

# **VIMALA COLLEGE (AUTONOMOUS) THRISSUR**

**KERALA- 680009, INDIA**

**(NAAC Re-accredited(3<sup>rd</sup> Cycle): A Grade, CGPA-3.50)**

**Affiliated to University of Calicut**



## **B.Sc. DEGREE PROGRAMME IN FAMILY AND COMMUNITY SCIENCE**

**Choice Based Credit and Semester System  
(CBCSS)**

**SYLLABUS AND SCHEME FOR CORE, COMPLIMENTERY and OPEN  
COURSES (2019 ADMISSION ONWARDS)**

**SYLLABUS FOR B.Sc FAMILY AND COMMUNITY SCIENCE PROGRAMME (CORE COURSES) (2019 Admission Onwards)**

Pattern of the model question paper, scheme of evaluation for internal examination and credit distribution have been included.

**B Sc FAMILY AND COMMUNITY SCIENCE PROGRAMME COURSE STRUCTURE**

**Credit Distribution**

Semester	Common Course		Core Course	Complementary Course		Open Course	Total
	English	Additional language		Chemistry	Botany/ Zoology/ Physics		
I	4+3	4	3	2	2	-	18
II	4+3	4	3	2	2	-	18
III	4	4	2	2	2	-	14
IV	4	4	3+4*	2+4*	2+4*	-	27
V	-	-	3+4+4+4	-	-	3	18
VI	-	-	4+4*+4+4*+ 2*+2*+2+3	-	-	-	25
Total	22	16	55	12	12	3	120

\*Practical

\*\*Project

## Method of Indirect Grading

Evaluation (both internal and external) is carried out using Mark system. The grade on the basis of the total internal and external marks will be indicated for each course, for each semester and for the entire programme.

### Ten point Indirect Grading System

% of Marks	Grade	Interpretation	Grade Point Average	Range of Grade points	Class
95 and above	O	Outstanding	10	9.5- 10	First Class with distinction
85 to below 95	A+	Excellent	9	8.5 - 9.49	
75 to below 85	A	Very good	8	7.5 - 8.49	
65 to below 75	B+	Good	7	6.5 - 7.49	First Class
55 to below 65	B	Satisfactory	6	5.5 - 6.49	
45 to below 55	C	Average	5	4.5 - 5.49	Second Class
35 to below 45	P	Pass	4	3.5 - 4.49	Third Class
Below 35	F	Failure	0	0	Fail
Incomplete	I	Incomplete	0	0	Fail
Absent	Ab	Absent	0	0	Fail

After the successful completion of a semester, Semester Grade Point Average (SGPA) of a student in that semester is calculated using the formula given below. For the successful completion of a semester, a student should pass all courses. However, a student is permitted to move to the next semester irrespective of SGPA obtained.

The Semester Grade Point Average can be calculated as

$$SGPA = \frac{\text{Sum of the credit points of all courses in a semester}}{\text{Total credits in that semester}}$$

$$\text{ie., } SGPA = \frac{C1 \cdot G1 + C2 \cdot G2 + C3 \cdot G3 + \dots}{n}$$

where G1, G2, ... are grade points of different courses; C1, C2, ... are credits of different courses of the same semester and n is the total credits in that semester.

$$\% \text{ of marks of a semester} = (SGPA/10) \times 100$$

The SGPA is corrected to three decimal points and the percentage of marks should be

approximated to two decimal points

The Cumulative Grade Point Average (CGPA) of the student is calculated at the end of a programme. The CGPA of a student determines the overall academic level of the student in a programme and is the criterion for ranking the students. CGPA can be calculated by the following formula

The Cumulative Grade Point Average (CGPA) can be calculated as

$$CGPA = \frac{\text{Total credit points obtained in six semesters}}{\text{Total credits acquired}(120)}$$

**Total percentage of marks= (CGPA/10)\*100**

$$CGPA \text{ of core courses} = \frac{\text{Total credit points obtained for Core Course}}{\text{Total credits acquired for Core Courses}}$$

## **PROGRAMME SPECIFIC OUTCOME FOR BSc FAMILY & COMMUNITY SCIENCE**

1. Understand the basics of Nutrition, Textiles, Human Physiology, Microbiology, Interior decoration and Family relation with regard to community living.
2. Equip with skills to manage resources in a dynamic way.
3. Train young minds improve every facet of family and social living- food, clothing, health and child care
4. Build attitudes and values promoting good citizenship.
5. Inculcate keen interest and curiosity in developing research culture.
6. Create knowledge and skill for societal development

## B Sc FAMILY AND COMMUNITY SCIENCE

### CORE COURSE STRUCTURE UNDER CBCSS ADMISSION 2019 ONWARDS

Semester	Code No.	Course Title	Hrs/Week	Credit	Marks		
					EE (80%)	IE (20%)	Total
<b>I</b>	FCS1B01	Fundamentals of Nutrition	4	3	60	15	75
<b>II</b>	FCS2B02	Human Development	4	3	60	15	75
<b>III</b>	FCS3B03	Research Methodology and bio informatics	3	2	60	15	75
	FCS3B03(P)	Practical I- Research Methodology and bio informatics	2	-	-	-	-
<b>IV</b>	FCS4B04	Food Science	3	3	60	15	75
	FCS4B04(P)	Practical II -Food Science	2	4*	80	20	100
<b>V</b>	FCS5B05	Human Physiology and Microbiology	3	3	60	15	75
	FCS5B06	Diet in Health	3	4	80	20	100
		Practical III- Diet in Health	4	**			
	FCS5B07	Family Resource Management	2	4	80	20	100
		Practical IV- Family Resource Management	2	**			
	FCS5B08	Textile Science	2	4	80	20	100
		Practical V – Textile Science	4	**			
		Project	2	**			
<b>VI</b>	FCS6B09	Dietetics	5	4	80	20	100
	FCS6B06 (P)	Practical III- Diet in Health & Practical VI- Dietetics	4	4**	80	20	100
	FCS6B07(P)	Practical IV- Family Resource Management		2**	60	15	75
	FCS6B10	Fabric care and Apparel Designing	5	4	80	20	100
	FCS6B10(P)	Practical V- Textile Science Practical VII- Fabric Care and Apparel Designing	4	4**	80	20	100
	FCS6B11	Concepts in Family Relation	4	2	60	15	75

	FCS6B12 (E1)	<b>Elective Courses***</b> Entrepreneurship Management	3	3	60	15	75
	FCS6B12 (E2)	Quantity Food Preparation Techniques					
	FCS6B12 (E3)	Extension Education and Communication					
	FCS6BPR	<b>Project</b>		2**	60	15	75
<b>OPEN COURSE- V SEMESTER</b>							
					<b>Marks</b>		
					<b>EE</b>	<b>IE</b>	<b>Total</b>
	FCS5D01:	Food Science and Basic Cookery					
	FCS5D02:	Interior Decoration	<b>3</b>	<b>3</b>	<b>60</b>	<b>15</b>	<b>75</b>
	FCS5D03:	Textiles and Apparel Designing					
<b>GRAND TOTAL</b>				<b>58</b>			<b>1700</b>
<b>AUDIT COURSES****</b>							
					<b>Marks</b>		
					<b>EE</b>	<b>IE</b>	<b>Total</b>
<b>I</b>	Environment Science			<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>
<b>II</b>	Disaster management			<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>
<b>III</b>	Intellectual Property Rights			<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>
<b>IV</b>	Gerontology			<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>

\*Exam will be held at the end of 4<sup>th</sup> semester

\*\* Exam will be held at the end of 6<sup>th</sup> semester

\*\*\* An institution can choose any one among the three courses

\*\*\*\*Credit and marks not counted in total SGPA and CGPA

## EVALUATION

### A) THEORY PAPERS

#### QUESTION PAPER MARK PATTERN FOR CORE COURSES

1. For a paper with 4/5 credits total marks is  $80+20=100$

External : 80marks , Internal : 20 mark

2. For a paper with 2/3 credits total marks is  $60+15=75$ .

External : 60marks , Internal : 15 mark

3. Project work  $60+15 = 75$

#### Distribution of marks and type questions.

##### Internal marks distribution for papers with 4/5 credits

Sl.No	Criteria	Marks
1	Attendance	4
2	Assignments	4
3	Seminar	4
4	Test paper 1	8
Total		20

##### Internal marks distribution for papers with 2/3 credits

Sl.No	Criteria	Marks
1	Attendance	3
2	Assignments	3
3	Seminar	3
4	Test paper 1	6
Total		15



**External marks distribution for papers with 4/5 credits**

<b>Category</b>	<b>Total Questions</b>	<b>To be answered</b>	<b>Marks for each question</b>	<b>Cieling</b>
Section A – Short answer	15	15	2	25
Section B- Paragraph	8	8	5	35
Section C- Essay	4	2	10	20
<b>Total</b>				<b>80</b>

**External marks distribution for papers with 2/3 credits**

<b>Category</b>	<b>Total Questions</b>	<b>To be answered</b>	<b>Marks for each question</b>	<b>Ceiling</b>
Section A – Short answer	12	12	2	20
Section B- Paragraph	7	7	5	30
Section C- Essay	2	1	10	10
<b>Total</b>				<b>60</b>

**B) PRACTICAL****Practical internal marks distribution [FCS4B04(P), FCS6B09(P) and FCS6B10(P)]**

<b>Sl.No</b>	<b>Criteria</b>	<b>Marks</b>
1	Attendance	4
2	Performance	4
3	Record	12
Total		20

**Practical internal mark distribution [ FCS6B07(P)]**

Sl.No	Criteria	Marks
1	Attendance	3
2	Performance	3
3	Record	9
Total		15

**PRACTICAL -EXTERNAL MARKS DISTRIBUTION**

**FCS4B04(P) -FOOD SCIENCE PRACTICAL II**

Sl . No	Criteria	Mark
<b>I</b>	<b>QUALITATIVE TESTS</b>	
	<b>TEST FOR CARBOHYDRATE</b>	
I	Molish's test	4
Ii	Benedict's test	4
Iii	Fehling's test	4
Iv	Barfoed's test	4
V	Seliwanoff's test	4
Vi	Phenyl hydrazine test	8
Vii	Result	2
	<b>TOTAL</b>	<b>30</b>
OR		
	<b>TEST FOR PROTEINS</b>	
I	Coagulation	5
Ii	Molish's test	5
Iii	Biuret test	5
Iv	Millions test	5
V	Xanthoprotein test	5
Viii	Result	5

	<b>TOTAL</b>	<b>30</b>
<b>II</b>	<b>QUANTITATIVE TESTS</b>	
I	Principle	5
Ii	Procedure	8
Iii	Titre value	7
Iv	Steps	7
V	Result	3
	<b>TOTAL</b>	<b>30</b>
<b>III</b>	<b>Record</b>	<b>20</b>
	<b>TOTAL</b>	<b>80</b>

#### **FCS6B07(P) PRACTICAL IV FAMILY RESOURCE MANAGEMENT**

<b>Sl . No</b>	<b>Criteria</b>	<b>Mark</b>
1	Presentation	10
2	Viva	10
3	Handicraft	20
4	Record	20
<b>TOTAL</b>		<b>60</b>

#### **FCS6B06(P) PRACTICAL III DIET IN HEALTH**

#### **FCS6B06(P) PRACTICAL VI DIETETICS**

<b>Sl . No</b>	<b>Criteria</b>	<b>Mark</b>
1	Presentation and taste	20
2	Serving and Presentation	10
3	Time and Cleanliness	5
4	Principle	10
5	Menu Plan	15
6	Calculation	10
7	RDA (8 nutrients with units)	10
<b>TOTAL</b>		<b>80</b>

**FCS6B10 (P) PRACTICAL V TEXTILE SCIENCE**

**FCS6B10 (P) PRACTICAL VII FABRIC CARE AND APPAREL DESIGNING**

<b>Sl . No</b>	<b>Criteria</b>	<b>Mark</b>
1	Drafting	10
2	Construction	10
3	Grain	4
4	Identification	12
5	Neatness and Completion	2
6	Embroidery	2
7	Garments	20
8	Record	20
<b>TOTAL</b>		<b>80</b>

**PROJECT**

**Project evaluation (Internal Marks)**

<b>Sl.No</b>	<b>Criteria</b>	<b>Marks</b>
1	Originality	3
2	Methodology	3
3	Scheme &organization of report	4.5
4	Viva voce	4.5
<b>Total</b>		<b>15</b>

**Project evaluation (External Marks)**

<b>Sl.No</b>	<b>Criteria</b>	<b>Marks</b>
1	Relevance of the topic & statement of objectives	12
2	Reference, presentation, quality of	12

	analysis /statistical tools used	
3	Findings and recommendations	18
4	Viva Voce	18
<b>TOTAL</b>		<b>60</b>

**SEMESTER I**  
**FCS1B01 FUNDAMENTALS OF NUTRITION**

<b>Sl No</b>	<b>Course Outcome</b>	<b>PSO</b>	<b>CL</b>	<b>KC</b>	<b>Class Sessions</b>	<b>Lab/ Field study</b>
<b>1</b>	Understand the basics of nutrition, health and malnutrition	PSO1	U	C,P	6	
<b>2</b>	Understand the nutritional status and nutritional classification of foods	PSO1	U	P	8	
<b>3</b>	Summarize the ICMR Recommended Allowances for Indians (RDA)	PSO3	Ap	C	8	
<b>4</b>	Understand the classification, functions, digestion, absorption, metabolism, sources, requirements and deficiency of macronutrients	PSO1	U	C	12	
<b>5</b>	Understand the functions, sources, deficiency and requirements of fat soluble vitamins and water soluble vitamins	PSO1	U	C	14	
<b>6</b>	Understand the functions, sources, deficiency and requirements of minerals like Calcium, Iron, Iodine, Fluorine	PSO1	U	C	10	
<b>7</b>	Determine the energy value of food, Total energy requirements and BMR	PSO3	Ap	C	8	
<b>8</b>	Understand the requirements of water and maintenance of water balance in the body	PSO1	U	C,P	6	
<b>Total hours of Instruction</b>					<b>72</b>	

**Credits: 3**

**Theory: 4hrs / week**

**Objectives:**

To enable the students to gain information about the sources, functions and effects of deficiency of various nutrients.

**Unit I** Introduction to human nutrition Definition- Nutrition, health, Malnutrition, Nutritional Status. Nutritional classification of foods,

**Unit II** Recommended Dietary Allowances ICMR Recommended Allowances for Indians (RDA) - Reference man & reference woman.

**Unit III** Study of Macronutrients Carbohydrates, proteins and fat - Classification, functions, digestion, absorption, metabolism, source, requirements and deficiency.

**Unit IV** Study of Vitamins Functions, sources, deficiency and requirements of :-Fat soluble vitamins (Vitamin A, D, E and K) and water soluble vitamins (Vitamin B- Thiamine, Riboflavin, Niacin, folic acid and vitamin B12 and vitamin C)

**Unit V** Study of minerals Functions, sources, deficiency and requirements of: - Calcium, Iron, Iodine, Fluorine.

**Unit VI** Study of energy

Definition, Determination of Energy value of food by Bomb Calorimeter, Total energy requirements – BMR – factors effecting BMR, physical activity, physiological fuel value

**Unit VII** Water Functions, water balance and requirements.

### **References**

1. Sri. Lakshmi B., Nutrition Science, New Age International (p) Ltd, New Delhi - 2002.
2. Swaminathan M., Handbook of Food and Nutrition, the Bangalore Printing and Publishing co., Ltd., Bangalore.2003.
3. Bamji M.S. et.al. Textbook of Human Nutrition, Oxford, IBH Publishers, 1999.

## SEMESTER II

### FCS2B02 HUMAN DEVELOPMENT

**Credit: 3**

**Hours: 4hrs / Week**

#### *Objectives*

1. To provide scientific knowledge about human development and behavior.
2. To know the needs of children at different stages of development.
3. To give an awareness of the needs and problems of exceptional children.

Sl No	Course Outcome	Pos/P SOs	CL	KC	Class Sessions
1	Understand stages of human development.	PSO1	U	C	22
2	Understand the needs and problems of exceptional children.	PSO6	U	C	10
3	Develop skills in organizational behaviour and generate solutions to situational problems	PSO2	C	C	20
4	Interpret the values and role of play in child's development.	PSO3	An	C	12
5	Develop knowledge of children's laws and rights	PSO6	U	C	8
	Total hours of Instruction				72

#### *Unit I Principles of growth development*

Stages of development, Importance of heredity and environment in the development of the child.

#### *Unit II Prenatal period*

Conception, stages of development, complications of pregnancy, factors influencing prenatal development, antenatal care.

#### *Unit III Neonate*

Characteristics, abilities and adjustments.

#### *Unit IV Babyhood, Early childhood, late childhood*

Physical, motor, emotional, social, moral, cognitive and language development. Discipline methods and effects. Habit formation.

#### *Unit V Adolescence*



Characteristics, physical, social, emotional, cognitive and moral development, problems of adolescence. Sex education- need and significance.

### ***Unit VI Adulthood***

characteristics and problems.

### ***Unit VII Pre- school education***

Objectives and types of pre schools- nursery, balwadi, laboratory nursery school, kindergarten and Montessori.

### ***Unit VII Play***

Theories, values and types.

### ***Unit IX Juvenile delinquency***

Causes and rehabilitation, child's laws and rights

### ***Unit X Exceptional children***

Definition, causes, classification, identification, need for special education – gifted child, mentally handicapped, physical and sensory.

### ***Related experience***

1. Observation of the following developments of a child in preschool- physical, social, emotional and intellectual development.
2. Visit to any of the two places – day care centre/ special school/ balwadi / play school.

### ***References***

1. Hurlock E.B., Child Development, Mc Graw Hill, Kogakurtia Ltd.
2. Hurlock E.B., Child Growth and Development, Mc Graw Hill
3. Hurlock E.B., Developmental Psychology, Mc Graw Hill
4. Devadas R.P. and Jaya N. (1984) A Textbook on Child Development, Mac Millan, India ltd.
5. Suriakanthi A. (1989) Child Development, Kavitha Publication, Gandhigram.
6. Stewart A.C. and Friedmans (1987) Child development: Infancy through Adolescence, Willy International.
7. Gaij G.T. (1989) Human Development, Prentice Hall, New Jersey.

### SEMESTER III

#### FCS3B03 - RESEARCH METHODOLOGY AND BIOINFORMATICS

Credits: 2

Hour: 3 hrs/week

#### PART A- RESEARCH METHODOLOGY

##### Objectives

1. To understand the methodology of research its principles and techniques
2. Developing and understanding research from a report writing

Sl No	Course Outcome	PSO	CL	KC	Class Sessions	Lab/ Field study
1	Understand research concepts	PS01	R	F	2	
2	Compare different types of research methods	PS01	U	P	8	
3	Construct research design or proposal for future project works	PS05	A	P	10	10
4	Examine various sampling techniques and measurement scales	PS06	U	F	10	4
5	Develop report writing and data presentation skills	PS02	C	P	10	4
6	Outline of bioinformatics and statistics	PS01	R	F	10	
7	Enable students to reflect knowledge & skills in bioinformatics and to apply it in various aspects of Home Science	PS06	R	C	4	
Total hours of Instruction					54	36

##### Unit I Fundamentals of Research:

Definition of research, objectives, characteristics and types – action research, applied research, ex post facto research, historical research, fundamental research.

##### UNIT II Defining research problem

Definition and selection, necessity of defining the problem, technique involved in defining a problem

### **Unit III Research design / proposal**

Meaning and purpose of a research design or proposal, research problem definition, identification, statement of research problem, criteria for selection, definition of concepts (operational definition). Variables - types of variables, independent and dependent variables, control and intervening variables. Hypothesis AND related literature –Meaning

### **Unit IV Methods of data collection**

Collection of primary data – observation method, Interview method, collection of Data through questionnaires and schedules, other methods of data collection, collection of secondary data

### **Unit V Research Tools**

Questionnaire, observation, interview schedule and other tools used.

### **Unit VI Sampling**

Sampling methods, merits and demerits of sampling

### **Unit VII Research Report Writing**

Principle of research report, contents in a report

### **References**

1. Kothari.C.R., Research Methodology. Wiley Eastern Limited, New Delhi,2000
2. Best.W.J and Kahn V.J., Research in Education, 7th edition, Prentice Hall Private Ltd. New Delhi
3. Koul.L., Methodology of Educational Research,2ndedition, Vikas publishing house ltd., New Delhi

## **PART B BIOINFORMATICS**

### ***Objective***

To provide the basic knowledge in the discipline and application of bioinformatics

### **Unit I – Introduction to bioinformatics**

Definition, Branches- genomics and proteomics, Scope- Application of bioinformatics in various fields

### **Unit II – Key biosequences in molecular biology**

Nucleic acid and aminoacids

### **Unit III – Introduction to data bases**

Important data base sources, Structure, Functions, classification

### **Unit IV – Tools of bioinformatics**

Sequence analysis, Tools, Salient features of BLAST, FASTA, AND PSI- BLAST

### **References**

1. Attwood, T K & D J Parry Smith. 1999> Introduction to Bioinformatics. Addison Wesley Longman
2. John Wiley & Sons. Inc., publications, NewYork
3. Khan I A & A Khayum. 2002, Fundamentals of Bioinformatics, Ukkkaz Publications, Hyderabad
4. Less A M. 2002. Introduction to Bioinformatics. Oxford University press. Oxford

## **SEMESTER III**

### **FCS3B03(P) PRACTICAL 1 -RESEARCH METHODOLOGY AND BIOINFORMATICS**

**Credit: 0**

**Hour: 2 hrs /week**

1. Prepare a research tool – questionnaire, interview schedule
2. Conduct a community survey on relevant topics of Home Science.
3. Prepare a research proposal
4. Observational study on developmental pattern of preschool children
5. Conduct a nutritional assessment survey among college students
6. Conduct a community awareness programme

**SEMESTER IV**  
**FCS4B04 FOOD SCIENCE**

**Credits: 3**

**Theory: 3hrs / week**

**Objectives**

To enable students

1. Understand the nutritive composition of different food groups.
2. Impart knowledge about the different methods of cooking and food preservation.

<b>Sl No</b>	<b>Course Outcome</b>	<b>Pos/PSOs</b>	<b>CL</b>	<b>KC</b>	<b>Class Sessions</b>	<b>Lab/Field study</b>
<b>1</b>	Understand structure, functions and classification of foods and different food groups	PSO3	R	F	10	
<b>2</b>	Understand the nutritional and anti-nutritional factors of various foods	PSO1	U	P	12	
<b>3</b>	Assess the effect of heat on foods and compare different methods of cooking	PSO3	U	C	12	
<b>4</b>	Understand food additives and different preservation methods for food processing	PSO3	U	C	12	
<b>5</b>	Evaluate organoleptic qualities of food	PSO3	E	P	2	4
<b>6</b>	Estimate content of carbohydrate, Vitamin C and reducing sugars in food	PSO6	C	P	2	20
<b>8</b>	Detection of adulterants in food	PSO3	C	C,P	2	6
<b>9</b>	Develop different recipes and evaluate its nutritional content	PSO3	C &E	C,P	2	6
<b>Total hours of Instruction</b>					<b>54</b>	<b>36</b>

## **Unit I Introduction to food science**

1. Definition of food and functions of food
2. Food pyramid, basic five food groups and uses
3. Cooking-objectives and different methods of cooking.

## **Unit II Study of foods**

1. **Cereals** Structure (wheat) and nutrient composition cereal products, effect of heat on starch.
2. **Pulses and Nuts and Oil seeds.**  
Nutritive composition and germination and anti-nutritional factors.
3. **Vegetables** Classification and nutritive composition and selection, pigments
4. **Fruits** Composition and nutritive composition, browning reaction
5. **Milk and milk products** Nutrient composition of milk and milk products – curd, butter, ghee, skimmed milk, effect of heat
6. **Eggs** Structure, nutritive composition, characteristics of fresh eggs and deterioration of eggs.
7. **Meat** Nutritional significance and post-mortem changes.
8. **Fish** Nutritional significance and selection.
9. **Fats and Oils** Nutritional importance, smoking temperature and rancidity.
10. **Beverages** Classification
11. **Sugar and its products** Caramalisation, hydrolysis, crystallization and stages of sugar cookery

## **Unit III Food preservation - Principles and methods**

## **Unit IV Food adulteration- Common adulterants and simple Test for detection of Adulterants**

### **References**

1. Norman, N. Potter and Hotchkiss, J.H, Food Science, CBSE publishers and Distributers, New Delhi, 1996.
2. Mudambi, S.R. and Rao , S.M. Food Science, New Age International (P) ltd. Banglore, 1989.
3. Begum, M.P., A Text Book of Food, Nutrition and Dietetics, sterling Publishers Pvt. Ltd., New Delhi, 2001.
4. Srilakshmi, B., Food Science, New Age International Pvt. Ltd., New Delhi.
5. Mudambi, S.R. and Rajagopal M.V., Fundamentals of Food & Nutrition, New Age International (P) Ltd., New Delhi, 1990.

6. Swaminathan, M. Handbook of Food and Nutrition, The Bangalore Printing and Publishing Co., Ltd., Bangalore, 20

**SEMESTER IV**  
**FCS4B04(P) PRACTICAL II FOOD SCIENCE**

**Credits: 4**

**Practical: 2hrs / week**

***Module I Food preparation***

- i. Record the weight of 1 cup/ 1tbsp/ 1tsp of different types of food stuffs.
- ii. Record the ratio of raw to cooked volume of rice, rava and pulses.
- iii. Simple preparations using cereals, pulses, vegetables, fruits, milk, egg, meat and fish using different cooking methods.
- iv. Weaning recipes
- v. Food preservation – Jam, squash, pickles

***Module II Food Analysis i.***

**Qualitative tests for**

- a. Proteins
- b. Carbohydrates – Monosaccharide (glucose, fructose) and disaccharides

**ii . Quantitative tests**

- a. Vitamin C in lime juice (dye method)
- b. Estimation of reducing sugar by Benedict's method
- c. Calcium in food – demonstration

**SEMESTER V**  
**FCS5B05 HUMAN PHYSIOLOGY AND MICROBIOLOGY**

**Credits: 3**

**Theory: 4 hrs / week**

Sl No	Course Outcome	Pos/PS Os	CL	KC	Class Sessions	Lab/ Field study
<b>CO1</b>	Understand about the anatomy of human body	PSO1	U	C,P	4	
<b>CO2</b>	Understand the various organ systems and its functioning	PSO1	U	C	25	
<b>CO3</b>	Understand the morphology of microorganisms and their role in health and diseases	PSO1	U	C	15	
<b>CO4</b>	Understand the factors affecting growth of microorganisms and mode of transmission	PSO1	U	C	10	
<b>CO5</b>	Understand the types of immunity and methods of sterilization	PSO1	U	C	8	
<b>CO6</b>	Understand the mechanism of spoilage of food and etiology of food infections	PSO1,	U	C	10	
Total hours of Instruction					72	

**Part-I HUMAN PHYSIOLOGY**

***Objective***

To study about the various systems and functions of the human body.

***Unit I Blood***

Functions, composition, blood formation and destruction, hemoglobin, blood coagulation, blood groups, Rh factor, Erythroblastosis foetalis.

***Unit II Circulatory System***



Heart- structure, properties of heart muscle, Special conducting tissues, cardiac cycle, Heart sound, pulse, Heart rate, blood pressure, ECG.

### ***Unit III Digestive System***

Structure and functions of Digestive Tract, Functions of various secretions and juices, Functions of accessory organs such as salivary glands, tongue, liver, gall bladder and pancreas.

### ***Unit IV Urinary System***

Structure and functions of kidney, structure of Nephron, urine formation and micturition

### ***Unit V Reproductive System***

Male and Female reproductive organs in brief, ovarian and uterine cycle's, fertilization, implantation, parturition.

### ***Unit VI Endocrine System***

Structure and functions of pituitary gland, thyroid gland, parathyroid gland, Pancreas, adrenal glands and sex glands (ovaries, testis and placenta).

### ***References***

1. Chatterjee C.C., Human Physiology, (11th edition), vol 1 & 2, Medical Allied Physiology (1987).
2. Sarada Subramaniam and Madhavankutty K.A, A Concise Text Book of Physiology Orient Longman pub. New Delhi.
3. Vidya Ratan ,Handbook of Human Physiology, Jaype Brothers ,Medical Publishers New Delhi, 110002
4. Sherman Veneles and Luriano, Human Physiology.
5. Best, Herbert Charles and Taylor ,Burke Norman –The Living Body
6. Text Book of Human Physiology ,S.Chand and Co.Pvt.Ltd. Ram Nagar, New Delhi
7. Fred.E.D Armour, Basic Physiology, Oxford and IBH Publishing Co, New Delhi

## **PART –II MICROBIOLOGY**

**Objective:** Elementary knowledge about microorganisms and their role in health and diseases.

**Unit I** Introduction, Importance of the study of microbiology and classification of microorganisms.

**Unit II** Bacteria and Bacterial Diseases Morphology, factors affecting growth, reproduction, spore formation. Pneumonia, tuberculosis, meningitis, gonorrhea, syphilis, typhoid, cholera and tetanus. Control and Destruction Of Bacteria Sterilization and disinfection

**Unit III** Yeasts Morphology and economic importance

**Unit IV** Virus and Viral Diseases, Morphology – Bacteriophages. Chicken pox, mumps, poliomyelitis, rabies, infective hepatitis, Chikunguinea, Dengue and AIDS.

**Unit V** Infection and Immunity: Sources of infection and methods of transmission. Immunity Classification –innate and acquired, active and passive immunity, immunization schedule for children

**Unit VI** Food fermentations: Cheese, bread, wine, fermented vegetables – methods and organisms used. Food and enzymes from microorganisms – single cell protein, production of enzymes.

**Unit VII** General principles underlying spoilage, Spoilage of different kinds of foods, cereals and cereal products – sugar and sugar products – vegetable and fruits – meat and meat products – fish and other sea foods – eggs and poultry – dairy and fermentative products (ice cream/milk/bread/wine).

**Unit VIII** Food Poisoning: food borne infections (a) Bacterial: Staphylococcal, Brucella, Bacillus, Clostridium, Escherichia, and Salmonella (b) Fungal: Mycotoxins including aflatoxins, (c) Viral: Hepatitis, (d) Protozoa – Amoebiasis.

**References:**

1. Anna .K.Joshua, Microbiology, Popular Book Depot, Madras 15.
2. Barnes and Noble, Bacteriology –Principles and practices.

**SEMESTER V**  
**FCS5B06 DIET IN HEALTH**

**Credit: 4**

**Theory: 3hours/week**

**Objectives**

To enable the students to

1. Understand the role of nutrition in different conditions.
2. Develop competency in planning diets to meet the nutritional requirements of different socio-economic levels.

Sl No	Course Outcome	Pos/P SOs	CL	KC	Class Sessions	Lab/F ield study
1	Understand the role of food in daily life.	PSO3	U	C	4	
2	Compare the nutritional requirement in different age groups.	PSO3	An ,E	P	8	
3	Understand nutrition related problems in life cycle.	PSO3	U	F	8	
4	Understand national and international health programmes to prevent malnutrition.	PSO3	U	F	10	
5	Plan and prepare balanced diets for different age groups.	PSO3	C	P	7	42
6	Develop competency in planning diets to meet the nutritional requirements of different socio economic levels.	PSO3	C	P	7	30
7	Understand the need of nutrition for sports persons.	PSO3	U	C	10	
Total hours of instruction					54	72

**Unit 1 Meal Planning**

Link between health and Nutrition, different food groups, menu planning, balanced menus

## **Unit II Nutrition In Pregnancy**

Nutritional status and general health, physiologic changes, nutritional requirements, dietary problems, complications

## **Unit III Nutrition In Lactation**

Physiological adjustments during lactation, nutritional requirements, efficiency of milk production, diet of lactating women

## **Unit IV Nutrition In Infancy**

Growth and development during infancy, nutritional requirements, breast feeding, artificial feeding, weaning foods suitable for infants

## **Unit V Nutrition In Preschool Age**

Growth and development of preschool children, nutritional requirements, food habits and nutrient intake of preschool children, nutritional problems

## **Unit VI Nutrition In School Age**

Physical development, food habits, nutritional requirements, nutritional status of school children

## **Unit VII Nutrition during Adolescence**

Nutritional requirements, food habits, nutritional problems

## **Unit VIII Nutrition for Adults**

Nutritional requirements, nutritional status and health status

## **Unit IX Nutrition for Aged**

Nutritional requirements, food habits, nutritional problems

## **Unit X Nutrition in Special Events**

Sports Nutrition

## **Unit XI Nutrition programmes and Agencies:**

Important National Nutrition programmes- ICDS, Mid Day Meal Programme, Vitamin A prophylaxis Programme, Anaemia Prophylaxis Programme, goitre control programme, important national and international agencies working in the field of nutrition WHO, FAO, NIN, CFTRI.

## **References**

1. Antia.F.P, Clinical Dietetics and Nutrition, Oxford University Press, New Delhi, 1997, 4th edition.
2. Srilakshmi.B, Dietetics, New Age International Pvt. Ltd. Publishers, New Delhi, 1997.
3. Swaminathan.M, Principles of Nutrition and Dietetics

4. Subhangini Joshi, Nutrition and Dietetics
5. Gopalan.C, Ramasastri.B.V, Nutritive value of Indian Foods, Vol.I, NIN, ICMR, 1994.
6. Mahan.J.K, Arlin.M.T, Krause's Food Nutrition and Diet Therapy 8th edition, W.B Saunders Company, 2001.

## SEMESTER V

### FCS5B07 FAMILY RESOURCE MANAGEMENT

**Credit: 4**

**Hours: 2hrs / Week**

#### ***Objectives***

1. To help students learn principles of resource management
2. To provide students knowledge on household economics
3. To make students conscious of aesthetics
4. To encourage students to apply theoretical knowledge in practical life

Sl No	Course Outcome	PSO	CL	KC	Class Sessions	Lab/F ield study
1	Understand the process of management in family living	PSO 1	U	F	8	-
2	Develop wise decisions in personal life and make use of given resources	PSO 2	Ap	M	3	8
3	Apply the principles of Ergonomics after critically analyzing one's work habits	PSO 5	Ap	M	8	2
4	Understand the functions of house and the principles for planning a house	PSO 1	U	C	4	
5	Develop a creative sense in interior decoration by applying the elements and principles of design	PSO 3	Ap	M	6	26
6	Improve the standard of living utilizing family resources	PSO 2	C	M	7	
Total hours of instruction					36	36

#### ***Unit I Principles of Resource Management***

##### **1. Principles of Resource Management**

meaning & definition of home management, steps involved in management, decision making, values, goals & standards, qualities of an efficient home maker

##### **2. Resources**

Definition & classification, characteristics resources, and guides to increase satisfaction from resources

### **3. Energy management**

*Fatigue*-types, causes and methods to elevate fatigue

*Work simplification*-process chart, operation chart, flow process chart, Mundel's classes of change *Ergonomics*-meaning, importance, objectives, factors involved-man and his work, tools and equipment, indoor climate, furniture, ventilation, light, noise, storage

### **4. Time management**

Principles & techniques, tools in making time plan, Gantt chart

### **5. Money management**

*a. Family income*-sources of income, types of income, supplementing the family income

*b. Family expenditure*-family budget, steps in making family budget, Engels Law of consumption, savings, saving institutions-advantages

## ***Unit II Housing and Interior Decoration***

### ***a. Housing***

Functions of house, selection of site, principles of planning of house, kitchen layout

### ***b. Waste management***

Type of wastes, principles of waste management, disposal of waste. Recycling of waste and reuse of waste- biogas, vermiculture

### ***c. Interior decoration***

Design- definition and types, Elements of design, principles of design

Colour theory- dimensions, Prang's colour system and colour schemes

Flower arrangement-types and principles

Furniture selection, arrangement, and principle of arrangement

Window treatments- types and curtain styles

Accessories- classification- functional and decorative

Home lighting- types

## ***References***

1. Nickel, Pand Dorsey, J.M. Management in family living, Wiley Eastern Private Ltd, New Delhi, 1976

2. Gross, I.M & Grandall, D.W Management for Modern Families, 1973
3. Faulkner R & Faulkner S, Inside todays home, Holt Rinchart & Winston, Newyork
4. Rutt.A.H, Home furnishing, Wiley Eastern Private Ltd, New Delhi
5. Varghese.M.A, Ogale, N.N.Sreenivasan,K home Management, New Age International
6. Agan.T, The house-its plan & use, J.P.Lippincott company, Newyork, 1970
7. Ruth.F.Shewood, homes today and tomorrow, 1972, Chas.A.Benett company Illinois
8. Good house keeping guide to successful homemaking compiled by the editors of housekeeping 1956,Harper and Brother Publisher, Newyork.
- 9.Agarwal, K.C. Enviornmental Biology, Nidi publication.Ltd, Bikaner,2001.
- 10 Miller T.G., Enviornment science, Wardsworth publicationco. TB.

## SEMESTER V

### FCS5B08 TEXTILE SCIENCE

**Credit: 4**

**Theory: 2Hrs / Week**

#### *Objectives*

1. To give each student a desire to recognize and appreciate textile fibres.
2. To give the students sound scientific theory concerning fibers', including their production, properties and uses

Sl No	Course Outcome	PSO	CL	KC	Class Sessions	Lab/Field study
1	Develop strong knowledge base in the production of fibres and yarns	PSO 1	U	F	7	28
2	Identify textile fibres and apply it to various end uses	PSO 5	R&Ap	P	10	26
3	Understand about woven and nonwoven fabrics	PSO 1	U	C	3	-
4	Develop ethical values concerning production and finishing of textiles	PSO 4	U	C	10	4
5	Illustrate different methods and mechanism of dyeing and printing	PSO 5	U&Ap	P	3	14
6	Create awareness on green textiles	PSO 6	C	C	3	
Total hours of instruction					36	72

#### *Unit I Fibre Theory:*

Definition, primary and secondary properties of a fibre, classification of fibres, fibre identification.

#### **Unit II Textile Fibres-**

Major fibres- cotton, linen, silk, wool, nylon, polyester, rayon, acetate (production, properties



and uses)

### ***Unit III Yarn Construction***

Definition, spinning- cotton system, open end, wet spinning, dry spinning, melt spinning, bi component spinning, bi constituent spinning, friction spinning, twistless spinning, yarn- twist, number and types, blends.

### ***Unit IV Fabric Construction***

Looms- parts and operations- types of looms- handlooms, power loom and shuttle less looms, Preparation of yarns before weaving

Weaves- *Basic*- plain and derivatives, twill, bird's eye weave, herringbone twill, satin and sateen, *Novelty*- pile, leno, dobby, jacquard, double cloth, crepe, extra yarn weaves- spot (cut and continuous), lappet and swivel.

Fabric count and analysis, Blend and Mixtures

### ***Unit V Nonwovens-***

Knitting, felting, bonding, multicomponent, laces and nets, braiding.

### ***Unit VI Finishes***

Definition, classification, importance, types of finishes

**mechanical**- calendaring(friction, glazing, embossing, moireing and schreinerising), tentering, shearing, napping ,singeing,

**Chemical**-bleaching, mercerizing, sanforising, sizing, weighting, , crepe and crinkled effect, crease resistance,

**special/functional**- water repellency, flame proofing, mildew proofing and moth proofing .

### ***Unit VII Dyeing and Printing***

Dyes- definition and classification, mechanism of dyeing with direct, acid, basic, azoic, vat, sulphur, metal complex, mordant, reactive and disperse dyes. Methods of dyeing- fibre, stock, yarn, piece and garment.

Printing- styles- direct (block, roller, screen-hand screen, flat bed screen printing and rotary screen printing, stencil, duplex) discharge and resist (tie and dye, batik)

### ***Unit VIII Environment and Textile Industry-***

Environmental impacts related to cultivation, processing and uses.

Eco friendly fibres- jute, hemp, bamboo, organic cotton and recent trends.

Eco friendly practices and use of eco labels.

### ***References***

1. Marjory L. Joseph, Introductory Textile Science, Holt Rinehart and Winston, New York.
2. Susheela Dantyagi, Fundamentals of Textiles and their care, Orient Longmans, Madras
3. Hess, Textile fibres and their Uses, Oxford IBH Publishing Company, New Delhi.
4. Porter Corbman, Fibre to Fabric, Mc Graw Hill Book Company, New York.
5. [www. fiber2fashion.com](http://www.fiber2fashion.com)

## **SEMESTER V**

### **FCS6BPR-PROJECT**

**Credit: 2**

**Theory: 2hours / week**

#### **Objectives**

- To make the students research oriented
- To establish new research to contribute to program planning and evaluation

#### **Content**

- Development of research Programme
- Collection of Review
- Conduct Pilot Study in the field
- Conduct of work in the lab/ hospital/ community
- Analysis of Data
- Writing for the thesis and submission

## **SEMESTER VI**

### **FCS6B09 DIETETICS**

**Credits: 4**

**Theory: 5hrs / week**

#### **Objectives:**

To enable students:

1. Gain knowledge on normal and therapeutic diets.
2. Acquire practical experience in planning, preparing and serving of balanced diet in health and diseases.

Sl No	Course Outcome	PSOs	CL	KC	Class Sessions	Lab/ Field study
CO1	Understand the role and work ethics of dietitian	PSO3	U	F,C	4	
CO2	Understand the principles of diet therapy	PSO3	Ap	C,P	3	
CO3	Understand and plan the routine hospital diets	PSO3	Ap	C,P	5	4
CO4	Understand the various deficiency diseases	PSO3	Ap	C,P	10	
CO5	Understand the risk factors of various therapeutic conditions	PSO3	Ap	C,P	3	
CO6	Plan and prepare diet during various deficiency diseases	PSO3	Ap	C,P	25	22
CO7	Plan & prepare diet for therapeutic conditions	PSO3	Ap	C,P	25	46
CO8	Understand the management of various lifestyle diseases	PSO3	Ap	C,P	15	
Total hours of Instruction					90	72

### Unit I Introduction to Dietetics

Role of dietitian, link between health and nutrition

### Unit II Diet Therapy

Principles of Diet Therapy, therapeutic modifications of normal diets and routine hospital diets – enteral and parenteral feeding

### Unit III Diets in disease conditions

1. Deficiency diseases

a. Iron deficiency anemia

b. Protein- Energy Malnutrition (PEM)

c. Vitamin A deficiency

## 2. Therapeutic Diets

- a. Febrile conditions – TB and Typhoid
- b. Obesity and underweight.
- c. Diabetes mellitus.
- d. Gastro intestinal disturbances – peptic ulcer, constipation and diarrhoea.
- e. Liver diseases – Hepatitis and cirrhosis.
- f. Renal disorders - Glomerulonephritis and urinary calculi.
- g. Cardiovascular diseases – Atherosclerosis, hypertension
- h. Cancer.

### ***Reference***

1. F.P. Antia, Clinical Dietetics and Nutrition, III edition, Oxford University Press, Delhi, 1989.
2. Sri. Lakshmi B., Dietetics, New Age International (p) Ltd, New Delhi - 2002.
3. Swaminathan M., Principles of Nutrition and Dietetics.
4. Subhangini Joshi, Nutrition and Dietetics
5. Robinson, Corinno H, Basic Nutrition and Diet therapy.

### ***Journals***

1. Indian Journal of Nutrition and dietetics published by Avinashilingam Deemed University, CBSE.
2. The Indian Journal of Medical Research.
3. Nutrition, a Quarterly publication of the NIN, Hyderabad.

**SEMESTER VI**  
**FCS6B06 (P) PRACTICAL III -DIET IN HEALTH**

Planning diets to meet the requirement at different economic level- low, middle and high income  
for the following conditions

Pregnancy

Lactation

Infancy

Preschool age

School Age

Adolescents

Adult

Old people

**SEMESTER VI**  
**FCS6B09(P) PRACTICALS VII- - DIETETICS**

**Credit: 4**

**Practical: 4hrs / Week**

**Unit I Deficiency Diseases**

Plan and prepare diets for Deficiency Conditions.

- a. Iron deficiency anemia
- b. Kwashiorkor
- c. Night Blindness

**Unit II Therapeutic Diets**

Plan and prepare Diets for Disease Conditions

- a. Routine hospital diets
- b. Obesity
- c. Underweight
- d. Diabetes mellitus
- e. Typhoid
- f. Tuberculosis
- g. Peptic ulcer
- h. Constipation
- i. Cirrhosis
- j. Acute glomerulo nephritis
- k. Renal calculi
- l. Hypertension.
- m. Atherosclerosis

**Unit III Visits to research institute / Dietary Department.**

## **SEMESTER V**

### **FCS6B07(P) PRACTICE IV -FAMILY RESOURCE MANAGEMENT**

**Credit: 2**

**Hours: 2hrs / Week**

- \_ Residence stay for one week as practical's with report incorporating
- \_ Types of design-decorative, traditional and modern
- \_ Elements of design-applications
- \_ Principles of design-illustrations
- \_ Colour wheel
- \_ Colour schemes
- \_ Curtain styles
- \_ Accessories
- \_ Flower arrangement
- \_ Prepare 2 handicraft items

Or

Event management- planning, organizing, implementing and evaluating a group activity (party, exhibition)



## SEMESTER VI

### FCS6B10 FABRIC CARE AND APPAREL DESIGNING

**Credit: 4**

**Theories: 5 Hrs / Week**

#### *Objectives*

1. To acquire the ability in selecting textiles and constructing garments.
2. To have the ability to know how to care for fabrics

Sl No	Course Outcome	PSO	CL	KC	Class Sessions	Lab/F ield study
1	Explain different laundering techniques	PSO 1	U	F	22	-
2	Apply principles of laundering on different fabrics	PSO 2	Ap	P	12	-
3	Understand traditional Indian textiles and embroideries of India	PSO 2	U	F	22	28
4	Design garments keeping the elements and principles of design	PSO 3	C	P	14	36
5	Find out latest fashion trends in India	PSO 2	R	C	8	
6	Create flat patterns and adapt them to specific styles	PSO 2	C	M	12	8
Total hours of instruction					90	72

#### *Unit I Water*

Types and methods of softening (caustic soda, Lime soda, zeolite, borax)

#### *Unit II Study on Laundry*

Soaps and detergents, stiffening agents, bleaches, laundry blues, stain removal, dry cleaning.

#### *Unit III Principles of laundering and storing*

Cotton, silk, wool, rayon and synthetics.

#### *Unit IV Traditional Indian textiles and embroideries of India*

**Textiles**-Dacca muslins, Jamdhani, Baluchari, Patola, Himrus, Bandhini, Kalamakari,

Brocades Chanderi, Paithani, Pitamber, Banaras brocades, Amru

**Embroideries**- Kashida, Phulkari, Chamba rumal, Chikankari, Kantha)

#### *Unit V Garment construction*

Body measurements, methods of construction, parts and function of sewing machine, steps in preparing fabric before cutting, tools of sewing.

#### *Unit VI Fashion Elements*

Fashion terminologies- fad, style, classic, Haute couture, prêt-A- porter, trend

Fashion cycle

Merchandising- role of a merchandiser

Visual merchandising- Needs and important, elements- areas of display- store interior, store exterior, window display.

### ***Unit VII Study of human figure***

Elements and principles of design applied to apparel design, types of figures, selection of clothing for different figure types

### ***Unit VIII Study Tour to research institute / Textile mill or shops.***

### ***References***

1. Noemia D'souza, Fabric Care, New Age International (P) Ltd., New Delhi.
2. Jannette Jarnow, Kitty G. Dickerson, Inside Fashion Business, Prentice Hall Inc., New Jersey.
3. Essay M., Fashion Marketing, Blackwell Sciences Ltd., London 2002
4. Shailaja D. Naik, Traditional Indian Textiles
5. Metha R.J., Master pieces of Indian Textiles.
6. Abbing Bina, Fashion Rendering with Colour, Prentice Hall Inc., Corporation, New Jersey, 2001
7. Martin M. Pergler, Visual merchandising and display, Conde Nast publication, Canada, 2012

## **SEMESTER VI**

### **FCS6B08 (P) PRACTICALS V TEXTILE SCIENCE**

1. Collection of all fibres studied.
2. Identification of fibres by burning, microscopic and solubility tests.
3. Collection of all weaves studied.
4. Prepare a sample of block printing and tie and dye (1 sample).

## **SEMESTER VI**

### **FCS6B10 (P) PRACTICAL VII -FABRIC CARE AND APPAREL DESIGNING**

**Credits: 4**

**Theory: 4 hrs / week**

### **PRACTICALS**

1. Stitches- basic hand and decorative (embroidery- any 10)
2. Samples of any 2 traditional embroideries of India.
3. Seams and seam finishes (4 types each)
4. Bias and its application- facing- bias and shaped, piping
5. Fullness- gathers, tucks, pleats and darts (2 samples each)
6. Pockets- side and front
7. Collars- Chinese, peter pan, full shirt
8. Plackets- continuous bound, faced and bound, broken kurta
9. Sleeves- set in, kimono, puff and raglan (paper patterns)
10. Fasteners

11. Construction of garments – girl's frock, salwar, kameez and sari blouse
12. Boutique window display- theme based (group activity , report and photo to be maintained in the record)
13. Knowledge of textiles available through visits to shops or mills

## SEMESTER VI

### FCS6B11 CONCEPTS IN FAMILY RELATION

**Credit: 2**

**Theory: 4hrs / Week**

#### ***Objectives***

1. To help them understand family values.
2. To orient students for adjustment in marriage.
3. To prepare them to play the roles of a wife and mother effectively.
4. To make them aware on the laws and rights of women.

SI No	Course Outcome	PSO	CL	KC	Class Sessions
1	Develop healthy attitude towards marriage and interpersonal relationships	PSO 4	Ap	C	14
2	Understand the importance of family in today's social context	PSO 4	U	C	12
3	Solutions to thrive different circumstances in stages of life cycle	PSO 4	C	C	17
4	Solving critical family situations	PSO 4	C	M	13
5	Develop sound knowledge on methods of family planning	PSO 4	Ap	C	6
6	Improve the knowledge regarding legal issues concerning women	PSO 4	C	C	10
Total hours of instruction					72

#### ***Unit I Marriage***

Definition, purpose, functions, selection of spouse, physical, emotional, social, and intellectual maturity needed by the couple, areas of adjustment, factors influencing good marital adjustment, Courtship and Engagement – significance in Indian context.

#### ***Unit II Family***

Definition, features, types of family and functions of family, co-habitation, Methods of family planning.

#### ***Unit III Family life cycle***

Stages in the family life cycle- beginning, expanding, contracting- middle age- characteristic and adjustments(any4), old age- characteristics and problems

#### ***Unit IV Critical family situations***

Infidelity, desertion, divorce, alcoholism, death/suicide, disabilities.

#### ***Unit V Deviant sexual behavior***

Types- Exhibitionism, Fetishism, Frotteurisme, Pedophilia, sexual masochism, sexual sadism, Transvestic fetishism, Voyeurism, Zoophilia.

#### ***Unit VI Women and law***

Laws pertaining to marriage, women rights

***References***

1. Devadas R.P. and Jaya N. (1984) A Textbook on Child Development, Mac Millan, India ltd.
2. Rao C.N.S. (1990) the Family, S. Chand and Company Ltd., New Delhi.
3. Hurlock E.B., Developmental Psychology, Mc Graw Hill
4. Devadas R.P. and Jaya N. (1984) A Textbook on Child Development, Mac Millan, India ltd
5. Antony P. D'souze, sex education and personality development, Ustian publishers, 4/7 Deshabhandhu, Gupta road, New Delhi.

## ELECTIVE COURSES

### SEMESTER VI

#### FCS6B12(E1) - ENTREPRENEURSHIP MANAGEMENT (Elective)

**Credits: 3**

**Theory: 3hrs / week**

**Objectives:**

1. Understand the nature of entrepreneurial activities
2. To make students aware of the urgent needs for self employment
3. To develop skills in project identification, preparation of project reports and its implementation.

Sl No	Course Outcome	PSO	CL	KC	Class Sessions	Lab/Field study
1	Understand the concept of entrepreneurship	PSO 2	U	C	15	
2	Develop entrepreneurial skills for economic development	PSO 2	U	C	15	
3	Identify the entrepreneurial agencies and awareness on incentives to women	PSO 2	U	C	12	
4	Develop project proposal	PSO 2	C	P	12	
Total hours of instruction					54	

***Unit-1 Entrepreneurship***

Definition, scope, characteristics, factors affecting entrepreneurial development, entrepreneur vs. enterprise, classification of entrepreneur, entrepreneur motivation, difference from a manager, role of entrepreneur in economic development.

***Unit II Women entrepreneurs***

Definition, present status in India, steps taken for the promotion of women entrepreneurs, problems faced by women entrepreneurs

***Unit III EDP***

Definition, need, Objectives, steps, agencies conducting EDP, Role of government in organizing EDP.

***Unit IV Agencies for entrepreneurial support***

KITCO, SIDCO, KVIC, DIC, STED, SIDO, NSIC, TCO, SISI, SIDBI

***Unit V Small scale industries***

Definition, types, role in modern economy, steps for starting SSI, problems faced by SSI, supporting mechanisms – incentives and facilities from government.

***Unit VI Project***

Definition, types, steps in identification, project life cycle, scope and importance, project objectives.

***References***

1. Desai, N. Entrepreneurial development- Principles, programmes, Policies(Vol.1) Formulation Appraisal and Financing (VOL.II) and Programmes and Performance (VOL III) Himalaya Publishing House, Bombay, 1996
2. Vinod A, Entrepreneurship Management
3. Winze.M.D Women Entrepreneurs in India, Mital publications, New Delhi 1987.
4. Jose Paul, Entrepreneurship Development
5. Jayan, Entrepreneurship Development.

## SEMESTER VI

### FCS6B12 (E2)- QUANTITY FOOD PREPARATION TECHNIQUES

(Elective)

**Credits: 3**

**Theory: 3Hours / week**

#### *Objectives*

To enable students to

1. Understand the objectives of different types of Food Service Institutions.
2. Gain knowledge in menu planning, preparation of recipes in large scale and serving and in food costing.

Sl No	Course Outcome	Pos/PSOs	CL	KC	Class Sessions	Lab/Field study
CO1	Identify the scope of food service industry	PSO5	A p	C	4	
CO2	Using different types of menu	PSO5	A p	C	2	2
CO3	Analyze menu pricing and evaluation	PSO5	A n	P	3	2
CO4	Apply different techniques in food purchasing	PSO5	A p	P	4	2
CO5	Identify and develop receiving procedure and storage of food items	PSO5	A p	P	7	2
CO6	Build standardized recipes and portion control techniques	PSO5	C	P	4	3
CO7	Understand the product standards for purchasing and selling food items	PSO5	U	C	11	
CO8	Construct different styles of food service system	PSO5	A p	P	5	2
CO9	Evaluate budget, food cost control and interpret financial data	PSO5	E	C	7	
CO10	Ensure the patients receive their best possible nutritional intake whilst in hospital	PSO5	A n	C	7	
Total hours of Instruction					54	13

#### *Unit I Food Service Industry*

Scope and objectives of hospitality industry, different categories of hotels.



## ***Unit II Menu planning-The primary control of food service***

Types of menu – A la carte, Table d’hote & cyclic, Static, single use, Factors affecting menu planning, menu presentation, cost concepts and menu pricing - Factor method, Prime cost method and Actual cost method.

## ***Unit III Purchasing***

Qualities of an institutional buyer, Purchasing activity, product selection, mode of purchasing, methods of purchasing and purchasing process, purchasing records.

## ***Unit IV Receiving and storage***

Receiving - delivery methods, delivery procedure and receiving procedure.

Storage –types (dry storage and cold storage)

## ***Unit V Standardization of Recipes***

Standardization and portion control

## ***Unit VI Quantity Food production and quality control***

Objectives of food production, methods of production, product standards and product control – HACCP

## ***Unit VII Distribution and service of Food***

Types of food service – waiter service, self service and vending.

## ***Unit IX Budget***

Steps in budget planning, break even analysis food budget, and food cost control.

## ***Related Experience:***

Standardization of 10 selected recipes used in food service Institutions and quantity food production of any two items.

## **REFERENCES:**

1. Mohini Sethi and Surjeet, M. Malhan, “Catering Management an Integrated approach”, Wiley Eastern Limited, Mumbai, II edition reprinted, 1996.
2. Marian C. Spears; Food Service Organization; III Edition, Prentice Hall Inc., usa.1995.
3. West and Woods, Introduction to Food Service, Macmillan Publishing Company, New York, 7th edition, 1994.
4. Odder Cesarani and David Fosket, Theory of Catering, Odder and Stoughton, London, xth edition, 2003.

5. Odder Cesarani and David Fosket, Food and beverage service, Odder and Stoughton, London, x t h edition, 2003.

## SEMESTER VI

### FCS6B12 (E3)- EXTENSION AND COMMUNICATION (Elective)

**Credit: 3**

**Theory: 3hours / week**

#### Objectives

To enable the students to:

1. Understand the principles and objectives of extension and community development in our country.
2. Acquire knowledge and skill in using communication techniques.
3. Prepare for higher studies in Extension Education

Sl No	Course Outcome	Pos/ PSO	CL	KC	Class Sessions	Lab/F ield study
1	Understand the objectives of extension education	PSO 1	U	C	8	
2	Develop a social commitment for community	PSO 6	U	P	8	
3	Understand the rural sociology in India	PSO 6	U	C	12	
4	Develop good communication skills to aid community service	PSO 6	Ap	P	8	
5	Build leadership qualities	PSO 2	Ap	P	9	
6	Identify the scope of Home Science extension education	PSO 4	An	C	9	
Total hours of instruction					54	

#### Unit I *Community Development*

##### 1. Extension

Meaning, principles, concepts, scope and objectives of extension education in India

##### 2. Community development in India

Objectives, principle, philosophy, Types of communities-Rural and Urban, community development programmes in India-origin and history, Basic rural Institutions-school, panchayat, co-operatives; other institutions- mahila mandals, youth clubs, rural youth programmes-4-H clubs, YFA

##### 3. Leadership

Concepts, definition, characteristics, types, selection and training of leaders, methods of identifying professional and lay leaders.

##### 4. Programme planning in Extension

Definition, principle, criteria for good programme planning, scope, steps involved in programme development, plan of work, calendar of work, types of evaluation in extension.

##### 5. Rural Sociology

Characteristics, comparison between rural and urban society, kudumbasree.

## **6. Agencies and programmes for community development**

SWB, urban and rural co-operative banks, District Rural Development Agency, Employment Training and

Poverty Alleviation-IRDP, JRY, TRYSEM, DWCRA, NAEP

### ***Unit II Communication***

#### **1. Communication**

Definition and importance, elements of communication- Leagen's model, problems in communication, motivation- methods of motivating people

#### **2. Methods of approaching people**

Classification of extension teaching methods- types, scope, advantages and limitations of methods.

**Individual methods-** farm/home visit, office calls, personal letters and result demonstration

**Group methods-** method demonstration, lecture, meetings, conference

**Mass methods -** bulletin, circular letters, exhibits and television

#### **3. Audio-Visual Aids**

Importance of audio-visual aids in communication, cone of experience, factors to be considered in selection, preparation and use of audio visual aids, their merits and demerits

#### **4. Home Science Extension Education**

Needs and methods, vocationalization of Home Science in India, self-employment and Entrepreneurship through Home Science.

### **References**

1. O.P.Dahama, O.P.Bhatnagar, Education and communication for Development, 2nd edition, Oxford and IBH publishing Co., Pvt.Ltd.New Delhi.
2. S.V.Supe. An Introduction to Extension Education, Oxford and IBH publishing Co., Pvt.Ltd.New Delhi.
3. A.Advivi Reddy, Extension Education, Sreelakshmi press, Bapla.
4. Dale.E, Audio Visual methods in teaching, The Dryden Press, New York.
5. Kulendaivel.K, Audio Visual Education, Sri Ramakrishna Mission Vidyalaya, Coimbatore.
6. Dey.S.K, Panchayat Raj, Asia publishing house, Bombay, 1961.
7. Waghmore.S.K, Teaching Extension Education, Prasant publishers, Vallabha, Vidhyanagar, 1980.

## OPEN COURSES

### SEMESTER V

#### FCS5D01 FOOD SCIENCE AND BASIC COOKERY (OPEN COURSE)

Credit: 3

Theory 3hrs / week

##### *Objectives*

To enable students to understand the nutritive composition, methods of cooking and preservation of foods.

Sl No	Course Outcome	PSO	CL	KC	Class Sessions	Lab/F ield study
1	Understand structure, functions and classification of foods and different food groups	PSO 1	U	F	10	-
2	Understand the nutritional and anti-nutritional factors of various foods	PSO 1	Ap	P	12	-
3	Assess the effect of heat on foods and compare different methods of cooking	PSO 2	U	F	10	18
4	Understand food additives and different preservation methods for food processing	PSO 2	C	P	4	36
5	Understand the principle and types of browning reactions	PSO 1	U	F	4	
6	Develop different recipes and evaluate its nutritional content	PSO 2	C	P	14	18
Total hours of instruction					54	72

##### *Unit I Introduction to food science*

Functions of food, basic food groups and different methods and objectives of cooking.

##### *Unit II - Study of foods*

###### **a. Cereals**

Nutrient composition, effect of heat on starch and protein, role of ingredients in bread making and cake making.

**b. Pulses**

Nutritive value and germination, role of pulses in cookery.

**c. Vegetables**

classification and nutritive value and pigments.

**d. Fruits**

Composition and nutritive value, browning reaction

**e. Milk and milk products**

Nutrient composition, effect of milk on heating, fermented and non fermented milk products, role of milk in cookery.

**f. Eggs**

Nutritive value, characteristics of fresh eggs, role of egg in cookery. Salad dressing, stages of foam formation.

**g. Meat**

Nutrient composition and effect of cooking.

**h. Fish**

Nutritional composition and fish cookery.

**i. Fats and Oils**

Functions of oils and fats in food, rancidity.

**j. Beverages**

Classification, nutritional importance.

***Related experiences***

- i. Record the weight of 1 cup/ 1tbsp/ 1tsp of different types of food stuffs.  
Record the ratio of raw to cooked volume of rice, rava and pulses.  
Simple preparations using cereals, pulses, milk, vegetables, fruits, egg, meat and fish.
- ii. Salad dressing - mayonnaise
- iii. Baking – Cake, pizza, cookies (demonstration)
- iv. Food preservation – Jam, squash, jelly, pickles.

***References***

1. Norman, N. Potter and Hotchkiss, J.H, Food Science, CBSE publishers and Distributors, New Delhi, 1996.
2. Mudambi, S.R. and Rao, S.M. Food Science, New Age International (P) ltd. Bangalore, 1989.
3. Begum, M.P., A Text Book of Food, Nutrition and Dietetics, sterling Publishers Pvt. Ltd., New Delhi, 2001.
4. Srilakshmi, B., Food Science, New Age International Pvt. Ltd., New Delhi.
5. Mudambi, S.R. and Rajagopal M.V., Fundamentals of Food & Nutrition, New Age International (P) Ltd., New Delhi, 1990.
6. Swaminathan, M. Handbook of Food and Nutrition, the Bangalore Printing and Publishing Co., Ltd., Bangalore, 2003.

## SEMESTER V

### FCS5D02 INTERIOR DECORATION (OPEN COURSE)

**Credit: 3**

**Theory: 3hrs / Week**

#### Objectives

1. To make students conscious of aesthetics.
2. To help them understand beauty in design.
3. To develop in them an appreciation of art and design.

Sl No	Course Outcome	Pos/ PSO s	CL	KC	Class Sessions
1	Understand the elements and principles of design to create harmonious and balanced interior	PSO 1	U	F	10
2	Explain the properties of colour and its effects on the intended style	PSO 1	U	F	4
3	Discover the effect of natural and artificial light on colour and surface texture	PSO 3	An	F	2
4	Discover the importance of ensuring quality finishes on floor and walls to create professional and enduring interior space	PSO 3	An	C	6
5	Create striking and functional backdrop for furnishings and window treatments	PSO 2	C	M	6
6	Apply knowledge of design elements to the reality of placing objects in perfect manner	PSO 2	Ap	M	4
7	Create visual ideas about functional aspects of housing	PSO 2	C	M	4
8	Plan creative kitchen design by adapting principles	PSO 2	Ap	M	10
9	Summarise the elements of design in floral arrangement	PSO 2	U	F	8
Total hours of instruction					54

#### 1. Design

Definition and types- traditional, decorative, modern designs – naturalistic, stylized , geometric and abstract designs

#### 2. Elements of design

Line, texture and light- types and effects, space, colour

#### 3. Principles of design

Significance of : Proportion, balance, rhythm, emphasis and harmony.

#### **4. Colour theory**

Properties, prang's colour system, colour schemes, psychological implication of colours.

#### **5. Furniture selection and arrangement**

Principles of furniture selection and arrangement of furnitures in different rooms. Materials used in furniture construction.

#### **6. Window treatments**

Types- interior and exterior and curtain styles ( Priscilla, cottage set, café, swags, cascade, valances, blinds, straight curtains)

#### **7. Flower arrangement**

Types (mass, line, mass cum line,miniatureandJapanesearrangement( Ikebana, Bonsai)and principles. Materials used for flower arrangement.

#### **8. Accessories**

Classification- functional and decorative. Functions

#### **9. Home lighting**

Types( local & general), Methods of lighting(direct, indirect and semi direct),Sources of lighting ( Incandescent, fluorescent, structural and portable lamps), merits and demerits of incandescent bulbs and fluorescent tubes.

#### **10. House**

Functions, Principles of planning a house. Aspect &prospect.

#### **11. Kitchen**

Types (L shaped, U shaped, One way, Two way& Islandkitchens). Step saving kitchen and layouts. Kitchen work triangle.

**Related experience** \_ Types of design-decorative, traditional and modern

- \_ Elements of design-applications
- \_ Principles of design-illustrations
- \_ Colour wheel
- \_ Colour schemes
- \_ Curtain styles
- \_ Accessories
- \_ Flower arrangement

#### **References**

1. Nickel, P and Dorsey, J.M. Management in family living, Wiley Eastern Private Ltd, New Delhi, 1976
2. Gross, I.M & Grandall, D.W Management for ModernFamilies, 1973
3. Faulkner R & Faulkner S, Inside todays home,HoltRinchartWinston, Newyork
4. Rutt.A.H, Home furnishing, Wiley Eastern PrivateLtd, New Delhi
5. Varghese.M.A, Ogale, N.N.Sreenivasan,K home Management, New Age International
6. Agan.T, The house-its plan & use, J.P.Lippincottcompany, Newyork, 1970



## SEMESTER V

### FCS5D03 TEXTILES AND APPAREL DESIGNING (OPEN COURSE)

**Credit: 3**

**Theory: 3hrs / week**

#### *Objectives*

1. To recognize textile fibers.
2. To acquire ability in selecting textiles and constructing garments.
3. To develop self employment opportunities.

Sl No	Course Outcome	PSO	CL	KC	Class Sessions	Lab/Field study
1	Develop strong knowledge base in the fabric construction	PSO 1	U	F	17	
2	Understand about the various types of weaves	PSO 5	R&Ap	P	10	
3	Identify the traditional embroideries and textiles of india	PSO 1	U	C	13	-
4	Develop the basic skills in sewing	PSO 4	U	C	14	
Total hours of instruction					54	

#### **Unit I Fibre, yarn, theory and fabric construction**

Definition, types, spinning, loom, weaving.

#### **Unit II Weaves- Basic weaves and their variations**

Novelty weaves- types, pile, leno, lappet, swivel, dobby, jacquard, double cloth, cut spot, continuous weave, crepe.

#### **Unit III Fashion**

Definition, fashion cycle, fashion trends in India.

#### **Unit IV Traditional textiles and embroideries of India.**

#### **Unit V Printing and dyeing**

Types of dyes, printing methods.

#### **Related Experience**

1. Stitches- Basic hand and decorative (embroideries- any 10)
2. Seams and seam finishes.
4. Bias and its application.
5. Pockets- Set in, pocket in a seam, hip pocket.
6. Collars – Chinese, peter pan, full shirt
7. Plackets – Continuous bound, faced and bound broken kurta.
9. Demonstration of block prints

#### **References**

1. Hollen and Saddler; Textiles, Maxmillan.
2. Sushama Gupta, Neeru Garg, Renu Saini, Textbook of clothing and textiles, Kalyani publishers, Ludhiana.
3. Shailaja D Naik, Traditional Indian Textiles.
4. Essay M, Fashion Marketing, Blackwell Sciences Ltd., London.

# **MODEL QUESTION PAPER**

**MODEL QUESTION PAPER**

**FIRST SEMESTER B Sc DEGREE EXAMINATION, (CBCSS-UG)**

**Core Course- Family and Community science**

**FCS1B01- Fundamentals of Nutrition**

**Time: 2 Hours**

**Maximum Marks: 60**

**Section A**

**Answer all questions. Each question carries 2 marks.**

1. List out all essential amino acids
2. Give a note on polysaccharides
3. Symptoms of Kwashiorkor
4. Explain the role of PUFA in human body
5. Define EFA. Mention the names.
6. Define Reference Man
7. What is SDA of food
8. What are the Factors affecting Calcium Absorption
9. What are goiterogenic substances
10. What is RDA
11. Define Nutrition
12. What are the best protein rich foods and its requirement for different age groups

**(ceiling marks=20 Marks)**

**Section B**

**Short answer questions.**

**Answer all questions. Each question carries 5 marks**

13. Give a note on Classification of food
14. Explain the Digestion of Carbohydrates
15. Explain functions of Vitamin C
16. Write a note on the role of pancreas in digestion
17. Explain PEM and its treatment
18. Explain anemia and its types
19. Explain deficiency symptoms of Thiamin

**(ceiling marks=30 Marks)**

**Section C (Essay Questions)**

Answer any one Questions.

Each question carries 10 marks.

20. Define BMR. Explain the factors affecting BMR.

21. Describe the metabolism of Carbohydrate.

(1x10=10 Marks)

Model Question Paper  
SECOND SEMESTER B Sc DEGREE EXAMINATION,  
(CBCSS-UG)

Core Course- Family and Community science  
FCS2B02 –HUMAN DEVELOPMENT

Time: 2Hours

Max mks: 60

**Section A**

Answer all questions. Each question carries 2 marks

1. Medical care during pregnancy
2. Appearance of new born
3. Hemorrhoids
4. Tubal pregnancy
5. Define I.Q.
6. Define juvenile delinquency
7. Define gifted children
8. Characteristics of emotionally challenged children
9. Solitary play
10. Explain recapitulation theory
11. What is constructive play
12. What are the adjustments of neonate.

(ceiling marks=20 Marks)

**Section B**

Short answer questions.

Answer all questions. Each question carries 5 marks

13. Complication during pregnancy
14. Sensory abilities of new born
15. Factors influencing pre-natal development
16. Enlist any four principles of growth and development
17. What are the different types of play?
18. Types of pre- school
19. Adolescent is a period of storm and stress. Why?

(ceiling marks30 Marks)

### **Section C (Essay Questions)**

Answer any one Question. Each question carries 10 marks

20. Discuss the various factors affecting growth and development
21. Explain exceptional children under the following heading 1. Classification 2. Causes of mentally retardation 3. Prevention of mentally retardation 4. Care of mental retardation 5. Care of gifted children.

(1x10=10)

Model Question Paper  
THIRD SEMESTER B Sc DEGREE EXAMINATION,  
(CBCSS-UG)  
Core Course- Family and Community science  
FCS3B03 – RESEARCH METHODOLOGY AND BIOINFORMATICS

Time : 2 Hours

Maximum Marks: 60

**Section A**

Answer all questions. Each question carries 2 marks

1. Define applied research
2. What is meant by dependent variable
3. Briefly explain random sampling
4. What are the steps to be remembered in preparing a questionnaire
5. What is meant by hypothesis
6. List the qualities of a good research
7. Define bioinformatics
8. Write on EMBL
9. What are proteomics and genomics?
10. What is meant by data base?
11. What is genbank?
12. Write a note on sequence alignment

(ceiling marks=20 Marks)

**Section B**

Short answer questions.

Answer all questions. Each question carries 5 marks

13. Write a note on experimental design
14. Give a short note on action research
15. Explain briefly observations and its types
16. Write merits and demerits of sampling
17. Explain nucleotide sequence data bases
18. Explain reporting
19. Write a note on data base search engines

(ceiling marks30 Marks)

**Section C (Essay Questions)**

Answer any one Questions.

Each question carries 10 marks.

20. Explain scope of bioinformatics in different fields

21. Define research. Explain the types of research.

(1x10=10 Marks)



Model Question Paper

FOURTH SEMESTER B Sc DEGREE EXAMINATION

(CBCSS-UG)

Core Course- Family and Community science

FCS4B04- FOOD SCIENCE

Time : 2 Hours

Maximum Marks: 60

**Section A**

Answer all questions. Each question carries 2 marks

1. Write components of starch
2. Explain EFA
3. Briefly explain Tenderisation of meat
4. What are the different pigments present in vegetables and its effect on cooking
5. Explain Food groups
6. Define gelatinization
7. Explain food pyramid
8. Explain different methods of cooking
9. Write on crystallization
10. Explain nutritional significance of Fish
11. What are the different methods to determine the quality of egg?
12. What is meant by EFA

(ceiling marks=20 Marks)

**Section B**

Short answer questions.

Answer all questions. Each question carries 5 marks

13. Write a note on Stages of sugar cookery
14. Give a short note on rancidity
15. Explain briefly post mortem changes
16. Write the merits of germination
17. Explain the factors affecting gluten formation
18. Explain parboiling and its advantages and disadvantages
19. Explain Types of browning.

(ceiling marks30 Marks)

**Section C (Essay Questions)**

Answer any one Question.

Each question carries 10 marks.

- 20. Explain the structure of a cereal grain with diagram
- 21. Different methods of food preservation

(1x10=10 Marks)

Model Question Paper  
FIFTH SEMESTER B Sc DEGREE EXAMINATION  
(CBCSS-UG)  
Core Course- Family and Community science  
FCS5B05 –HUMAN PHYSIOLOGY AND MICROBIOLOGY

Time : 2 Hours

Maximum Marks: 60

**Section A**

Short answer questions.

Answer all questions.

Each question carries 2 marks.

1. List out the functions of Vagina
2. Give a note on salivary gland
3. Draw the waves of normal ECG
4. Explain the role of Aldosterone in human body
5. List out the composition of urine
6. Erythroblastosis fetalis
7. What is lag phase
8. Define a bacteriophage
9. What is herd immunity
10. What is endemic disease
11. Write on food spoilage
12. What are the methods and organism used for food fermentation

(ceiling marks=20)

**Section B**

Answer all questions in a paragraph

Each question carries 5 marks

13. Give a note on uterine cycle
14. Explain the Movement of Gastro intestinal tract
15. Explain any six properties of cardiac muscles
16. What is Micturition, explain its reflex?
17. Write a note on stages of bacterial growth

- 18. Explain economic importance of yeast
- 19. Explain viral diseases in brief

(ceiling marks 30 Marks)

**Section C (Essay Questions)**

Answer any one Questions.

Each question carries 10 marks.

- 20. Describe Cardiac Cycle and Heart Sound.
- 21. Write an essay on the control and destruction of bacteria

(1x10=10 Marks)

Model Question Paper  
FIFTH SEMESTER B Sc DEGREE EXAMINATION, (CBCSS-UG)  
Core Course- Family and Community science  
FCS5B06 –DIET IN HEALTH

Time : 2.5Hours

Maximum Marks: 80

**Section A**

Short answer questions.

Answer all questions.

Each question carries 2 marks.

1. Who is ARF?
2. What is the menu planning?
3. What is IDD?
4. Objectives of FAO
5. Give the RDA for male computer professional
6. Anorexia nervosa
7. Balanced diet
8. What are lactagogue? Give example
9. Define nutritional assessment
10. Define weaning
11. Why dental carries is common among school children?
12. What is carbohydrate loading?
13. Give the five food group system.
14. Requirement of four main nutrients in pregnancy.
15. What is the role of breast milk in infant immunity? (ceiling marks=25 Marks)

**Section B**

Answer all questions in a paragraph

Each question carries 5 marks

16. What are important physiological changes during pregnancy?
17. What are the objectives of school lunch programme?
18. What is complementary feeding?
19. "Obesity is an emerging problem among school children". Why?

20. Explain the process of ageing?
21. Give nutritional requirements in adults
22. What are the immunological advantages of breast milk?
23. Explain the role of water for a sport person

(ceiling marks=35 Marks)

**Section C**  
**(Essay Questions)**

Answer any two Questions.

Each question carries 10 marks.

24. Explain the importance of nutrients in elderly. How can you modify the diet for elderly?
25. Bring out the nutritional requirements and nutritional problems of teenagers.
26. Explain the reasons for increased nutrient requirement in lactation.
27. Discuss in detail the factors affecting menu planning

(2x10=20 Marks)

Model Question Paper  
FIFTH SEMESTER B Sc DEGREE EXAMINATION,  
(CBCSS-UG)  
Core Course- Family and Community science  
FCS5B07 –FAMILY RESOURCE MANAGEMENT

Time : 2.5 Hours

Maximum Marks: 80

**Section A**

Short answer questions.

Answer all questions. Each question carries 2 marks.

1. Mention the four dimensions of colour
2. Define work simplification
3. Enlist two means to optimize satisfaction derived from the utilization of family and community resources quoting examples
4. State the advantages of Gantt chart.
5. Write a short note on types of income
6. Define rhythm and its type
7. List out different functions of window treatments.
8. What are the steps in management process?
9. What is waste management?
10. Define time management
11. What is ambient lighting?
12. Explain work triangle.
13. Illustrate café curtain.
14. Explain types of values.
15. Comment on standards.

(ceiling marks=25Marks)

**Section B**

Answer all questions in a paragraph. Each question carries 5 marks

16. What are resources? Differentiate between human and material resources with example.
17. Enumerate the qualities of a good Home maker.
18. Describe the factors in the selection of a site for house construction.
19. State the important of supplementing income with a few examples suitable for low income families.

20. Discuss the steps in preparing of time schedule. Prepare a time schedule suitable for an employed home maker.
21. Elaborate with illustrations the six curtain styles stating where each one could be applied.
22. What are the elements of design?
23. List primary and secondary colour.

(ceiling marks=35Marks)

**Section C (Essay Questions)**

Answer any two Questions. Each question carries 10 marks.

24. State the important of maintaining household accounts
25. Discuss the various steps and factor's to be considered while making time plan
26. Explain the type of window treatments with illustration
27. Describe the principles of design with suitable illustration

(2x10=20 Marks)



Model Question Paper  
FIFTH SEMESTER B Sc DEGREE EXAMINATION,  
(CBCSS-UG)

Core Course- Family and Community science

FCS5B08 –TEXTILE SCIENCE

Time : 2.5 Hours

Maximum Marks : 80

**Section A**

Short answer questions.

Answer all questions. Each question carries 2 marks.

1. What is a regenerated fiber?
2. What is a novelty yarn?
3. What is plain weave?
4. What is bonding?
5. Define knitting
6. What is the cross section of a cotton fiber
7. Define 'fibre'
8. Write a note on sanforization
9. What is resist printing
10. What is spinning?
11. Explain napping?
12. What is fabric count.
13. Differentiate between blends and mixtures.
14. What is bi component spinning?
15. What are the effects of mercerization on cotton ?

(ceiling marks=25 Marks)

**Section B**

Answer all questions in a paragraph. Each question carries 5 marks

22. What is wet spinning?
23. Give the identification of rayon and wool
24. Write a note on bicomponent and biconstituent yarn
25. Write a note on yarn twist
26. What is a pile weave?
27. Discuss about bleaching and mercerization
28. Write a note on ecolabels
29. Write a note on rotary printing

(ceiling marks=35 Marks)

**Section C**  
**(Essay Questions)**

Answer any two Questions. Each question carries 10 marks.

- 30. Explain the classification of fibres according to their source
- 31. Write in details about the different finishes used on textile
- 32. Discuss about fancy weave
- 33. Explain in detail about printing (2x10=20 Marks)

**Model Question Paper**  
**VIMALA COLLEGE (AUTONOMOUS), THRISSUR**  
**FIFTH SEMESTER B.Sc. DEGREE EXAMINATION**  
**BSc. FAMILY AND COMMUNITY SCIENCE**  
**(CBCSS-UG)**

**Core Course- FCS5D01- FOOD SCIENCE AND BASIC COOKERY (Open course)**

Time: 2 Hours

Maximum Marks: 60

**Section A**

Answer all. Each question carries 2 mark

1. What is dextrinisation?
2. Explain enzymatic browning.
3. What are the pigments in vegetables?
4. Explain poor man's milk.
5. What all are the importance of breakfast cereals?
6. Describe the effects of germination on pulses.
7. Name any five pigments present in vegetables.
8. Write down the different proteins in egg white and egg yolk.
9. Write any three nutritional importance of meat.
10. Explain sugar crystallization.
11. Explain the role of egg in cake making.
12. What are leavening agents?

ceiling marks=20

**Section B**

Answer all. Each question carries 5 marks.

13. Explain rancidity in detail.
14. Objectives of cooking.
15. Describe browning reaction.
16. Explain caramilization of sugar
17. Importance of food preservation.
18. Give the functions of oils and fat.
19. Describe the nutritional importance of beverages.

ceiling marks30

### **Section C**

Answer any one. Each question carries 10 marks.

20. Explain the different methods of cooking with suitable examples.
21. Explain nutritional composition and importance of fish cookery.

1x10=10

Model Question paper

FIFTH SEMESTER B Sc DEGREE EXAMINATION,

(CBCSS-UG)

Core Course- Family and Community science

FCS5D02 – INTERIOR DECORATION (open course)

Time: 2 hours

Maximum marks: 60

**Section A**

Answer all questions. Each question carries 2 marks

1. Explain Japanese arrangement.
2. What is intermediate colour?
3. Functional accessories
4. What is monochromatic colour scheme?
5. What are decorative accessories?
6. Differentiate between tint and shade.
7. Explain the types of line.
8. Illustrate café curtain.
9. Draw a kitchen layout for a studio apartment.
10. What are miniature arrangements.
11. What is radial balance?
12. Explain work triangle.

(ceiling marks=20 Marks)

**Section B**

Answer all questions . Each question carries 5 marks

13. Explain the types of window treatment?
14. What are the materials used for flower arrangement?
15. Explain rhythm and harmony
16. Explain formal and informal balance
17. Explain psychological impact of blue colour?
18. Classify and explain colour schemes.
19. Describe the various curtain styles.

(ceiling marks30 Marks)

**Section C (essay questions)**

Answer any one Question. Each question carries 10 marks.

20. Explain flower arrangement under the following heading

a)Types b) Materials used c) Mass arrangement

21. Explain colours with the help of Prang's colour wheel.

(10 x1=10 Marks)

**Model Question Paper**  
**VIMALA COLLEGE (AUTONOMOUS), THRISSUR**  
**FIFTH SEMESTER B.Sc. DEGREE EXAMINATION**  
**BSc. FAMILY AND COMMUNITY SCIENCE**  
**(CBCSS-UG)**

**Core Course- FCS5D03- TEXTILES AND APPAREL DESIGNING (Open course)**

Time: 2 Hours

Maximum Marks: 60

**Section A**

Answer all. Each question carries 2 marks.

1. What is a fiber?
2. What is jacquard loom?
3. What is Chamba Rumal?
4. Explain kalamkari.
5. What is screen printing?
6. Comment on ecofriendly dyes.
7. Define a yarn.
8. Classify dyes.
9. What is fad and classic
10. Explain dobby weave.
11. What is a bagh?
12. Why is chikankari termed as white embroidery?

ceiling marks=20

**Section B**

Answer all. Each question carries 5 marks.

13. Explain jacquard.
14. What is fashion?
15. Describe on any two types of printing.
16. Explain kashida embroidery.
17. Write a brief note on hand embroidery and machine embroidery.
18. Explain fashion cycle.
19. Explain types of phulkari

ceiling marks30

### **Section C**

Answer any one. Each question carries 10 marks.

20. Describe about traditional textiles and embroideries of India.
21. Explain types and methods of printing.

1x10=10



Model Question Paper  
SIXTH SEMESTER B Sc DEGREE EXAMINATION,  
(CBCSS-UG)

Core Course- Family and Community science

FCS6B09- DIETETICS

Time : 2.5 Hours

Maximum Marks: 80

**Section A**

Short answer questions.

Answer all questions.

Each question carries 2 marks.

1. What is TPN?
2. What is GTT?
3. What is keraomalacia?
4. What are the aetiological factors of type II diabetes?
5. State on osmotic diarrhoea
6. What is DASH?
7. Classify BMI.
8. Write on carcinogens
9. What are hypocholesterolemic agents?
10. What are the metabolic changes of fever?
11. What are the preventive measures for constipation?
12. Agents responsible for liver disease.
13. Why fibre intake is restricted during cirrhosis?
14. What is low residue diet?
15. What are the components of dash diet?

ceiling marks=25

Marks)

**Section B**

Answer all questions in a paragraph

Each question carries 5 marks

16. Explain dietary management of cirrhosis
17. Plan a days diet for a person suffering from hypertension and discuss.
18. Explain the role of fat in the cause of atherosclerosis
19. Describe the type of diet advised for a preschooler child suffering from PEM
20. Explain the dietary management for nephritis.
21. Elaborate the process of cancer cell formation
22. What is enteral nutrition? What are the conditions in which enteral nutrition is suggested?

23. Write any five code of ethics for a dietician

ceiling marks=35 Marks

**Section C (Essay Questions)**

Answer any two Questions.

Each question carries 10 marks.

24. Explain symptoms and dietary management of peptic ulcer

25. Explain the symptoms, types and complications of diabetes mellitus

26. Elaborate on causes, complications and dietary management of obesity

27. What is cancer? What are the dietary modifications required while treating cancer patients? (2x10=20 Marks)

Model Question Paper  
SIXTH SEMESTER B Sc DEGREE EXAMINATION,  
(CBCSS-UG)  
Core Course- Family and Community science  
FCS6B10 –FABRIC CARE AND APPAREL DESIGNING

Time : 2.5 Hours

Maximum Marks: 80

**Section A**

Short answer questions.

Answer all questions. Each question carries 2 marks.

1. Explain the causes of permanent hardness,
2. Define fashion cycle
3. Why does thread break during sewing?
4. What kind of clothes will you select for a very thin figure?
5. What are the different stages of fashion cycle?
6. What is visual merchandising?
7. What is Phulkari?
8. What is the importance of correcting stitch tension?
9. What are the basic requirement of sewing machine?
10. Write a note on bleaches
11. Four type of figures
12. Explain soft water.
13. How are stains identified?
14. Explain the theory of detergency.
15. What are pitambers?

(ceiling marks=25 Marks)

**Section B**

Answer all questions in a paragraph. Each question carries 5 marks

16. What are the principles used during laundering of cotton fabric?
17. What is detergent?
18. What are stiffening agent? How it is applied in fabric?
19. How can lipstick stain be removed from the cotton fabric?
20. How will launder a woolen sweater?
21. What are optical brighteners?
22. Write a note on tools used in sewing
23. What are the steps in fabric before cutting?

(ceiling marks=35 Marks)

**Section C (Essay Questions)**

Answer any two Questions. Each question carries 10 marks.

24. How will you select clothing for a following figure? Illustrate

(a) A short figure (b) Tall and stout figure (c) A plump figure

25. Write a note on:

(a) Kantha of Bnegal (b) Phulkari of Punjab (c) kalamkari

26. Describe how following stains can be removed

(a) Blood stain (b) coffee stain (c) iron rust (d) mildew

27. Explain the laundering and storing principles for wool and rayon

(2x10=20 Marks)

Model Question Paper  
SIXTH SEMESTER B Sc DEGREE EXAMINATION,  
(CBCSS-UG)

Core Course- Family and Community science  
FCS6B11 –CONCEPTS IN FAMILY RELATION

Time : 2 Hours

Maximum Marks: 60

**Section A**

Short answer questions.

Answer all questions. Each question carries 2 marks.

- 1 Define family
- 2 Define marriage
- 3 Stages of family cycle
- 4 Alcoholism
- 5 Courtship
- 6 Extended family
- 7 Contraception
- 8 Infidelity
- 9 Family planning
- 10 Single parent family
- 11 Polyandry
- 12 Mental health

(ceiling marks=20 Marks)

**Section B**

Answer all questions in a paragraph. Each question carries 5 marks

- 13 Differentiate between desertion and divorce?
- 14 comment on contemporary issues in family life
- 15 What are the major objectives of marriage?
- 16 Discuss the merits and demerits of nuclear family
- 17 Give your views on mate selection
- 18 Enumerate the functions of marriage
- 19 Bring out the importance of Counseling.

(ceiling marks=30 Marks)

### **Section C (Essay Questions)**

Answer any one Question. Each question carries 10 marks.

- 20 Enumerate the major functions of family
- 21 Explain different types of deviant sexual behaviors

(1x10=10 Marks)

**Model Question Paper**

**VIMALA COLLEGE (AUTONOMOUS), THRISSUR**

**SIXTH SEMESTER B.Sc. DEGREE EXAMINATION**

**HOME SCIENCE (TEXTILES AND FASHION TECHNOLOGY) (CBCSS-UG)**

**Core Course- FCS6B12(E1) ENTREPRENEURSHIP MANAGEMENT**

Time: 2 Hours

Maximum Marks: 60

**Section A**

Answer all. Each question carries 2 marks.

1. What is Entrepreneurship ?
2. What is EDP ?
3. What is KITCO?
4. What is women Entrepreneur?
5. Define SSI
6. What is entrepreneur?
7. What is project formulation?
8. Compare the function of NSIC and KVIC
9. What are characteristics of an entrepreneur ?
10. Distinguish between entrepreneur and entrepreneurship.
11. Give the classification of projects.
12. What is project planning?

ceiling marks=20

**Section B**

Answer all. Each question carries 5 marks.

13. Explain supporting mechanism incentives and facilities from government.
14. Explain Project Life cycle.
15. Compare the function of NSIC and KVIC.
16. Give the classification of projects.
17. Write about the remedies to solve the problem faced by women entrepreneur
18. Write the characteristics of SSI.
19. Write down the problems faced by women entrepreneur.

ceiling marks=30

**Section C**

Answer any one. Each question carries 10 marks

20. What do you mean by EDP? Explain the objectives of EDP
  21. Entrepreneurship Development holds the key for rapid economic and social development of India
- 1x10=10

Model Question Paper

SIXTH SEMESTER B Sc DEGREE EXAMINATION, (CBCSS-UG)

Core Course- B.Sc. Family and Community science

FCS6B12(E2)- QUANTITY FOOD PREPARATION TECHNIQUES (Elective)

Time:2 Hours

Maximum Marks: 60

**Section A**

Short answer questions.

Answer all questions.

Each question carries 2 marks.

1. Explain transport catering
2. Write on menu presentation
3. Give a note on Purchase order
4. Write about dry storage
5. List out portion control equipments
6. List out Objectives of food production
7. Give a note on Agmark
8. What is vending?
9. What is over head cost?
10. Explain delivery procedure
11. Give a short note on mode of purchase
12. What is cyclic menus?

(ceiling marks=20

Marks)

**Section B**

Answer all questions in a paragraph

Each question carries 5 marks

13. Give a note on Catering segments
14. Explain the difference between A la carte and Table d' hote menu
15. Detail the different methods of food purchasing
16. Explain different types of cold storage method
17. Give a note on methods of food production
18. Explain the factors responsible for losses in food cost
19. Explain the behavior of food cost

(ceiling marks=30

Marks)



**Section C (Essay Questions)**

Answer any one Question.

Each question carries 10 marks.

20. Explain Menu under the following headings  
a) Factors affecting menu planning b) Menu Pricing
21. Elaborate the styles of service

(1x10=10 Marks)

## **Model Question Paper**

**VIMALA COLLEGE (AUTONOMOUS), THRISSUR**

**SIXTH SEMESTER B.Sc. DEGREE EXAMINATION**

**B.Sc. FAMILY AND COMMUNITY SCIENCE (CBCSS-UG)**

**Core Course- FCS6B12 (E3) EXTENSION AND COMMUNICATION**

Time: 2 Hours

Maximum Marks: 60

### **Section A**

Answer all. Each question carries 2 marks.

1. What is extension?
2. What is philosophy?
3. Describe rural and urban.
4. What is JRY?
5. What is NAEP?
6. Define communication.
7. Define leadership.
8. Explain the importance and definition of communication.
9. What is classification of extension teaching method?
10. Describe needs and methods of home science extension.
11. Describe community development in india.
12. Briefly explain the scope and objectives of extension. ceiling marks=20

### **Section B**

Answer any four. Each question carries 6 marks.

13. Describe on the types of communities on rural and urban.
14. Explain audio visual aids.
15. Describe about the program planning in extension.
16. Explain IRDP,JRY,NAEP,DWCRA.
17. Describe on the origin and history of community development programs.
18. Explain the objective of extension education in India.
19. Explain rural sociology. ceiling marks=30

### **Section C**

Answer any one. Each question carries 10 marks

20. Explain importance and elements of communication
21. Explain about self-employment and entrepreneurship through Home Science.

1X10=10