

Syllabus under Choice Based Credit System (CBCS) pattern

B.Sc. Food Science and Quality Control (Semester I)

BASIC NUTRITION & FOOD CHEMISTRY

Duration of Examination: 3hrs

Course code: UFSTC 101

Credits: 4(4hrs. per week)

Max marks = 100

External assessment =80

Internal assessment = 20

Syllabus for Examination to be held in the December, 2016

OBJECTIVES:

To enable the students to:

- a) Understand the relationship between nutrition and human well being.
- b) Know and understand the functions, importance of all nutrients for different age groups and special groups
- c) To know the major and minor components of foods.
- d) To know composition and properties of food.

UNIT – I

1. Introduction to nutrition –functions of foods, definition of nutrition, nutrients, adequate optimum and good nutrition, malnutrition. Food as a source of nutrients.
2. Inter relationship between nutrition and health, visible symptoms of good health.
3. Food guide-basic five food groups and usage of food guide.
4. Use of food in body-digestion, absorption, transport, utilization of nutrients in the body.

UNIT – II

1. Water as a nutrient, function, sources, requirement, structure, water balance – effect of deficiency.
2. Introduction to chemistry of water and ice.
3. Moisture in food: Hydrogen bonding, Bound water, Free water, Water activity and Food stability.
4. Energy – Unit of energy, food as a source of energy, energy value of food, the body's need for energy, B.M.R. activities. Utilization of food for energy requirements
5. Acid – base balance.

UNIT – III

1. Carbohydrates- composition, classification, sources, functions, structure, physical & chemical properties.
2. Other sweetening agents, functions of sugar in food (Browning reaction), changes during cooking and processing.
3. Lipids – composition, nomenclature, saturated, unsaturated fatty acids, classification, food sources, functions of fats.
4. Physical and chemical properties, emulsions, chemistry & technology of fat and oil processing. Role of food lipids in flavor
5. Proteins – composition, classification sources, functions, denaturation, and protein deficiency, determination of protein quality.
6. Amino acids – classification, Physio-chemical properties, modification of food protein through processing and storage.

UNIT – IV

1. Mineral functions, sources, Bio-availability, and deficiency of following minerals – calcium, Iron, Iodine, Fluorine, sodium, potassium.
2. Vitamins – Classification, units of measurement, sources, functions and deficiency diseases caused by following vitamins:
 - a. Fats soluble vitamins – Vitamin A, D, E and K
 - b. Water soluble vitamins – Vitamin C and B-complex
3. Vitamins and minerals structure general causes of loss in food. Fortifications, Enrichment and Restoration.

UNIT – V

1. Enzymes. Nomenclature, specificity, catalytic regulations, kinetics factors influencing enzyme activity, controlling enzyme action. Enzyme added to food during processing, modification of food by endogenous enzyme. Enzyme inhibitors in food.
2. Pigments indigenous to food, structure, chemical and physical properties. Effect of processing and storage.
3. Flavours – Vegetables, fruit and spice flavours, fermented food, Meat and sea food.

NOTE FOR PAPER SETTING: (Semester End Examination)

The Question paper will consist of two sections.

Section I: (12x5=60) Consist of 10 long answer questions (2 from each unit, choice from within the unit). Each question carries weight age of 12 marks. The candidate will have to attempt five questions (at least one from each unit).

Section II: (4x5=20) Consist of 10 short answer question (2 from each unit). Each question carries weight age of 4 marks. The candidate will have to attempt any five questions.

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

REFERENCES:

1. Damodran, S., Parkin, K.L and Fennema, D.R. (2007). Fennema's Food Chemistry. 4th edition. CRC Press.
2. Guthrie, H.A. (1983). Introductory nutrition. 5th Edition. Mosby, St. Louis.
3. Meyer, L.H. (2004). Food Chemistry. Textbook Publishers. ISBN: 0758149204.
4. Mudambi, S.R., Rao, S.M. and Rajagopal, M.V.(2006). Food science. 2nd Edition. New Age International publishers.
5. Mudambi, S.R and Rajgopal, M.V. (2001). Fundamentals of Foods and Nutrition. 4th Edition.new Age International Publishers.
6. Shakuntla, M.N and Shadaksharaswamy, M. (2013). Food Facts and Principles. New Age International.
7. Srilakshmi, B. Food science. 3rd Edition. NewAge International.
8. Swaminathan, M. (2012). Advanced Text book on food and Nutrition, Vol. II. The Bangalore Printing And.
9. Swaminathan, M. (2012). Handbook of Food & Nutrition. 5th Edition. Bangalore printing.
10. Willson, D. (1999). Evan Principles of Nutrition. 4th Edition. John Willey & Sons: New York.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS

B.Sc. Food Science and Quality Control (Semester I)

BASIC NUTRITION & FOOD CHEMISTRY

Duration of Examination: 3hrs

Course code: UFSPC 101

Credits: 4(4hrs. per week)

Max marks = 50

External assessment =25

Internal assessment = 25

Syllabus for Examination to be held in December, 2016

1. Experiments on properties of monosaccharides- Glucose,Fructose and Galatose
2. Experiments on properties of Disaccharides - maltose,lactose and sucrose.
3. Experiments on properties of Polysaccharides -starch
4. Estimation of glucose in a given sample.
5. Experiments on properties of amino-acids.
6. Experiments on properties of proteins
7. Experiments on properties of fats.
8. Saponification number of lipids.

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 605 for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.Sc. Food Science and Quality Control (Semester II)

FOOD MICROBIOLOGY, SANITATION AND HYGIENE

Duration of Examination: 3hrs

Course code: UFSTC 201

Credits: 4(4hrs. per week)

Max marks = 100

External assessment =80

Internal assessment = 20

Syllabus for Examination to be held in May, 2017

OBJECTIVES:

To help the students to

- a) Acquire an elementary knowledge about micro-organism.
- b) To develop an understanding of the role of microorganisms in environment, Industry and in maintenance of health.
- c) Understand the importance of safe handling of food.

UNIT – I

1. Introduction to microbiology and its relevance to everyday life-General morphology of micro-organisms – General characteristics of bacteria, fungi, virus, protozoa, algae.
2. The relationship of micro-organism to sanitation. Role of microbiology-Environment effects of microbial growth.
3. Effects of micro-organisms on food degradation and food bore illness – Bacteria, Virus, Molds, Yeasts and parasites.

UNIT – II

1. Control of macro-organisms growth curve – Effect of environmental factors on growth of micro organisms-pH, water activity – oxygen availability, temperature & others.
2. Microbial intoxications and infections – sources of contamination of foods toxic production and physiological action. Sources of infection of foods by pathogenic organisms, symptoms and method of control.
3. Beneficial effect of micro-organisms.
4. Relevance of microbiological standards for food safety.

UNIT – III

1. Microbiology of different foods – Spoilage and contamination- Sources, types, effects on the following:
 - a) Cereals & Cereals products.
 - b) Sugar & Sugar products.
 - c) Vegetables & Fruits.
 - d) Meat & Meat products.
 - e) Fish & other sea foods.
 - f) Eggs & Poultry.
 - g) Milk & Milk products.
 - h) Canned and other processed foods.
2. Other food hazards – chemicals, antibiotics, hormones, metals contamination – poisonous foods.
3. Food contamination – sources and transmission by water, air, sewage and soil as reservoirs of infection and mode of spread.
4. Other agents of contamination:

Human, domestic animals, vermins, birds.

UNIT – IV

1. Needed environment microbiology- water, air, soil & sewage.
2. Importance of personal hygiene of food handlers – clothes, illness. Education of food handler in handling and serving food
3. Safety in food procurement, ' storage, handling and preparation – control of spoilage – safety of left over foods.
4. Cleaning and sanitization. Products and methods – use of detergents and chemicals, tests for sanitiser's strength.

UNIT – V

1. Kitchen Sanitation:
 - Kitchen design-equipment and systems.
 - Structure and layout of food premises maintaining clean environment.
 - Selecting and Installing cleaning equipment.
2. Waste product handling: Planning for waste disposal. Solid waste and liquid waste.
3. Control of infestation:

Rodent Control – Rats, Mice-Rodent,, proofing, destruction, Vector Control. Uses of pesticides.

4. Food Sanitation, Control and Inspection – Planning and implementation of training programmes for health personnel.

NOTE FOR PAPER SETTING:

The Question paper will consist of two sections. (*Semester End Examination*)

Section I: (12x5=60) Consist of 10 long answer questions (2 from each unit, choice from within the unit). Each question carries weight age of 12 marks. The candidate will have to attempt five questions (at least one from each unit).

Section II: (4x5=20) Consist of 10 short answer question (2 from each unit). Each question carries weight age of 4 marks. The candidate will have to attempt any five questions.

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

REFERENCES:

1. Adams, M.R and Mass, M.D. (2008). Food Microbiology. newAge International Pvt. LTd. Publishers.
2. Banwart, G.T. (1987). Basic Food Microbiology. CBS Publications:New Delhi.
3. Block, J.G. (1999). Microbiology Principles and Explorations. 4th Edition. John wiley and sons Inc.
4. Frazier, W.C. (1968). Food Microbiology. 4th Edition. McGraw Hill Inc.
5. Jay, J.M., Lossner, M.J and Golden, D.A. (2008). Modern Food Microbiology. 7th edition. Springer. ISBN: 0387231803
6. Kawata, J.G. (1963). Environment Sanitation in India. Lucknow Publishing House.
7. Longree, K. (1967). Quality Food Sanitation. McGraw Hill Publishers:New York.
8. Pelezar, H.J. and Rober, D. (1968). Microbiology. 2nd Edition. McGraw Hill:New York.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS

B.Sc. Food Science and Quality Control (Semester II)

FOOD MICROBIOLOGY, SANITATION AND HYGIENE

Duration of Examination: 3hrs

Course code: UFSPC201

Credits: 2(3hrs. per week)

Max marks = 50

External assessment =25

Internal assessment = 25

Syllabus for Examination to be held in the May, 2017

1. Microscope and its parts. Examination under low power/high power and oil immersion objectives.
2. Gram staining, Isolation and Identification.
3. Zheil-Nelsch staining.
4. Examination of yeasts, mould and non-pathogenic bacteria.
5. Study of sterilization equipments.
6. On the job training for 1 month during summer break.

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 605 for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.A. Home Science Semester 1st

INTRODUCTION TO HOME SCIENCE

Duration of Examination=3 Hours
Course Code: UHSTC 108
Credits : 4(4hrs. per week)

M.Marks : 100
Internal Ass. : 20
External Ass. : 80

Syllabus for the examination to be held in December, 2016

Theory

Objectives:

The course is designed to enable the students to:-

1. Understand the concept, scope and philosophy of Home Science.
2. Appreciate the role of Home Science in Nation building.
3. Develop desirable attitudes towards integrated rural and urban development.
4. Cultivate human values through learning Home Science

Unit-I Basics of Home Science

- Definition, meaning, branches and scope of Home Science.
- Philosophy of Home Science.
- Development of Home-Science as a discipline.
- Linkages of Home Sciences with other related subjects- Psychology, Sociology, Economics and Agriculture.

Unit-II Job Opportunities in Home Science

- Home science Education at various levels-School/College/ /university/ Research
- Job oriented courses: Nutrition, Dietetics, Food Preservation, Housing,
- Textiles and Clothing, Interior Design, Pre-School education and extension.
- Vocations within and outside Home Science institutions.
- Qualities of a good Home Science student.

Unit-III Home Science in Action Programme

- Applied Nutrition programme, Integrated Child Development services, Integrated Rural Development programme, National Rural employment Programme, Training of Gram Sevikas, Mukhya Sevikas, National Adult Education Programme
- Role of Home Science in Women's empowerment.
- Role of Home Science in the Service of community and in rural Development.

Unit-IV Home Science and Family Studies

- Average size, marriage patterns, distinct social roles and nature of relationship between members of the family.
- Internal distinction is authority based on age and sex roles.
- Gender differences with reference to atrocities and access to resources (female headed households)
- Role of Home Science education in the empowerment of Individual , Family and Society.

Unit-V Introduction to Computers

- Relevance of computers to Home Science-Basics of Computer: A. Model of computer, Characteristics of computer, problem solving using computers.
- Input/output units Description of computer input/output units, other input method. Computer output units.
- Security and safety of Data; Secondary storage devices, Computer Memory-computer languages.
- Introduction to operating system-MS, Windows, exploring desktop, accessories, control panel, managing documents and folders.

NOTE FOR PAPER SETTING: (Semester End Examination)

The question paper will consist of ten long answer questions(two from each unit, choice from within the unit).

Each question carries a weightage of 16 marks . The candidate will have to attempt five questions (at least one from each unit). (16×5=80 marks)

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

REFERENCES:

1. Devdas, Rajmal, P. (1968) Textbook of Home-Science, Farm Information Unit, Directorate of Extension, Ministry of Agriculture, New Delhi.
2. Devdas Rajmal, P. The Meaning of Home Science Sri Avinashillingam Home-Science College, Coimbatore (1968)
3. The Family and Integrated Rural Development, FAO, 1976.
4. Devdas, Rajmal, P. Methods of teaching Home Science. National Council of Education Research and Training, Delhi, 1977.
5. Chandra A. Shah, A Joshi U. "Fundamental of teaching.Home Science", Sterling

Publishers, Private Limited, 1989.

6. Paraliker, Kalpana, R, "The Art of Teaching Home Science", Evira Publication, Baroda, 1990.
7. Paraliker, Kalpana R, "What is Home Science, Evira Publication, Baroda, 1989.
8. V. Raja Raman, Fundamentals of Computers, Prentice Hall of India, New Delhi, 1996.
9. Subramenian, S. Introduction to Computers.
10. Nagpal, O.P Mastering M.S Office 2000.
11. Chander A. Introduction to Home Science, Metropolitan, New Delhi, 1995.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS **B.A. Home Science Semester 1st**

INTRODUCTION TO HOME SCIENCE

Duration of Examination=3 Hours
Course Code: UHSPC 108
Credits : 2(3 hrs. per week)

M.Marks : 50
Internal Ass. : 25
External Ass. : 25

Syllabus for the examination to be held in December, 2016

Practicals:

- 1) Survey to know different marriage patterns in the Indian society.
- 2) A Report on visit to Preschools/Food Preservation Centers /Interior designers
/NGO's/ Dietitians /Fashion Houses & Women entrepreneurs
- 3) Visit to ICDS to know the services provided for the community.
- 4) Basics of computer operation and care.

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 605 for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.A. Home Science Semester 2nd

FOODS AND NUTRITION

Duration of Examination=3 Hours
Course Code: UHSTC 208
Credits : 4(4hrs. per week)

M.Marks : 100
Internal Ass. : 20
External Ass. : 80

Syllabus for the examination to be held in May, 2017

Theory

OBJECTIVES: The course aims to help students to:

1. Understand the concept of food and nutrition in the body.
2. Understand the effect of cooking on food.
3. Create awareness about food preservation, meal planning and nutritional requirements.
4. Understand various processes involved within the body.

Unit-I

1. Function of Food, Food groups and their nutritive value. Concept of nutrition over nutrition value. Concept of nutrition over nutrition, under nutrition.
2. Different basic methods of cooking-boiling, steaming, frying, baking (their merits and demerits.)
3. Basic terminology used in food preparation, Washing, Peeling, Cutting, Slicing, Grating, Cubing, Pounding, Soaking, Fermentation, Germination, Roasting and kneading.

Unit-II

1. Effect of preparation on food components:
2. Carbohydrates, Proteins, Oils & fats, Minerals Vitamins, Pigment and flavour.
3. Factors affecting food- acceptance, color, texture and flavour.
4. Structure and composition of Cereals, Dais, Milk, Eggs, Fish, Poultry, Meat Vegetables, Fruits.

Unit-III

1. Food preservation and basics of food processing. Basic principles, Spoilage-general principles, causes preservation by low temperatures, freezing, drying, high temperatures, preservatives and Radiation.
2. Food laws & Food standards.
3. Food adulteration.

Unit-IV

1. Meal Planning: Basic principles of meal planning,
2. factors affecting meal planning.
3. Nutritional requirements and planning meals for adults

Unit-V

1. Digestive system- its structure,
2. Process of digestion, assimilation and utilization of food.
3. Deficiency diseases of various nutrients- carbohydrates, proteins, fats, vitamins, minerals and water.

NOTE FOR PAPER SETTING: (*Semester End Examination*)

The question paper will consist of ten long answer questions (two from each unit, choice from within the unit). Each question carries a weightage of 16 marks. The candidate will have to attempt five questions (at least one from each unit). (16×5=80 marks)

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

REFERENCES:

1. Behaviour Marior, Introductory Favels Mac, Mulkan Co., New York, 1980.
2. ICMR, Nutritive value of Indian foods, New York, 1989.
3. Frazir, W.C Food Microbiology, MC Graw Hill Book Co., 1978.
4. Mudambi, S,R. and Rajagopal, M.V. (1983): Fundamentals of Food and Nutrition, Wiley, Eastern Limited.
5. Mudambi, S,R. and Rajagopal, M.V. (1987): Fundamentals of Food and Nutrition, Wiley, Eastern Limited.
6. Gupta, A. & Garg, . (1981): Text Book of Foods and Nutrition, Child Care and Psychology, Kalyani Publishers, Ludhiana.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS **B.A. Home Science Semester 2nd**

FOODS AND NUTRITION

Duration of Examination=3 Hours
Course Code: UHSPC 208
Credits : 2(3hrs. per week)

M.Marks : 50
Internal Ass. : 25
External Ass. : 25

Syllabus for the examination to be held in May, 2017

Preparation of :

1. Beverages- Tea, Coffee, Milkshake.
2. Cereals-Rice,Chappati,Sandwich,Pastries,Cakes.
3. Vegetables Salad, Curries.
4. Fruit-Fresh and stewed.
5. Milk-Porridge, Curds, paneer.
6. Soups-clear.
7. Meat-cookery/alternative Vegetarian substitutes,
8. Some traditional recipes of J&K.

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 605 for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.Sc. Home Science (Semester I)

BASIC PHYSIOLOGY AND FUNDAMENTALS OF HUMAN NUTRITION

Course code: UHSTC101
Duration of Examination: 3hrs.
Credits: 4(4hrs. per week)

Max marks = 100
External assessment =80
Internal assessment = 20

Syllabus for Examination to be held in December, 2016

OBJECTIVES:

The course is designed to enable students to

1. Understand the concept of physiology of human body
2. Obtain a better understanding of the principles of nutrition and dietetic through the study of physiology
3. Understand the concept of nutrition, various nutrients ,their requirements ,functions and deficiencies
4. Understand the vital relationship between nutrition and health.

Unit I

- ❖ Cell structure and functions ,tissues, organs and organic systems
- ❖ Classification of tissues-epithelial, muscular, connective and nervous tissue and their distribution in the body.

Unit II

- ❖ Blood-composition , functions, blood groups.
- ❖ Digestive system- structure, digestion, absorption and utilization

Unit III

- ❖ Concept of nutrition ,relationship of nutrition to health, adequate nutrition and malnutrition, foods and its functions
- ❖ Energy-definition of calorie, BMR and factors affecting it, specific dynamic action of foods
- ❖ Concept of food groups and food exchange lists, factors affecting meal planning and importance of meal planning.

Unit IV

- ❖ Carbohydrates-classifications, functions, sources
- ❖ Protein- classification ,sources ,functions, mutual supplementation and deficiency diseases
- ❖ Lipids- classification ,sources ,functions

Unit V

- ❖ Vitamins- classification ,sources ,functions and deficiency
- ❖ Minerals-sources, functions, deficiency of iron, calcium, sodium, potassium and iodine.
- ❖ Water and electrolyte balance.

NOTE FOR PAPER SETTING: (Semester End Examination)

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Section II: (4x5=20) Consist of 10 short answer question (2 from each unit). Each question carries weight age of 4 marks. The candidate will have to attempt any five questions.

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

References:

1. Acharya K.T. et.al.(1981) Recommended dietary intakes for Indian. ICMR, Delhi,.
2. Anthony C.A.(1963) Textbook of Anatomy and Physiology. The C.V Mossy Company, Saint-Louis .
3. Bell, G.H. Experimental Physiology Johnsmith and Sons. Limited Glassgow.
4. Best and Taylor N.B.(1965) The living body Chapman and hall limited, London onwards.
5. Chaney M.S(1971) Nutrition, Houghton Preffin Company, Boston.
6. Gopalan C. Ramasastri, B.V. Balasnbaramania S.C (, 1981)Nutritive value of Indian Foods, NIN, Hyderabad.
7. Green J.M.(1968) An introduction to human physiology, Oxford University Press, London.
8. Rajlakshmi R.Applied nutrition. Oxford IBM publishing company, New Delhi.

9. Robinson, C.H. Lawia M.R, Chenoweth and Garwich, A.E (1986) Normal and Therapeutic nutrition, Macmillan publishing company.
10. Svasmirdha M.S (1985). Essential of foods and nutrition. VI fundamentals aspects.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS

B.Sc. Home Science (Semester I)

BASIC PHYSIOLOGY AND FUNDAMENTALS OF HUMAN NUTRITION

Duration of Examination=3 Hours
Course Code UHSPC101
Credits : 2(3hrs. per week)

M.Marks : 50
Internal Ass. : 25
External Ass. : 25

Syllabus for the examination to be held in December, 2016

- ❖ Demonstration of Tissue slides under microscope.
- ❖ Blood Grouping, Hemoglobin Estimation.
- ❖ Study of weights and measures.
- ❖ Study of food sources of nutrients.
- ❖ Study of meal planning and factors affecting it.
- ❖ Planning and preparation of meals for iron deficiency anemia and protein – energy mal nutrition.
- ❖ Planning and preparation of day’s meal. Calculating nutrients in accordance to the RDA for adults.
- ❖ Planning and preparation of nutrient rich dishes
 - Energy
 - Protein
 - Carbohydrates
 - Vitamin A
 - Vitamin C
 - Thiamin
 - Calcium

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
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Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.Sc. Home Science (Semester I)

FUNDAMENTALS OF FAMILY RESOURCE MANAGEMENT

Course code: UHSTC102

Duration of Examination: 3hrs

Credits: 4(4hrs. per week)

Max marks = 100

External assessment =80

Internal assessment = 20

Syllabus for Examination to be held in December, 2016

Objectives:

1. To understand the fundamentals of resource management in a changing scenario.
2. To inculcate skills in identifying, creating, selecting and using available resources judiciously with emphasis on maximization and conservation.
3. To understand the scientific application of the process of management in the judicious use of resources
4. To gain knowledge with respect to the interior decoration.

Unit –I: An overview of Management Concepts

- ❖ Meaning of management
- ❖ Purpose of Home management
- ❖ major home and family responsibilities
- ❖ home maker as manager
- ❖ Qualities of efficient home manager
- ❖ Misconception and obstacles to good management

Unit –I I: Introduction to Resources

- ❖ Meaning, definition, importance and characteristics of resources.
- ❖ classification of resources
- ❖ Factors affecting utilization of resources
- ❖ Maximizing use of resources
- ❖ Resource conservation – importance and methods.
- ❖ Availability of resource at self and family level.
- ❖ Major motivating factors-values, goals and standards.

Unit –III: Management process

- ❖ Decision making-definition, steps and types
- ❖ Management Process:
 - Planning
 - Supervising
 - Controlling
 - Organizing
 - Evaluation
- ❖ Management of specific resources by an individual / family
 - Money
 - Time
 - Energy

Unit – IV: Design fundamentals

- ❖ Objectives of Art and Interior Design.
- ❖ Types of Design : Structural and Decorative
- ❖ Elements of content : Space, point, line, shape, form, texture, light and colour
- ❖ Colour and its application-
 - Dimensions of colour
 - Importance of colour and its role in creation of the design
 - Colour theories
 - Colour schemes
 - Characteristics of colour

Unit –V:Principles of Design

- ❖ Rhythm,
- ❖ Balance,
- ❖ Proportion,
- ❖ emphasis and
- ❖ Harmony
- ❖ Application of principles of design in
 - Flower arrangement
 - Furniture arrangement
 - Colour schemes

NOTE FOR PAPER SETTING: (Semester End Examination)

The Question paper will consist of two sections.

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Section II: (4x5=20) Consist of 10 short answer question (2 from each unit). Each question carries weight age of 4 marks. The candidate will have to attempt any five questions.

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

References

1. Koontz.H. and O'Donnel C., 2005, Management – A systems and contingency analysis of managerial functions. New York: McGraw-Hill Book Company
2. Kreitner. 2009, Management Theory and Applications, Cengage Learning: India
3. Nickell, P., & Dorsey, J.M.,(1962) Management in family living, , (4th Edition). New York NY: Wiley.
4. Rao V.S. and Narayana P.S., (2007,)Principles and Practices of Management, Konark Publishers Pvt. Ltd.
5. Stoner J., 2008, Management. PHI Learning.
6. Shukul M and Gandotra V.,2006,Home management and family finance,Dominant publishers and distributors ,New Delhi.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS

B.Sc. Home Science (Semester I)

FUNDAMENTALS OF FAMILY RESOURCE MANAGEMENT

Duration of Examination=3 Hours

Course Code UHSPC102

Credits : 2(3hrs. per week)

M.Marks : 50

Internal Ass. : 25

External Ass. : 25

Syllabus for the examination to be held in December, 2016

- ❖ Making and evaluation of one's own time plan
- ❖ Study of pathway chart of any one household activity
- ❖ Preparing structural and decorative design by showing various colour schemes
- ❖ Floor decorations by various techniques
- ❖ Preparation of different types of flower arrangement

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 60% for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.Sc. Home Science (Semester I)

FUNDAMENTALS OF CLOTHING CONSTRUCTION AND CARE

Course code: UHSTC103

Max marks = 100

Duration of Examination: 3hrs

External assessment =80

Recommended credits: 4 (4 hrs. per week)

Internal assessment = 20

Syllabus for Examination to be held in December, 2016

OBJECTIVES:

1. To acquaint the students with terminology related to clothing.
2. To develop skills in clothing construction.
3. To familiarize the students with method and aids of laundry.
4. To enable intelligent selection, use and care of Textiles.
5. To acquaint them with basic embroidery stitches.

Unit – I: Introduction to clothing construction

- ❖ Importance & Functions of clothing.
- ❖ Clothing construction – introduction, terminology & principles
- ❖ Equipments & tools used for measuring, drafting, cutting & sewing machine.
- ❖ Sewing machine: Parts & functions, basic operations, defects and remedies, care and maintenance required.
- ❖ Basic sewing processes – stitches, seams, fastenings, openings, fullness, collars, sleeves, pockets.

Unit II: Preparation of fabric for layout and cutting

- ❖ Importance of taking body measurements in relation to sizes.
- ❖ Taking body measurements for different types of garments.
- ❖ Drafting and paper patterns, preparation of fabrics for garment making,
- ❖ Laying out of patterns,-general guidelines, basic layouts-lengthwise, partial lengthwise, double fold, open and combination fold.
- ❖ Pinning ,marking and cutting
- ❖ Estimation of material required for different types of garments.

Unit – III Introduction to embroidery

- ❖ Fundamentals of embroidery – techniques, design, colour combination,

- ❖ Uses of different threads, different embroidery stitches.
- ❖ Study of various types of contemporary embroideries like shadow work, cut work, appliqué work and smoking.

Unit – IV Laundry technology

- ❖ Laundry aids – Laundry equipment, methods of laundry, principles of washing method and machine washing.
- ❖ Water – Hard and soft water, temporary and permanent hardness, methods of softening water.
- ❖ Soaps and detergents – Definition, manufacture, properties and their cleaning action.
- ❖ Bleaches, stain removal, whitening and stiffening agents / definition and types.

Unit –V Selection of apparel

- ❖ Selection according to age – Infants, pre-school, school going children, adolescent, adults and old age.
- ❖ Climate, occasion, occupation, fashion, figure and design.
- ❖ Factors affecting fitting
- ❖ Fit problems and remedies.

NOTE FOR PAPER SETTING: (Semester End Examination)

The Question paper will consist of two sections.

Section I: (12*5=60) Consist of 10 long answer questions (2 from each unit, choice from within the unit). Each question carries weight age of 12 marks. The candidate will have to attempt five questions (at least one from each unit).

Section II: (4x5=20) Consist of 10 short answer question (2 from each unit). Each question carries weight age of 4 marks. The candidate will have to attempt any five questions.

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

References:

1. Bans , S Hutton,J, singer Sewing book, Hamlya, London, 1972.
2. Corbman, P.B textiles- Fibre to fabric (6th edition) MC Graw Hill book Co. 1983.
3. Creative embroidery designs- Ondorisha Publications.
4. Dulkar, Durga Household textiles and laundry work, Delhi,1983.
5. Doogagi- Basic processes and clothing construction, New Delhi, Raj Book depot, 1975.
6. Dhantyagi, S, Fundaments of textiles and their care, orient Long man, Bombay, 1974.
7. Hall. A.J , the standard handbook of textiles, National trade press,1946.
8. Jaffe. H. Children wear Design, fair child publication New York 1989.
9. Marry Kefgan and personal appearance- A guide for sonsumer, 4th Mac Millan Publishing co. New York. 1971. Mac Millan, London.
10. Needle craft by Readers digest.
11. Rayan S.M – a study of Human behavior, Mac Millan Com. New York.
12. Weber, J. Clothing- Fashion, Fabric, construction, Benne and M. knight Publishing company, 1986.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS

B.Sc. Home Science (Semester I)

FUNDAMENTALS OF CLOTHING CONSTRUCTIONS AND CARE

Duration of Examination=3 Hours
Course Code UHSPC103
Credits : 2(3hrs. per week)

M.Marks : 50
Internal Ass. : 25
External Ass. : 25

Syllabus for the examination to be held in December, 2016

❖ **Basic sewing processes:**

- Stitches: tacking, hemming.
- Seams-Plain, lapped, French, counter, flat and fell.
- Fastenings,
- plackets-one and two piece ,
- fullness-tucks and pleats,
- collars-peter pan ,cape,
- sleeves-plain and puff,
- pockets-patch.

❖ **Basic embroidery:**

stem, chain, lazy daisy, fly, satin, long and short ,,herringbone, blanket ,button hole, French knot ,bullion stitch ,feather, cut work, shadow work, smoking.

❖ **Drafts:**

- Childs bodice block.
- Adaptation of Childs bodice block for making any one garment.

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 605 for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.Sc. Home Science (Semester II)

FOUNDATIONS OF HUMAN DEVELOPMENT AND FAMILY DYNAMICS

Course code: UHSTC 204

Max marks = 100

Duration of Examination: 3hrs

External assessment =80

Credits: 4 (4hrs. per week)

Internal assessment = 20

Syllabus for Examination to be held in May, 2017

Recommended credits : 4(4hrs. per week)

Objectives:

1. To introduce the students of the field of Human Development: Concepts, Scope and Historical Perspectives.
2. To introduce the students to the dimension of Development over the life span
3. Acquire knowledge and insights about the dynamics of development of contemporary marriage and family system in India.
4. Became acquainted with the concept, goals and areas of adjustment in marital relationships with the family
5. Become aware of the changing roles and relationships within the family.
6. Understand the dynamics of families in distress and crises.

Unit-I

❖ Child development

- Importance and scope of child development
- Various methods of child study: Observation and interview (in detail)

❖ Human development

- Meaning, Importance and Scope of Human Development

Unit II

❖ Orientation to Growth and Development

- Principles and factors influencing growth and development
- Pre-natal development
- Conception and fertilization
- Stages in pre-natal development
- Birth process

- Anti natal care

Unit III

❖ Development of Physical and Motor Abilities across the life span

- Physical Appearance of the new born -size, weight, bodily proportion, sensory capacities.
- Physical development in infancy, Pre -school, middle childhood and adolescence
- Motor Development: reflexes in infancy, major milestones in preschool years, middle and late childhood and adolescence, plateau in adulthood, declining coordination in middle adulthood and old age.

❖ Cognitive Development

- A brief introduction to Piaget's theory stages.
- Cognitive development during adulthood, decline in old age.

Unit IV

❖ The development of language across the life span:

- Language as form of communication, early vocalization.
- Beginning to use language
- Language as refined through middle, late childhood and puberty.

❖ Socio-Emotional Development across the life span:

- Social milestones
- Acquiring sex role in childhood
- Emotional confusion and adolescence
- Stability of emotions in adulthood and old age .

Unit V

❖ The Family and Marriage

- Definition and Types of families
- Functions of the Family
- Family life cycle
- Definition and Types of marriages
- Mate selection and its factors

❖ **Socialization:**

- Meaning of socialization
- Functions of the family and community in the socialization of the child
- Agents of socialization- family, neighbour, press and media

NOTE FOR PAPER SETTING: (Semester End Examination)

The Question paper will consist of two sections.

Section I: (12×5=60) Consist of 10 long answer questions (2 from each unit, choice from within the unit). Each question carries weight age of 12 marks. The candidate will have to attempt five questions (at least one from each unit).

Section II: (4×5=20) Consist of 10 short answer question (2 from each unit). Each question carries weight age of 4 marks. The candidate will have to attempt any five questions.

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

References:

1. Rice, F.P. (1988). Human development Prentice Hall
2. Berk, Laura (1993). Infant children and adolescents. Allyn and Bacow.
3. Binger, J.J. (1994). Individual and family development; A life span interdisciplinary approach, Prentice Hall
4. Sharma, Arti (2001). Indian Psyche of childhood, Global Vision Publishing House.
5. Kumar, R. (1998). Child Development in India Health, Welfare and management . Vol. I and II. Ashiah Publishing House.
6. Saraswati, T.S. and Kaur, B.(1993). Human development and Family Studies in India, New Delhi. Sage Publication.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS B.Sc. Home Science (Semester I)

FOUNDATIONS OF HUMAN DEVELOPMENT AND FAMILY DYNAMICS

Duration of Examination=3 Hours
Course Code UHSPC 204
Credits : 2(3hrs. per week)

M.Marks : 50
Internal Ass. : 25
External Ass. : 25

Syllabus for the examination to be held in December, 2016

- ❖ Observing infants in various settings i.e.
 - Anganwari/ Preschool
 - Home Setting
- ❖ Recording all-round development of children below 12.
- ❖ To study the changes (personal and social) in adolescents.
- ❖ Interviewing adults with regards to their role in the family.
- ❖ Visit to a day care centre to study its programme and activities.
- ❖ Survey of welfare agencies working for the welfare of families.
- ❖ Interaction with the aged to study their activities and problems.
- ❖ Lecture by a counselor to study the process of counseling.
- ❖ Observation of motor and cognitive development of infants.
- ❖ Survey of existing marriage pattern in local context.

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 60% for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.Sc. Home Science (Semester II)

FUNDAMENTALS OF COMMUNICATION AND EXTENSION

Course code: UHSTC 205

Max marks = 100

Duration of Examination: 3hrs

External assessment =80

Internal assessment = 20

Syllabus for Examination to be held in May, 2017

Recommended credits : 4(4hrs. per week)

OBJECTIVES

1. To understand the concept of communication and extension and its relevance for self and national development.
2. To appreciate the role of Home Science extension in community development.
3. To sensitise students towards identifying extension methods and prepare suitable materials for effective communication.
4. Understand the socio-economic structures and systems that make up the rural and urban communities.

Unit I- Basics of Communication

- ❖ Concept, nature, function and Scope of Communication.
- ❖ Postulates of Communication.
- ❖ Principles of Communication.
- ❖ Elements of Communication process and their characteristics Communication, Message, Channel, Audience, Feedback.

Unit II- Models of Communication

- ❖ Concept and Purpose of Models.
- ❖ Aristotle's Model.
- ❖ Wilkeer Schramn Model
- ❖ Gerbuer's Model.

Unit III- Basics of Extension

- ❖ History and Philosophy of Extension.

- ❖ Concept, objectives and Scope of Extension.
- ❖ Principles of Extension.
- ❖ Functions of Extension.
- ❖ Qualities of an Extension Worker.

Unit IV- Teaching - Learning Process in Extension

- ❖ Concept.
- ❖ Criteria for Effective Extension Teaching.
- ❖ Effective teaching situation and its elements.
- ❖ Criteria for effective learning.

Unit V- Facilitators in Communication and Extension Methods and Materials.

- ❖ Relationship between Extension and Communication.
- ❖ Methods of Community Contact
 - Individual – Personal Visits, Letters, discussion
 - Group – Meeting, Discussions, Demonstration
 - Mass – Print and Electronic Media
- ❖ Role of Communication technologies in Extension.

NOTE FOR PAPER SETTING: (Semester End Examination)

The Question paper will consist of two sections.

Section I: (12*5=60) Consist of 10 long answer questions (2 from each unit, choice from within the unit). Each question carries weight age of 12 marks. The candidate will have to attempt five questions (at least one from each unit).

Section II: (4x5=20) Consist of 10 short answer question (2 from each unit). Each question carries weight age of 4 marks. The candidate will have to attempt any five questions.

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

References:

1. Singh. A.K. 2000, Agricultural extension, Agrobias, Jodhpur, India.
2. Kumar, B. and Hansra, 2000; Extension Education for Human Resource Development, Concept Publishers, New Delhi.
3. Singh, Ranjit, 1987; Text Book of Extension Education, Sahitya Kala Prakashan, Ludhiana.
4. Supe, S.V. 1984; An introduction to extension education New Delh, Oxford and IBH.
5. Rolling. N. 1986; Extension Science; Information Systems in Agricultural Development, Edinburg, Cambridge University Press.
6. Ravindran, R.K. 1999; Media and Society. Commonwealth, New Delhi.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS B.Sc. Home Science (Semester II)

FUNDAMENTALS OF COMMUNICATION AND EXTENSION

Duration of Examination=3 Hours
Course Code UHSPC 205
Credits : 2(3hrs. per week)

M.Marks : 50
Internal Ass. : 25
External Ass. : 25

Syllabus for the examination to be held in May, 2017

- ❖ Planning, preparation presentation of audio-visual aids
 - Posters
 - Puppets
 - Pamphlets
 - Charts
 - leaflets
- ❖ Planning & Implementations of Discussion Method.
- ❖ Planning & Implementation of Personal Visits – to study socio-economic status of different rural/urban families.
- ❖ Participant observation of families for gender bias.

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 605 for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

Syllabus under Choice Based Credit System (CBCS) pattern

B.Sc. Home Science (Semester II)

BASICS OF RESEARCH METHODS & STATISTICS

Duration of Examination: 3hrs

Course code: UHSTC 206

Credits: 4(4hrs. per week)

Max marks = 100

External assessment =80

Internal assessment = 20

Syllabus for Examination to be held in May, 2017

OBJECTIVES :

1. To understand the significance of statistics and research methodology in Home Science Research.
2. To understand the Application of appropriate statistical technique for research design.

UNIT – I

- ❖ Introduction to research methods and statistics.
 - Meaning, Definition and importance of research methods.
 - Meaning, Definition & Characteristics of statistics.
- ❖ Role of statistics and research in Home Science discipline
- ❖ Types of Research –Historical, Survey, experimental, case study, Social, participatory.
- ❖ Introduction, Definition & importance of research design, Types of Research design – Exploratory, Descriptive, Diagnostic, experimental.

UNIT - II

- ❖ Formulation or identification of problem - meaning, definition, factors.
- ❖ Hypothesis - Meaning & types.
- ❖ Sources of collection of data - Meaning, Advantages and Limitations.
 - Primary - Direct observation, Questionnaires, Interview, group discussion, schedule, case study.
 - Secondary - personal documents, public records and reports, Role of Library.

UNIT - III

- ❖ Selection of Sample / sampling.
 - Meaning, Definition, Selection of samples, Size of Sample, types of probability sampling
 - Systematic,
 - random sampling,
 - Two states and multistage sampling.
 - Non probability Sampling,
 - Purposive sampling.
 - Quota
 - Volunteer / Self Selection,
 - Snowball sampling.
- ❖ Pilot study - Definition & characteristics.
- ❖ Data Analysis - Meaning, Definition, importance & steps, Classification, tabulation, Interpretation of statistical Information, Diagrammatic Presentation & Graphical Presentation.

UNIT IV

- ❖ The writing process
 - Getting started.
 - Use out line as a starting device
 - Drafting
 - Reflecting, Re-reading – Checking organization, Checking headings, Checking content, Checking clarity, Checking Grammar.

UNIT V

- ❖ Parts of Dissertation/ Research Report/article
 - Abstract
 - Introduction
 - Review of Literature
 - Materials and Methods
 - Results and Discussion
 - Summary and Conclusion
 - Bibliography

- Recommendation

NOTE FOR PAPER SETTING: (Semester End Examination)

The Question paper will consist of two sections.

Section I: (12*5=60) Consist of 10 long answer questions (2 from each unit, choice from within the unit). Each question carries weight age of 12 marks. The candidate will have to attempt five questions (at least one from each unit).

Section II: (4x5=20) Consist of 10 short answer question (2 from each unit). Each question carries weight age of 4 marks. The candidate will have to attempt any five questions.

Distribution of Internal Assessment (20 Marks)

Theory	Syllabus to be covered in the examination	Time allotted	% weightage (Marks)
Internal Assessment Test (Pattern: One long answer type question of 10 marks and five short answer type questions of 2 marks each)	Upto 50% (after 45 days)	1 hour	20

References

1. Bandarkar, P.L. and Wilkinson, T.S. (2000): Methodology and Techniques of Social Research, Himalaya Publishing House, Mumbai.
2. Bhatnagar, G.L. (1990): Research Methods and Measurements in Behavioural and Social Sciences, Agri. Cole Publishing Academy, New Delhi.
3. Dooley, D. (1995): Strategies for interpreting Qualitative Data; Saga Publications, California.
4. Gay, L.R. (1981, 2nd Ed.): Educational Research, Charles, E. Merrill, Columbus, Ohio.
5. Long, J.S. (Ed.) (1988): Common Problems Proper Solutions: Avoiding Errors in Quantitative Research Beverly Hills, Sage Publications, California.
6. Mukherjee, R. (1989): The Quality of Life: Valuation in Social Research, Saga Publications, New Delhi.
7. Stranss, A. and Corbin, J. (1990): Basis of Qualitative Research: Grounded Theory Procedures and Techniques, Saga Publications, California.

Syllabus under Choice Based Credit System (CBCS) pattern

PRACTICALS B.Sc. Home Science (Semester II) BASICS OF RESEARCH METHODS & STATISTICS

Duration of Examination=3 Hours
Course Code : UHSPC 206
Credits : 2(3hrs. per week)

M.Marks : 50
Internal Ass. : 25
External Ass. : 25

Syllabus for the examination to be held in May, 2017

❖ **Formulation of a Research Project**

- Introduction
- Importance
- Objectives
- Review of Literature.
- Hypothesis
- Research Methodology
- Results & Discussion
- Summary & Conclusions
- Bibliography

Note for Practical examination (Total Marks: 50)

Practical	Syllabus to be covered in the examination	% weightage (Marks)
Daily evaluation of practical records/ Viva voce/ attendance etc.		50 (including 20% for attendance, 20% for viva voce and 60% for internal test and day to day performance)
Final practical performance + viva voce (external examination)	100% Syllabus	50 (40 (paper) +10(viva voce))
Total		100

