Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 440033

Scheme and Syllabus

Bachelor of Science (Home Science)

Submitted by

Board of Studies,

Bachelor of Science (Home Science)

FYUGP- Scheme I-VIII Semester

Bachelor of Science (Honors/Research)

(Home Science - Major)
Four Year (Eight Semester Degree Course)
Teaching and Examination Scheme

B.Sc. Sem-I (Home Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme Hrs.			Total Credits	Examination Scheme						
								Theory				Practical		
				TH	TU	P		Exam Hrs	SEE	CIE	Min	SEE	CIE	Min
1	DSC	Fundamentals of Food and Nutrition	BHS1T01	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Fundamentals of Food and Nutrition	BHS1P01	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Fundamentals of Human Development	BHS1T02	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Fundamentals of Human Development	BHS1P02	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO1T01	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO1T02	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Refer VSC Basket	BVS1P01(A) BVS1P01(B)	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS1P02(A) BVS1P02(B) BVS1P02(C)	-	-	4	2	-	-	-	-	50	50	50
9	AEC	Compulsory English	BAE1T01	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Environmental Science	BVE1T01	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Indian Knowledge of Home Science - I	BIK1T01	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC1P01	-	-	4	2	-	-	-	-	-	100	50
				14	-	16	**22**		**530**	**170**		**125**	**275**	

B.Sc. Sem-II (Home Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Fundamentals of Textile and Clothing	BHS2T03	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Fundamentals of Textile and Clothing	BHS2P03	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Interior Decoration and Design	BHS2T04	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Interior Decoration and Design	BHS2P04	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO2T03	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO2T04	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Refer VSC Basket	BVS2P03(A) BVS2P03(B) BVS2P03(C)	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS2P04(A) BVS2P04(B) BVS2P04(C)	-	-	4	2	-	-	-	-	50	50	50
9	AEC	Second Language	BAE2T02	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Constitution of India	BVE2T02	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Indian Knowledge of Home Science – II	BIK2T02	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC2P02	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**	-	**125**	**275**	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

B.Sc. Sem-III (Home Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Fundamentals of Home Science Extension	BHS3T05	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Fundamentals of Home Science Extension	BHS3P05	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Chemistry in Home Science	BHS3T06	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Chemistry in Home Science	BHS3P06	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 1 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 1 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 2 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 2 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OEBasket	BGO3T05	2	-	-	2	3	80	20	40	-	-	-
10	VSC	Refer VSC Basket	BVS3P05(A) BVS3P05(B) BVS3P05(C)	-	-	4	2	-	-	-	-	50	50	50
11	AEC	Second Language	BAE3T03	2	-	-	2	3	50	50	40	-	-	-
12	FP	Field Project	BFP3P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC3P03	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	22		450	150		150	350	

B.Sc. Sem-IV (Home Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Family and Community Nutrition	BHS4T07	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Family and Community Nutrition	BHS4P07	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Physics in Home Science	BHS4T08	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Physics in Home Science	BHS4P08	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 3 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 3 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 4 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 4 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO4T06	2	-	-	2	2	80	20	40	-	-	-
10	SEC	Refer SEC Basket	BVS4P06(A) BVS4P06(B) BVS4P06(C) BVS4P06(D)	-	-	4	2	-	-	-	-	50	50	50
11	AEC	English Compulsory	BAE4T03	2	-	-	2	3	50	50	40	-	-	-
12	CEP	Community Service (Community Health and Family Welfare)	BCM4P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC4P04	-	-	4	2	-	-	-	-	50	50	50
Total				12	-	20	**22**		**450**	**150**		**150**	**350**	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

B.Sc. Sem-V (Home Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Childhood and Adolescent Development	BHS5T09	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Childhood and Adolescent Developmet	BHS5P09	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Fabric Construction	BHS5T10	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Fabric Construction	BHS5P10	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Resource Management	BHS5T11	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Resource Management	BHS5P11	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 1 (Refer Elective DSE Basket)	BHS5T12	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 1 (Refer Elective DSE Basket)	BHS5P12	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 5 (Refer Minor Basket		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 5 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	Minor	Minor 6 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
12	Minor	Minor 6 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
13	VSC	Refer VSC Basket	VS5P07(A) VS5P07(B)	-	-	4	2	-	-	-	-	50	50	50
14	CEP	Community Service and Family Welfare	BCM5P02	-	-	2	1	-	-	-	-	25	25	25
Total				**13**	**-**	**18**	**22**	**-**	**520**	**130**	**--**	**150**	**300**	**-**

B.Sc. Sem-VI (Home Science- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Developmental Programme	BHS6T13	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Developmental Programme	BHS6P13	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Gerontology and Care of Elderly	BHS6T14	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Gerontology and Care of Elderly	BHS6P14	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Household Biology- Human Physiology	BHS6T15	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Household Biology- Human Physiology	BHS6P15	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 2 (Refer Elective Basket)	BHS6T16	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 2 (Refer Elective Basket)	BHS6P16	-	-	2	1	-	-	-	-		50	25
9	Minor	Minor 7 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 7 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	VSC	Refer VSC Basket	BVS6P08(A) BVS6P08(B)	-	-	4	2	-	-	-	-	50	50	50
12	OJT	Internship (Related toDSC)	BOJ6P01	-	-	8	4	-	-	-	-	100	100	100
Total				**11**	**-**	**22**	**22**		**440**	**110**		**225**	**325**	

Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor

B.Sc. Sem-VII (Honors) (Home Science - Major)

S N	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	FSN 1/HD 1/ T and C 1/ RM1/ HSc.Ext 1	BHS7T17	2	-	-	2	3	80	20	40	-	-	-
2	DSC	FSN 1/HD 1/ T and C 1/ RM1/ HSc Ext 1	BHS7P17	-	-	2	1	-	-	-	-	25	25	25
3	DSC	FSN 2/HD 2/ T and C 2/ RM 2/ HSc Ext 2	BHS7T18	2	-	-	2	3	80	20	40	-	-	-
4	DSC	FSN 2/HD 2/ T and C 2/ RM 2/ HSc Ext 2	BHS7P18	-	-	2	1	-	-	-	-	-	50	25
5	DSC	FSN 3/HD 3/ T and C 3/ RM 3/ HSc Ext 3	BHS7T19	2	-	-	2	3	80	20	40	-	-	-
6	DSC	FSN 3/HD 3/ T and C 3/ RM 3/ HSc Ext 3	BHS7P19	-	-	2	1	-	-	-	-	25	25	25
7	DSC	FSN 4/HD 4/ T and C 4/ RM 4/ HSc Ext 4	BHS7T20	2	-	-	2	3	80	20	40	-	-	-
8	DSC	FSN 4/HD 4/ T and C 4/ RM 4/ HSc Ext 4	BHS7P20	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 3	BHS7T21	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 3	BHS7P21	-	-	2	1	-	-	-	-	25	25	25
11	RM	Research Methodology	BHS7T22	2	-	-	2	3	80	20	40	-	-	-
12	RM	Research Methodology	BHS7P22	-	-	4	2	-	-	-	-	50	50	50
Total				**13**	**-**	**14**	**20**		**520**	**130**		**125**	**225**	

B.Sc. Sem-VIII (Honors) (Home Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	FSN 1/HD 1/ T and C 1/ RM 1/ HSc Ext 1	BHS8T23	2	-	-	2	3	80	20	40	-	-	-
2	DSC	FSN 1/HD 1/ T and C 1/ RM 1/ HSc Ext 1	BHS8P23	-	-	2	1	-	-	-	-	25	25	25
3	DSC	FSN 2/HD 2/ T and C 2/ RM 2/ HSc Ext2	BHS8T24	2	-	-	2	3	80	20	40	-	-	-
4	DSC	FSN 2/HD 2/ T and C 2/ RM 2/ HSc Ext 2	BHS8P24	-	-	2	1	-	-	-	-	-	50	25
5	DSC	FSN 3/HD 3/ T and C 3/ RM 3/ HSc Ext 3	BHS8T25	2	-	-	2	3	80	20	40	-	-	-
6	DSC	FSN 3/HD 3/ T and C 3/ RM 3/ HSc Ext 3	BHS8P25	-	-	2	1	-	-	-	-	25	25	25
7	DSC	FSN 4/HD 4/ T and C 4/ RM 4/ HSc Ext 4	BHS8T26	2	-	-	2	3	80	20	40	-	-	-
8	DSC	FSN 4/HD 4/ T and C 4/ RM 4/ HSc Ext 4	BHS8P26	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 4	BHS8T27	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 4	BHS8P27	-	-	2	1	-	-	-	-	25	25	25
11	OJT	Apprenticeship (Related to DSC)	BOJ8P02	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	18	**20**		**440**	**110**		**175**	**275**	

Four Year UG Honours Degree in Major and Minor with 160-176 credits

B.Sc. Sem-VII (Research) (Home Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	FSN 1/HD 1/ T and C 1/RM 1/ HSc Ext 1	BHS7T17R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	FSN 1/HD 1/ T and C 1/RM 1/ HSc Ext 1	BHS7P17R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	FSN 2/HD 2/ T and C 2/ RM 2/ HSc Ext 2	BHS7T18R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	FSN 2/HD 2/ T and C 2/ RM 2/ HSc Ext 2	BHS7P18R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	FSN 3/HD 3/ T and C 3/ RM 3/ HSc Ext 3	BHS7T19R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	FSN 3/HD 3/ T and C 3/ RM 3/ HSc Ext 3	BHS7P19R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 3	BHS7T20R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 3	BHS7P20R	-	-	2	1	-	-	-	-	-	50	25
9	RM	Research Methodology	BHS7T21R	2	-	-	2	3	80	20	40	-	-	-
10	RM	Research Methodology	BHS7P21R	-	-	4	2	-	-	-	-	50	50	50
11	RP	Research Project/ Dissertation (Core)	BRP7P01	-	-	6	3	-	-	-	-	75	75	75
Total				**11**	**-**	**18**	**20**		**440**	**110**		**175**	**275**	

'R' in the subject code indicates 'Research'.

B.Sc. Sem-VIII (Research) (Home Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min
1	DSC	FSN 1/HD 1/ T and C 1/RM 1/ HSc Ext 1	BHS8T22R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	FSN 1/HD 1/ T and C 1/RM 1/ HSc Ext 1	BHS8P22R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	FSN 2/HD 2/ T and C 2/ RM 2/ HSc Ext 2	BHS8T23R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	FSN 2/HD 2/ T and C 2/ RM 2/ HSc Ext 2	BHS8P23R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	FSN 3/HD 3/ T and C 3/ RM 3/ HSc Ext 3	BHS8T24R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	FSN 3/HD 3/ T and C 3/ RM 3/ HSc Ext 3	BHS8P24R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 4	BHS8T25R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 4	BHS8P25R	-	-	2	1	-	-	-	-	-	50	25
9	RP	Research Project / Dissertation (Core)	BRP8P02	-	-	14	7 (4+2 +1)	-	-	-	-	175	175	175
Total				**09**	**-**	**22**	**20**		**360**	**90**		**225**	**325**	

'R' in the subject code indicates 'Research'.

Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits

Total Credits:

1. Three Year UG Degree Program: 132
2. Four Year UG Degree Program: 172

Abbreviations: Generic/Open Electives: OE, Vocational Skills & Skill Enhancement Courses: VSEC, Vocational SkillCourses: VSC, Skill Enhancement Courses: SEC, Ability Enhancement Courses: AEC, Indian Knowledge Systems: IKS, Value Education Courses: VEC, On Job Training (Internship/Apprenticeship): OJT, Field Project: FP, Community Engagement & Service: CEP, Co-curricular Courses: CC, Research Methodology: RM, Research Project: RP

Basket for VSC Category Courses (HOME SCIENCE)

Semester	Course Category	Name of Course	BOS	Course Code
I	VSC	Basic Garments and Accessory Making Water quality Testing	Home Science	BVS1P01(A) BVS1P01(B)
II	VSC	Early Childhood Education Measuring Instrument Horticulture	Home Science	BVS2P03 (A) BVS2P03 (B) BVS2P03 (C)
III	VSC	Nursing Methods Electric Safety and Maintenance Housing and Home Furnishing	Home Science	BVS3P05(A) BVS3P05(B) BVS3P05(C)
V	VSC	Information Communication Techniques Bakery and Confectionary	Home Science	BVS5P07(A) BVS5P07(B)
VI	VSC	Pattern Making and Fashion Designing Event Management	Home Science	BVS6P08 (A) BVS6P08 (B)

Basket for <u>ELECTIVE</u> (DSE) Category Courses (Home Science)

Semester	Course Category	Name of Course	Course Code
V	Elective 1	A. Entrepreneurship Management	BHS5T12
		B. Nutritional Biochemistry	
VI	Elective 2	A. Toy Based Pedagogy	BHS6T16
		B. Diet Therapy	
VII (Honors)	Elective 3	A. Food Science and Nutrition	BHS7T21
		B. Human Development	
		C. Textile & Clothing	
		D. Resource Management	
		E. Home Science Extension	
VIII (Honors)	Elective 4	A. Food Science and Nutrition	BHS8T27
		B. Human Development	
		C. Textile & Clothing	
		D. Resource Management	
		E. Home Science Extension	
VII (Research)	Elective 3	A. Food Science and Nutrition	BHS7T20R
		B. Human Development	
		C. Textile & Clothing	
		D. Resource Management	
		E. Home Science Extension	
VIII (Research)	Elective 4	A. Food Science and Nutrition	BHS7T25R
		B. Human Development	
		C. Textile & Clothing	
		D. Resource Management	
		E. Home Science Extension	

B.Sc. Home Science
Semester –I

B.Sc. Home Science Semester –I (DSC)
BHS1T01
Fundamentals of Food and Nutrition

Total Marks	**150**
Theory=SEE+ CIE	80+20 = 100
Practical=SEE +CIE	25+25 = 50

OBJECTIVES:

- To understand the functions of food and the role of various nutrients, their requirements and effects of deficiency.
- To promote basic knowledge pertaining to various food groups and nutrients.
- To make students familiar with the different methods of cooking, their advantages and disadvantages.

THEORY

UNIT- I

I-Introduction to Food and Nutrition

1. Basic terms used in Food and Nutrition- Definition- Food, Nutrition, Nutrients, and Balanced Diet
2. Functions of food- Physiological, psychological, and social
3. Characteristics of basic food groups and their contribution to the diet

II-Energy- Definition and factors affecting BMR

III-Carbohydrates- Definition, classifications, functions, sources, deficiency states, and digestion-absorption
Dietary Fibre- Types and sources

UNIT- II

I-Proteins- Definition, classifications, functions, sources, deficiency states, and digestion-absorption

II-Fats- Definition, classifications, functions, sources, deficiency states, and digestion-absorption

UNIT- III

I- Vitamins- Functions, Sources and Deficiency of:

a) Fat Soluble Vitamins:

i) Vitamin A ii) Vitamin D iii) Vitamin E iv) Vitamin K

b) Water Soluble Vitamins:

i) Thiamine (B_1) ii) Riboflavin (B_2) iii) Niacin (B_3) iv) Cyanocobalamin (B_{12}) v) Vitamin C

II- Minerals- Functions, Sources and Deficiency of:

i) Calcium ii) Phosphorus iii) Iodine iv) Iron v) Sodium vi) Potassium

Unit -IV

I-Water- Functions of water in human body, water balance, and sources of water

II- Methods of Cooking:

i. Objectives of cooking food
ii. Advantages of cooking food
iii. Different cooking methods and cooking media

CIE

Total Marks	**20**

PRACTICAL:
(SEE-25 marks)

1. Food Presentation and Table Setting.
2. Simple Cooking- Food preparation, serving, calculation of cost and yield.

a) **Cereals:** Plain Rice, Pulao, Sweet Rice, Masale Bhat, Chapati, Puri, Paratha, Missi Roti, Puran Poli, Bhakri
(any 2)
c) **Pulses:** Whole, De-husked and Sprouted (any 2)
d) **Vegetables:** Curries, Dry preparation and Baked (any 2)
e) **Fruits:** Fresh, Dried Baked and Steamed (any 2)
f) **Milk and Milk Products:** Porridge, Desserts, Curds, and Paneer (any 2)
g) **Eggs:** Boiled, Fried, Poached and Custard (any 2)
3. **Cooking Methods-** Planning and preparation of recipes by
a) Boiling (any 1)
b) Steaming (any 1)
c) Pressure cooking (any 1)
d) Frying (any 1)

SEE-Total Marks	**25**
Cooking	15
Presentation	05
Record	05
CIE	25

CIE: (25 marks)
Any two of the following:

- Market survey of the food commodities as per food groups and their cost.
- Latest kitchen appliances in the market-their use and upkeep.
- Scrap book related to food groups, sources, deficiencies of various nutrients.

References:

- Nutritive Value of Indian Foods: Gopalan C, Rama Shastri & Balasubramanin S.C., National Institute of Nutrition1993.
- Food Science, Chemistry and Experimental Foods: Dr.M.Swaminathan,The Bangalore Printing and Publishing Co. Ltd. 1995.
- Essentials of Food and Nutrition, Vol.I (Fundamental aspects): Dr. Swaminathan, 2nd edition BAPPCO, 2000.
- Applied Nutrition: R. Rajlakshami Oxford & IBH Pub. Co.pvt Ltd,3rd edition, 1981.
- Foods and Nutrition: The Educational Planning Group, Delhi, Arya Publishing House. 3rd edition, 1991.
- B. Srilakshmi, Nutrition Science, sixth edition, new age international (P) Ltd, New Delhi (2018).
- Joshi. A. S, "Nutrition & Dietetics", third edition, Tata McGraw hill education Pvt. Ltd., New Delhi (2010).
- The book of Ingredients: Philip Dowell & Adrian Bailey, Michaey, Michael Joseph, Ltd, 1980.
- Indian Food Composition Tables: Longvah T, Ananthan R,Bhaskarachary K and Venkaiah K. National Institute of Nutrition,2017.

B.Sc. Home Science Semester –I (DSC)

BHS1T02

Fundamentals of Human Development

Total Marks	**150**
Theory	**Marks**
SEE	80
CIE	20
Practical	**Marks**
CIE	50

Objectives:

- To develop an understanding about the discipline of Human Development
- To acquire a detailed understanding of developmental milestones and domains fromconception to middle childhood
- To gain insight on context specific cultural practices of development in childrenand explore the role of family and community in the life of children
- To make student aware of methods of studying human behaviour.

COURSE CONTENT: THEORY

UNIT I: Introduction to Human Development

- Definition, History, Interdisciplinary nature and scope of Human Development
- Domains, Stages and Context of Human Development
- Principles of Growth and Development
- Factors influencing Growth and Development

UNIT II: Prenatal, Birth and the Neonate

- Fertilization, Pregnancy – Signs, Symptoms, Complications, Discomforts
- Conception and Stages of Prenatal Development
- Child Birth - Process and types, complications during birth
- Reflexes and Care of the new-born

UNIT III: Infancy

- Characteristics of infancy
- Major adjustments of infancy
- Physical and Motor Development of infants
- Emotions and Vocalizations of infants
- Sensory capacities of infants

UNIT IV: Toddlerhood

- Developmental tasks and Characteristics
- Physical and Motor Development

• Social and Emotional Development

• Cognitive, Moral and Language Development

Practical (1 credit) **(CIE-50 marks)**

Preparation of a Workbook, on the following- **10 Marks**

- Developmental tasks
- Immunization
- Album on the stages of Pre-natal development
- Care during Pregnancy

Methods of child study **10 Marks**

- Anthropometry, Observation, Interview, Questionnaire, Case study, Projective,

Psychological tests, Sociometry, Longitudinal and Cross-sectional approach

Plan and prepare stimulatory activities for sensory development of infants. (0-1 year) **10 Marks**

Plan & develop activities to facilitate development in different domains and submit a flip/ album of activities. **10 Marks**

Audio and video resources to study prenatal development, infancy and toddlerhood. **10 Marks**

References:

- Berk, L. (2013). *Child development*. 9th ed. Boston: Pearson.
- Rice, F. P. (1998). *Human Development: A Life-span Approach*. New Jersey: Prentice Hall.
- Santrock, J. W. (2011). *Life-span development*. New York: McGraw-Hill.
- Singh, A. (Ed.) 2015. *Foundations of Human Development*. New Delhi: TataMcGraw-Hill.

B.Sc. Home Science Semester –I (VSC)

BVS1P01 (A)

Basic Garments and Accessory Making

Total Marks	**100**
Practical	**Marks**
SEE	50
CIE	50

CIE = 50 Marks

PRACTICALS

1. Demonstration of taking body measurements.
2. Introduction to Tools for Garment construction- Measuring tools, markingtools, Cutting tools, sewing tools, Pressing tools,
3. Sewing machine –parts, functions, care
4. Drafting, cutting & stitching of ;-Apron, Baby Frock
5. Make fashion accessory (Any One)-Head gears, Hand bags and Jewellery,
6. Make samples of Surface ornamentation- Appliqué, Quilting, smoking,
7. Make an Embroidery album of Decorative stitches (Any Five)– Chain Stitch, Herringbone Stitch, Stem Stitch, Running Stitch, Lazy-Daisy, Satin Stitch, French knot Stitch, Bullion stitch, Buttonhole Stitch

CIE = 50 Marks

Total Marks – SEE	**50**
Drafting	10
Stitching	15
Surface Ornamentation	15
Record and Album	10

References:

1. Complete Guide to Sewing-Readers Digest, The reader's digest association, 1976
2. Dorling Kindersley- The complete Book of Sewing, London, New York.
3. Complete Book of Sewing, Alison Smith Dorling Kindersley, 1999
4. Singer Sewing Book, Gladys Cunningham, The Singer Company
5. Aswani K.T. Fancy Weaving Mechanism, Mahajan Books, Ahmedabad.
6. Deulkar Durga - Household Textile and laundry work, Atmaram and sons, Delhi

B.Sc. Home Science Semester – I (VSC)
BVS1P01(B)
Water quality Testing

Total Marks	100
Practical	**Marks**
SEE	50
CIE	50

Course Content:

1. Working principles and operations of basic equipment's of Chemistry laboratory

   (pH meter, Physical balance, electronic balance, Hare`s apparatus, etc.)
2. Demonstration of handling of basic apparatus in chemistry laboratory

   (Burette, Pipettes, Volumetric flask, thermometer, Bunsen burner, and other common glassware.)
3. Demonstration of preparation of Solutions: Normal and Molar solutions.
4. Preparation of Buffer Solutions.
5. Single acid base single titration, Determine the Normality and weight per liter.
6. Titration of strong acid vs strong base (Acid-base double titration)
7. Determination of Calcium and Magnesium hardness of water by EDTA titration.
8. Determination of total and permanent hardness of water by EDTA titration.
9. Determination of viscosity of given liquid by Ostwald's Viscometer.
10. Determination of Surface tension of given liquid by Stalagmometer.
11. Preparation of colloidal solution of starch.
12. Determination of the Density of given liquid by using Hare's apparatus.

Reference books:

1) Morrison, R. N.; Boyd, R. N. Organic Chemistry, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education).
2) Finar, I. L. Organic Chemistry (Volume 1& 2), Dorling Kindersley (India) Pvt. Ltd.

   (Pearson Education).
3) Ahluwalia, V.K.; Dhingra, S. (2004), Comprehensive Practical Organic Chemistry: Qualitative Analysis, University Press.
4) Sharma, R.K., Sidhwani, I.T., Chaudhari, M.K. (2013), Green Chemistry Experiments: A monograph, I.K. International Publishing House Pvt Ltd. New Delhi.
5) Chandra, R.; Singh, S.; Singh, A. (2019), Basic Organic Chemistry, Arcler Press.

Course Outcome:

1. This course is designed to offer enhanced practical skills to the students.
2. After completion of this course student will have understand, learn and perform skills needed for water quality testing in a chemistry laboratory.

B.Sc. Home Science Semester –I (AEC)
BAE1T01
COMPULSORY ENGLISH

COURSE OUTCOMES:
Students will be able to enhance their awareness of correct usage of English language in writing and speaking.

- Students will improve their speaking ability in English both in terms of fluency and comprehensibility.
- Students will enlarge their vocabulary.
- Students will review the grammatical forms of English and the appropriate use of these forms in specific communicative contexts.
- Students will develop their ability as critical readers and connect issues discussed in the text with life.
- Students will attain and enhance competence in the four modes: writing, speaking, reading & listening
- Students will develop skills that enable them to present their ideas clearly and logically to achieve a specific purpose.

Theory Exam: 50 Marks
Continuous Internal Evaluation (CIE): 50 Marks
Total: 100 Marks

Prescribed Text: Stepping Stone - Board of Editors
(Published by Macmillan Education India Pvt. Ltd.)

UNIT-1

1. Grassroots Innovation and Social Enterprise - Saji woe Oa
2. Two Gentlemen of Verona - A. J. Cronin
3. Go, Kiss the World - Subroto Bagchi

UNIT-2
4. Little Girls Wiser than Men - Leo Tolstoy
5. The Narmada
6. Old Manat the Bridge - Ernest Hemingway

UNIT-3 (LANGUAGE SKILLS-1)

- Greetings and Introduction
- Countries and Nationalities
- Interesting Products
- Activities and Interest
- Food
- My Family

UNIT-4 (LANGUAGE SKILLS-2)

- Preparing a Flyer for an Event, Preparing Advertisement for a Product, Preparing a Handout for a Social Cause/ Issue
- Resume Writing

Continuous Internal Evaluation (CIE): 50 Marks

A Continuous Internal Assessment of 50 marks shall be based on the different oral communication skills activities regularly conducted by the Teacher and the worksheets/ written assignments /creative projects to be submitted by the students. The students are required to actively participate in these activities and mandatorily submit the worksheets/written assignments/creative projects. The guidelines and some suggested items for the activities/assignments are given in the prescribed Text Book, 'Stepping Stone'.

QUESTION PAPER PATTERN
THEORY EXAM
(50 MARKS)

Q.1 Answer any Two (Out of Three) of the given questions in about 50 words each. (UNIT-1) (2 X 5 Marks = 10)

Q.2 Answer any Two (Out of Three) of the given questions in about 50 words each. (UNIT-2) (2 X 5 Marks = 10)

Q.3 (A) Five Very Short Answer Questions to be answered in one or two sentences each (UNIT-1) (5 X 1 Mark = 5)

(B) Five Very Short Answer Questions to be answered in one or two sentences each (UNIT-2) (5 X 1 Mark = 5)

Q.4 Writing a script of the dialogue of any ONE (Out of Two) of the conversational situations. (UNIT-3) (1 X 10 Marks = 10)

Q.5 Attempt any ONE (Out of Two) of the Questions based on the items prescribed in UNIT-4 (1 X 10 Marks = 10)

B.Sc. Home Science Semester –I
BVE1T01
ENVIRONMENTAL SCIENCE

COURSE OUTCOMES:

At the end of the course, students shall be able to:

- Explain the basics of Environmental Science and Atmospheric Science along-with the components of Environment
- Explicate the importance of Environmental Education.
- Elucidate the fundamentals of atmospheric science including formation, depletion and effects of ozone layer and acid rain on environment.
- Describe the various physical and chemical characteristics and properties of Water and Soil
- Understand the Ecology and its allied branches
- Comprehend about Population and Community Ecology
- Study the changes in Population by understanding the concept of Population ecology

Unit-I: Basics of Environmental Science (7.5 Hrs)

A. Introduction of Environmental Science: Definition, Types, Classification, Characteristics, Components and principles of environment. Scope and need for environmental science, Multidisciplinary nature of environmental science, Environmental ethics.
B. Environmental Education: Goals, Objectives and principles of environmental education, formal and non-formal environmental education, environmental programme, importance of environmental education, environmental awareness.
C. Components of Environment: Atmosphere (Structure and composition),hydrosphere – distribution of water, hydrological cycle, global water balance, lithosphere – Internal structure of Earth, types of rocks, Biosphere- Boundaries of biosphere.

Unit-II: Basics of Atmospheric Science (7.5 Hrs)

A. Atmospheric Chemistry: Structure of atmosphere based on temperature, photochemical reaction in the atmosphere, temperature inversion and lapse rate, smog formation, types of smog (sulphur and photochemical smog), adverse effect of smog on human being, aerosol.
B. Green House Effect: Greenhouse gases, relative contribution and effects of greenhouse effect, control of greenhouse gases. Ozone depletion: chemistry of ozone depletion, Dobson Unit, ozone depleting substances (ODS), ozone hole, consequences of ozone depletion, mitigation measures and international protocols.
C. Acid Rain: Chemistry of Acid Rain, effect of acid rain on ecosystem, control measures. Precipitation – Forms of precipitation (rain, drizzle, snow, sleet, and hail), types of precipitation (conventional, orographic, and cyclonic).

Unit-III: Basics of Ecology (7.5 Hrs)

A. Ecology: Definition, subdivision and modern branches of ecology, ecology spectrum, scope of ecology. Application and significance of ecology to human beings.
B. Abiotic Factors: Temperature: effect of temperature on plants and animals, Adaptation to meet extreme temperature. Light: Zonation in marine habitat, effects of light on plants and animals, Microclimate and fire, Shelford law of tolerance, Leibigs law of minimum.
C. Biotic Factor: Inter specific relationship Positive: Mutualism (symbiosis),

commensalism, proto- cooperation Negative: Parasitism, predation, competition, Antibiosis, Neutralism.

Unit-IV: Ecosystems and food chain (7.5 Hrs)

A. Ecosystem: Definition, structure and function of ecosystem, types of ecosystem: Terrestrial (forest, grassland, desert, cropland), Aquatic (Marine and freshwater)
B. Food chain: Definition & types: Grazing food chain, detritus food chain, and parasitic food chain, food web in forest and grassland ecosystem. Ecological pyramids (number biomass and energy), energy flow in ecosystem (Y- shaped). Energy flow and the law of thermodynamics.
C. Biogeochemical Cycles: Definition, classification, gaseous cycle (oxygen, carbon and nitrogen) Sedimentary cycle (phosphorus and sulphur).

Reference Books:

1. Text Book of Environment: K M Agrawal, P.K. Sikdar, and S.C. Deb, Mc'Millan Publication, Mumbai.
2. Man and Environment: M.C. Dash and P.C. Mishra, Mc'Millan Publication, Mumbai.
3. Environmental Science: S.C. Santra, New Central Book Pvt.Ltd, Kolkatta.
4. Environmental Problems and Solution: D.K. Asthana, S.Chand Publication, New Delhi.
5. Environmental Chemistry: S.S. Dara, S.Chand Publication ,New Delhi.
6. Environmental Chemistry: A.K. Dey, New Age International Publishers,2001.
7. A Textbook of Environmental Studies: Dr S.Satyanarayan, Dr S.Zade, Dr S Sitre and Dr P.U. Meshram, Allied Publishers, New Delhi.
8. Environmental Biology: Biswarup Mukherjee, Tata McGraw-Hill Publishing Company Ltd, New Delhi,1996.
9. Animal Ecology and Distribution of Animals: Veer Bala Rastogi, Rastogi Publication, Meerut (U.P).
10. Ecology and Environment: P.D.Sharma, Rastogi Publication ,Meerut (U.P).
11. Fundamentals of Environmental Biology: S. Arora, Kalyani Publishers.
12. Environmental Biology: P.K.G. Nair, Himalaya Publication.
13. Environmental Biology: K.C. Agrawal, Agro Botanical Publisher, Bikaner,1994

B.Sc. Home Science Semester –I (IKS)
BIK1TO1
Indian Knowledge of
Home Science- I

Total Marks	100
Theory	Marks
SEE	80
CIE	20

OBJECTIVES:

1) To unable the students to acquire the knowledge of food and nutrition.
2) To know the history of human development.
3) To impart knowledge about textile and clothing.
4) To gain the knowledge about resource management.
5) To assess the knowledge regarding home science extension.

Unit I

- History of nutrition.
- Nutrition research in India.
- Introduction, definition and importance of traditional foods.
- Introduction and benefit of satvik diet.
- Regional food patterns-Typical breakfast, meals and snacks foods of different regions of India.
- History of millets, types of millets and health benefits of millets.
- Nutrition composition of millets -Jowar, Bajara and Ragi.

Unit -II

- Manusmriti : Indian mental concepts of children (IMCC)
- About Children in Manusmriti: 16 Sanskaars
- Children's education, guru, student, and varna,
- Hinduism and Children, Jainism and Children, Buddhism and Children

Unit III

Traditional Costumes of Different States of India

- History and Accessories of Male and Female Costumes of Maharashtra,
- History and Accessories of Male and Female Costumes of Punjab,
- History and Accessories of Male and Female Costumes of Gujrat
- History and Accessories of Male and Female Costumes of Rajasthan,
- History and Accessories of Male and Female Costumes of Tamil Nadu

UNIT- IV

1. Concept of Housing, Need of Housing and Functions of housing
2. Evolution of Housing – The First shelter, Temporary shelter, Permanent shelter
3. Shelter in ancient civilization
4. Changes in housing needs and standards due to influence of services and modern amenities.
5. Factors affecting housing

UNIT-V

- Home science extension in India, History, concept, characteristics.
- Role of home science extension in National development
- Teaching and learning Indian knowledge system through extensioneducation
- Folk and traditional media: Meaning, Strength of the folk & traditionalmedia, Limitations of folk and traditional media.
- Traditional folk media: Folk song, folk dance, powada, puppet show,street play.

References:

- B. Srilakshmi, Nutrition Science, Sixth Edition, New Age International (P) Ltd, New Delhi (2018).
- B. Srilakshmi, Food Science, Third Edition, New Age International (P) Ltd, New Delhi (2006)
- Joshi. A. S, "Nutrition & Dietetics", Third Edition, Tata McGraw Hill Education Pvt. Ltd., New Delhi (2010).
- Ambedkar BR. *Buddha and his Dhamm. (Hindi translation: Anand Kausalyayan)* Nagpur: Samata Sainik Dal; 1993. pp. 217–9.
- Kapur M, Mukundan H. Child care in ancient India from the perspective of developmental psychology and paediatrics. 1st ed. New Delhi: Sri Satguru Publications; 2002.
- Sitholey P, Agarwal V, Vrat S. Indian mental concepts on children and adolescents. Indian J Psychiatry. 2013 Jan;55(Suppl 2):S277-82. doi: 10.4103/0019-5545.105551. PMID: 23858268; PMCID: PMC3705696, retrived from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3705696/
- The compendium of eight branches of Ayurveda- Astangasamgraha, Vol. 3. New Delhi: Sri Satguru Publications; 1999. (Translated by a board of scholars).

- Vastrashastra: Prof. Vimal Adhau Maharashtra Vidhyapeeth Granth Nirmit Mandalasathi, Vidhya Books Aurangabad.
- William Watson - Textile Design and colour, Longman Green and Co. London.
- Agan T.C. – The House Oxford and I.B.H. publishing Co.
- Andreas, P (2019), Housing for all : Building Catalogue, Dom publishers
- Balchin, P & M Rhoden, (2003), Housing – The essential Foundation, Routledge.
- Castro, a & Hope (2015), Housing and Habitat in the Ancient Mediterranean: Cultural and Environmental responses, Peeters Pub and Booksellers.
- Deshpande R.S. – Modern Indian Homes in India, United Book Corporation, Poona 2nd Edition
- Dwivedi, R.M (2007), Urban Development and Housing in India: 1947 to 2007,

New Century Publication

- Hiraskar, G.K. (2016), The Great Ages of World architecture, Dhanpat Rai Publication Limited, New Delhi.
- Modern Houses in India (2017) Creaivity Publishers.
- Dahama,O.P. and Bhatnagar O.P. Education and Communication forDevelopment, Oxford & IBH Publishing Co., New Delhi.
- Supe, S.V. An Introduction to Extension education, Oxford Publishing Company, New Delhi & Kolkata, 1999.

B.Sc. Home Science
Semester - II

B.Sc. Home Science Semester –II (DSC)

BHS2T03

Fundamentals of Textile and Clothing

Total Marks	**150**
Theory	**Marks**
SEE	80
CIE	20
Practical	**Marks**
SEE	25
CIE	25

Objectives:

1. To get acquainted with basic knowledge of Textile fibers.
2. To understand the importance and necessity of various construction techniques for different fabrics, and to acquire the skills to apply those construction techniques in a sample form
3. To acquire knowledge and skill regarding stitching techniques for various garment components such as plackets, pockets, cuffs, collars, and fasteners which are ultimately used for stitching of any garments
4. To acquire knowledge and skill regarding stitching techniques for various garment components

Unit I :

1. Scope of Textile and Importance of Clothing :
2. Classification of textile fibers, General and Essential properties of Textile fibers
3. Manufacturing process of natural fibers.;-Cotton, silk, wool
4. Physical and chemical properties of natural fibres

Unit II :

1. Manufacturing process, of man made fibers :- viscose rayon, nylon, polyester
2. Physical and chemical properties of manmade fibres
3. Types of Yarn – Simple, novelty, textured yarns, Yarn twist,

Unit III :

1. Introduction to Seams –Plain ,French, Lapped Flat fell,
2. Tucks- Pin, Cord, Cross
3. Pleats – Knife, box, inverted.
4. Gathers – Machine and hand gathers
5. Types and uses of - Frills, Buttons, Yokes, Pockets, Sleeves

Unit IV :

1. Fashion accessories –Types and uses of-- Head gears, Foot wear, Hand bags, Types and use of jewellery
2. Surface ornamentation –Types and application of- Appliqué, Quilting, smoking, embroidery

Total Marks SEE	25
Drafting	05
Stitching-	10
Sample Making	05
Record	05

CIE -25 Marks

PRACTICAL

1. Drafting cutting and stitching of :-Baba suit, Romper
2. Make an album of :

   a..Seams : French, Lapped, Flat fell

   b. Tucks : Pin, Cross, Corded

   c. Pleats : Side, Box, Inverted

References:

- Deulkar Durga - Household Textile and Laundry Work, Orient Longman, Delhi.
- Dantyagi S. - Fundamentals of Textile and their care. Orient Longman, Delhi.
- Dorling Kindersley- The complete Book of Sewing, London, New York.
- Dorothy Siegart, Lyle-Modem Textiles, John Wiley and Sons.lnc New York
- Doongaji. S and Deshpande R - Basic Process of Clothing Construction.
- Erwin, Mabel and kinchen- Clothing for Modern, Mac Milan publishing, New York.
- Fabrics science by Joseph Puzzuto
- Modern textiles by Dorothy Siegert Lyle
- Understanding fabric from fiber to finished cloth by Dbbie and Giollo
- Understanding textiles by Phyllis G. Tortora and Billie J Collier
- Corbman,P.B., Textiles-Fibre to Fabric, Gregg Division/McGraw Hill Book Co.,US,1985.
- Joseph M.L.,Essentials of Textiles (5^{th} Edition), Holt, Rinehart and WinstonInc.,Florida, 1988.
- Complete Guide to Sewing-Readers Digest, The reader's digest association, 1976
- Complete Book of Sewing, Alison Smith Dorling Kindersley, 1999
- Singer Sewing Book, Gladys Cunningham, The Singer Company

B.Sc. Home Science Semester –II (DSC)

BHS2T04

Interior Decoration and Design

Objectives:

1) To develop skill in using colors to create different effects in space, with the use of various color schemes.
2) To leave techniques of using color in different media
3) To give knowledge of flowers / floral decoration and arrangement

Total Marks	**150**
Theory	**Marks**
SEE	80
CIE	20
Practical	**Marks**
CIE	50

UNIT – I – Importance of colour in Interior Decoration

A. Detail Study of Prang colour system:
i. Characteristics or dimensions of colour
a. Hue, b. Value, c. Intensity
ii. Classification of color
a. Primary, b. Secondary, c. Intermediate, d. Tertiary, e. Quaternary, f. Neutral
iii. Warm & cool colours
iv. Advancing & Receding colours
v. Colour wheel

UNIT – II Colour Schemes:

A. Related colour scheme:
a. Monochromatic, b. Analogous
B. Contrast colour scheme:
a. Complementary, b. Double complementary, c. Split complementary, d. Triad, e.Neutral
C. Colour schemes for different rooms
a. Kitchen and dining, b. Drawing room /Living room, c. Bed room

UNIT – III– Decorating Interior & Exterior

A. Floral Decoration:
- a) Definition and Importance
- b) Objectives
- c) Material Required

B. Flower Arrangement
- a) Application of Elements of Art in flower Arrangement
- b) Application of Principles of Art in Flower Arrangement.

C. Use of Flower arrangements:
- a) Personality
- b) Occasion
- c) Placement in rooms
- d) Flowers as gift
  - a) Bouquet
  - b) Spray of flowers
  - c) Potted

Unit – IV- Types of flower arrangement

- a) Traditional
- b) Oriental / Japanese
- c) Modern
- d) Floating
- e) Miniature
- f) Dry

B. Artificial Flower Arrangement:
i. Method of making Artificial Flower
ii. Material required for artificial flower arrangement

C. Do’s & Don’ts in flower arrangement

PRACTICALS

1. Classification of colors (Primary, Secondary and Intermediate) and Colour Wheel-
2. Warm & Cool colours-
3. Value Scale-
4. Colour Schemes (Monochromatic, Analogous, Complementary, Triad and Neutral)-
5. Types of flower decoration/arrangements (i) Single stick ii Small Bunch iii)Miniature iv) Modern) -Accessories in home decoration (Creative Art) -

Practicals	**CIE Total Marks – 50**
Colour Wheel/ Warm & Cool colours/ Value Scale	10
Colour Scheme	20
Flower arrangement	10
Record Book	10

B.Sc. Home Science Semester-II (VSC)
BVS2P03 (A)
Early Childhood Education

Total Marks	**100**
Practical	**Marks**
SEE	50
CIE	50

OBJECTIVES:

1. To realize the importance of early years and why childhood matters.
2. To understand the significance of various creative activities and teacher's role in implementing them.
3. To develop the skills and techniques to plan activities in ECCE centres of different types, to conduct activities in early childhood care and education and to work effectively with parents and community.

Introduction to ECCE: **CIE-50marks**

1. Concept ad importance of early childhood years
2. Objectives and significance of ECCE.
3. Case study of a government and private pre-school center and report writing.
4. Designing low cost and environment friendly appropriate learning materials for:
    - Story telling
    - Readiness activities
    - Art and Craft (crayon work, paper cutting, collage and origami, paintings and printings, etc.)
    - Rhyme booklets
    - Language and Literacy Skills
    - Numeracy Skills
5. Preparation of teaching aids for preschool children (Any-4)
6. Theme based -Plan a lesson plan to execute and participate in a preschool.
7. Organize a workshop/exhibition for involving parents of pre-school children.

Total Marks	**100**
SEE	**50**
Preparation of teaching aid	10
Preparation of Lesson Plan	20
Design a low-cost learning material	10
Record/ Resource file	10
CIE	**50**

References

1. Grewal, J.S. (1984). Early Childhood Education, Agra National Psychological Corporation Pub.
2. Swaminathan Mina. A Source book on Early Childhood Care and Education, UNESOC, Clinical Co-Operative Programme Paris.
3. https://www.ncert.nic.in/dee/pdf/deethemebased.pdf
4. https://www.egyankosh.ac.in/bitstream/123456789/96681/1/Unit-27.pdf

B. Sc. (Home Science) Semester II (VSC)
BVS2P03 (B)

Measuring Instrument

VSC Practical	**04 hours/week**	**Marks: 100**	**Credit: 02**
Instruments	**Name of Experiments** (Any 10 experiments to be performed)		
Vernier Calipers, Screw Gauge, Scale, Balance	1) Use of Vernier Calipers to determine dimensions of a given object.		
	2) Use of Screw Gauge to determine dimension of a given object.		
	3) Comparison of measurements with Scale, Vernier Calipers and Screw Gauge.		
	4) Determining Density of solid object using a Balance and vernier Calipers.		
Travelling Microscope	5) Use of Travelling Microscope to determine inner diameter of a Capillary tube.		
Thermometer	6) Measurement of temperature using thermometer and its inter-conversion in other scales.		
Convex lens and Glass slab	7) Determination of refractive Index of a material of glass slab.		
	8) Determination of Focal Length of a given convex lens.		
Resistors	9) To study the colour coding of given Resistance and compare it with its practical value measured by a Multimeter.		
	10) Determine the unknown resistance by using Ohm's Law.		
multi-meter	11) Use of multi-meter to measure voltage of AC supply.		
Transformer	12) Study of transformer and determination of turn's ratio.		

Course outcomes:

1) Develop precise measurement skills using various instruments, including vernier calipers, screw gauges, scales, and travelling microscopes.
2) Understand and apply key principles such as density calculation, Ohm's Law, and focal length determination.
3) Learn to compare measurements obtained from different instruments to evaluate accuracy and precision.
4) Gain experience in using both digital (multimeter) and analog (thermometer, balance) instruments for various measurements.
5) Explore and understand advanced topics like the refractive index, transformer turn ratios and the colour coding of resistors.

B.Sc. Home Science Semester-II (VSC)
BVS2P03 (C)
Horticulture

Total Marks	**100**
Practical	**Marks**
SEE	50
CIE	50

Objectives:-

1. Features of orchard, planning and layout of orchard, tools and implements.
2. Preparation of nursery beds for sowing of seeds.
3. Preparation of plant material for potting, hardening plants in the nursery.
4. Practicing different types of cuttings, layering, graftings and buddings including opacity and grafting etc

Experiments:

1. Features of orchard, planning and layout of orchard
2. Identification of tools and implements
3. Preparation of nursery beds for sowing of horticulture crops (Any 4 Plants)
4. Digging of pits for fruit plants
5. Study of planting systems
6. Training and pruning of orchard trees.
7. Preparation of fertilizer mixtures and field application.
8. Study of harvesting and grading of horticultural crops
9. Study of packaging and storage of horticultural crops
10. Preparation of nursery beds and sowing seeds.
11. Potting reporting and preparation of plant material for potting.
12. Practicing different types of cutting, layering
13. Practicing different budding method.
14. Practicing different grafting methods.
15. Preparation growth regulators for seed germination and vegetative propagation.
16. Visit to different Orchards. Visit to established model Govt. and Private Nurseries of adjoining areas

Suggested Reading:

- Chadha,K.L.(ICAR),2002,2001. Handbook of Horticulture, ICAR, NewDelhi
- D.K. Salunkhe and S.S. Kadam, 2013. A handbook of Fruit Science and Technology. CRC Press.
- Denisen E.L.,1957. Principles of Horticulture. Macmillan Publishing Co., New York.
- Edmond,J.B, Sen,T.L, Andrews,F.S and Halfacre R.G., 1963. Fundamentals of Horticulture. Tata McGraw Hill Publishing Co., New Delhi.
- Gardner/Bardford/Hooker. J.R., 1957. Fundamentals of Fruit Production. Mac Graw Hill Book Co., New York.
- Jitendra Singh, 2002. Basic Horticulture. Kalyani Publishers, Hyderabad.
- K.V.Peter, 2009. Basics Horticulture. New India Publishing Agency
- Kausal Kumar Misra and Rajesh Kumar, 2014. Fundamentals of Horticulture. Biotech Books.
- Kumar, N., 1990. Introduction to Horticulture. Rajyalakshmi publications, Nagarcoil, Tamilnadu
- NeerajPratap Singh, 2005. Basic concepts of Fruit Science 1 stEdn. IBDC Publishers.
- Prasad and Kumar, 2014. Principles of Horticulture 2 ndEdn. Agrobios (India).

B.Sc. Home Science Semester –II (VEC)

BVE2T02

CONSTITUION OF INDIA

UNIT – I:

- Historical Background to the Framing of the Indian Constitution: General Idea about the Constituent Assembly of India.

UNIT – II

- Preamble – Nature and key concepts/Constitutional values, Socialism, Secularism, Democracy, Justice, Liberty, Equality and Fraternity
- Salient Features of the Constitution of India

UNIT – III

- General study about the kinds, nature and importance of; Fundamental Rights, Directive Principles of State Policy and Fundamental Duties.

UNIT –IV

- Introduction of the Constitutional Institutions and Authorities;
- Central Legislature and Executive (Parliament of India, President of India and Council of Ministers)
- State Legislature and Executive (State legislative Assemblies, Governors and Council of Ministers)
- Higher Judiciary (Supreme Court of India and High Courts)

B.Sc. Home Science Semester –II (IKS)

BIK2T02
Indian knowledge of
Home Science-II

Total Marks	100
Theory	Marks
SEE	80
CIE	20

Objectives:

1. To enhance the knowledge of food and nutrition.
2. To acquire knowledge regarding child care in ancient India
3. To familiarize with the traditional sarees of different states of India
4. To comprehend the knowledge about vastushastra.
5. To understand the evolution of knowledge system in home science extension andtraditional folk media

UNIT I

- Concept of health.
- Guidelines for good health
- Relationship between nutrition and health.
- Introduction and definition of yoga.
- Yogasana - meaning, principal and their health benefit.
- Introduction to Pranayama and Dhyana and their health benefits.
- Concepts of Aahara (Diet) according yogic text.

UNIT II

Child care in Ancient India (Perspectives of developmental psychology)

- Care of the newborns and children
- Rites of passage and rituals
- Common childhood disorders
- Treatment of childhood disorders

UNIT III

Traditional Sarees of Different states of India:

- Bandhani :-History, Colour, Designs and Threads used in it
- Patola :- History, Colour, Designs and Threads used in it
- Chanderi :- History, Colour, Designs and Threads used in it
- Paithani :- History, Colour, Designs and Threads used in it
- Dacca :- History, Colour, Designs and Threads used in it
- Brocades :- History, Colour, Designs and Threads used in it
- Kashmiri Shawls :- History, Colour, Designs and Threads used in it

UNIT IV

1. History of Vastushastra
2. Importance of Vastushastra
3. Placement of Rooms according to vastushaastra
4. Placement of Doors according to vastushaastra
5. Location of Water bodies according to vastushaastra

UNIT V

- Evolution of knowledge system in home science extension.
- Evolution of system approaches to agricultural innovations.
- Use of natural resources
- Different folk media to transmit knowledge, culture, traditions, custom, social values,norms.
- Traditional folk media: Drama, bhajan, kirtan, bharud, davandi.

References:

- Maimum Nisha, Health Food & Nutrition, Kalpaz Publication.
- B. Srilakshmi, Nutrition Science, sixth edition, new age international (P) Ltd,New Delhi (2018).
- Joshi. A. S, "Nutrition & Dietetics", third edition, Tata McGraw hill education Pvt. Ltd., New Delhi (2010).
- Sen Colleen Taylor Food Culture in India Greenwood Press,2005
- Swami Mangalteertham : Synthetic approach to Diet & Nutrition, Deogarh NutanPublication, Deogarh, 2005 4. Swami Gambh
- Dr R Nagarathna and Dr H R Nagendra: Yoga and Health, Swami Vivekananda Yoga Prakashana, 2002.
- Kapil Kapoor, "Indian Knowledge Systems: Nature, Philosophy and Character" in Indian Knowledge Systems, Kapil Kapoor & Avadhesh Kumar Singh (eds), DK Printworld, New Delhi, 2002
- https://www.exoticindiaart.com/book/details/child-care-in-ancient-india-from-perspectives-of-developmental-psychology-and-paediatrics-nac410/
- Usha Shrikant - Ethinic Embroidery of India, SamaiaEnterprises , Mumbai.
- Vastrashastra:Prof.VimalAdhauMaharashtra VidhyapeethGranthNirmitMandalasathi, Vidhya Books Aurangabad.
- William Watson - Textile Design and colour, Longman Green and Co. London.
- Agan T.C. – The House Oxford and I.B.H. publishing Co.
- Deshpande R.S. – Modern Indian Homes in India, United Book Corporation,Poona 2nd Edition
- Goldstein H./Goldstein V. – Art in Every day Life Macmillan Co. , New York, 4thEdition
- Pak – Tin & Helan Yeap – Feng Shui – Health Harmony B. Jain Publishers Pvt.Ltd. New Delhi , 1998
- Edition Shrivastav - Remedial Vastushastra, Manoj Publication, Delhi, 2001
- Dahama, O.P. and Bhatnagar O.P. Education and communication for Development, Oxford & IBH Publishing Co., New Delhi, 1977.
- Supe, S.V., An introduction to Extension Education, Oxford Publishing Company,New Delhi and Kolkata