crotch line garments by drafting and draping (short, Bermudas, Trousers etc)

UNIT-IV Development of pattern with variation in
One piece dresses.
Two piece dresses
Dart less dresses, Dart manipulation. (Incorporating various collars, sleeves, yokes, necklines, pockets and plackets etc.)

UNIT-V Draping of bodice block and shirt block and their variation.
Draping of symmetrical designs and preparing patterns. Pattern markings, pattern envelops and guide sheet.

References:

Spun yarn technology- Eric oxtoby butterwall publication.
Subodh Kumar Agrawal (1980) Textile Processing and Auxillaries.
Aswani K.T. weaving mechanisms- Mahajan Book Distributors, Ahemadabad.
Amalsar D.M yarn and cloth calculation.
Amalsar handloom Weaving.
Hillhouse, M.S and Mansfield E.A dress Design, Draping and flat Patterned, London.
Helen Theory of Fashion.

PAPER - IX
APPAREL AND ITS SOCIAL, PSYCHOLOGICAL ASPECTS

Max. Marks: 80

Objectives:

To impart an in-depth knowledge of style readings, pattern making and garment construction techniques. To develop and understand the principles of pattern making through flat pattern and draping. To create awareness of quality assurance norms and evaluating of quality in apparel

UNIT-I Caps and Hoods
Dresses without waistline, seems, Built up necklines, Halters, Facings

UNIT-II Clothing for people with special needs.
Maternity and lactation period.
Old age.
Physically challenged.

UNIT-III Evaluating the quality of apparel
Identification of the components of apparel.
Fibre content, shaping devices, underline fabrics, pockets, necklines, hem treatments, decorative details and alteration potential. Standards for evaluating the various components.

UNIT-IV Origin of clothing.
Why costumes differ all over the world, material aspects and climate.
Religious influence.
Events of the world.
Clothing symbols.

Socialization and development of the self.
Social norms.
Individuality and conformity

UNIT-V The study of dress and adornment
Personality and Types of Personality.
Determinants of Personality
Personality theories- Definition, theories, personality traits.
Sigmund Freud defense mechanisms, Jung Murray

References:

Avis M. Dry (1961) The psychology of Jung, Methuen and Co. London.
Natalle Bray Dress Fitting published by Blackwell Science Ltd.

Armstrong, Pattern making for fashion design.

Grate and storm- Concepts of clothing, McGraw Hill Book co., New York.

Bina Abling; fashion Sketch Book, Fairchild Publications, New York

Slampler, Sharp and donnell: Evaluating



PAPER - XV

HISTORIC COSTUMES

Max. Marks: 80

Objectives:

To gain knowledge of the significance developments in production of textiles in the world. To assess similarities and dissimilarities in different civilization in terms of fibre production, ornamentation and usage. To develop sensitivity and understanding towards historic silhouettes and designs. To learn about the designers of international fame and their contribution to the fashion of today.

UNIT-I Clothing- Origin and functions of clothing
Resist dyeing and ikat fabrics.
Printed and painted fabrics.
Banarasi saree
Sarees of M.P.
Costume in ancient civilization emphasize on fabric, garment features, use of colour decoration and accessories.

- Indian
- Egyptian.
- Greek.
- Roman.

UNIT-II History of Indian state costumes for Male and Female a. Kashmir b. Maharashtra c. Gujrat d. Rajasthan e. West Bengal f. Tamilnadu

UNIT- III Costumes for men and women during 10th to 17th costumes) century (Medieval Costume)
a. India b. French c. European. d. English. Costumes and China and Japan.

UNIT-IV Costumes Of 18th century to 20th century

- Indian
- French.
- Italian.
- England.
- American.
- Japanese.
- Australia

UNIT-V Growth of costume:
Fashion- Terminology, fashion concepts, its creation and analysis

- Mass Production of clothing.
- Fashion Designers and his role.
- Fashion Forecasting.
- Design Development.

Refrences :

John and sentence Bryan (1999), World Textiles, Thames and Hudson, London.
Harvey Janet (1996): Traditional Textiles of central Asia, Thames and Hudson, London.

Boucher Francois, A history of Costumes in the West Thames and Hudson.

Paine Sheila (1990): Embroidered Textiles Traditions, Thames and Hudson, London.

Revolution in Fashion: The Kyoto costume institute, Abbeville Presi, New York.

PAPER - XVI

FASHION MERCHANDIZING

Max. Marks: 80

UNIT-I Market segmentation, Targeting and Positioning (STP) concepts and methods of market segmentation need for positioning through various means, formation of positioning maps.

UNIT-II Product its type and relation to fashion classification of fashion product life cycle, the process of product life cycle, the process of products development Brand management and brand image building, the making of a brand. Branding strategies

UNIT- III Promotion and Distribution- Role of promotion, methods of promotion, Advertising, Sales promotion, personal selling, designing and management of different methods of promotion and their employment-in relation to cost effectiveness and product life cycle, different channels of distribution-selection and management

UNIT-IV Designing of retail outlets.
Store layout and design. Front design, Interior design, lighting design.
Elements of store environment, allocating space, circulation. Pricing-principles and methods pricing in relation to product type, product life cycle distribution outlets.

UNIT-V Domestic vs. Export market-principles of marketing and merchandising for the domestic and export market, channels of distribution. Visual merchandising Types of Displays- window displays, interior displays. Elements of displays

PRACTICAL - II

APPAREL DESIGNING ITS-CONSTRUCTION AND HISTORIC COSTUMES

Max. Marks: 100

Distribution of Marks:

Sessional	-	20
Viva	-	20
Two practical	-	30 each

Development of paper pattern and construction of garments: using chocks, stripes, unidirectional and novelty fabrics. Designing through draping Basic draping principles and techniques. Developing a pattern. Designing, Drafting and Construction of skirts. A line, flared, circular, pleated, yoked with godet. Pockets, plackets seams, pleats, Tucks, Bows etc. Plackets - Centre button closing A symmetrical closing Double breasted. Garments- Drafting and construction of different types of blouses. Choli Cut blouse. Belt Blouse. Plain Blouse. Drafting of Salwar and Kammez with design. Semi fitted Kurta. A line kurta. Paneled kurta. Lucknowi Kalidar Kurta. Flared Kurta. Salwar and its different kinds. Churidar. Preparing samples of traditional embroidery of different states. Preparing samples of novelty embroidery stitches.

OPTIONAL (IN PLACE OF PRACTICAL)

Max. Marks – 100 External – 50% Internal – 50% Project work: Current trends in textile and clothing

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