

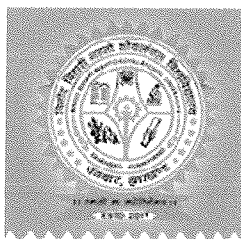
**SYLLABUS FOR FOUR YEAR UNDER GRADUATE  
PROGRAMME (FYUGP)**

**HOME SCIENCE**

**(UNDER CHOICE BASED CREDIT SYSTEM)**

**As per provision of NEP-2020**

**ACADEMIC SESSION: w.e.f. 2022-23**



For

All Constituent/Affiliated Colleges Under Binod Bihari  
Mahto Koylanchal University,  
Dhanbad



# BINOD BIHARI MAHTO KOYALANCHAL UNIVERSITY

Dhanbad, Jharkhand - 828130

E-mail:- [registrarbbmku@gmail.com](mailto:registrarbbmku@gmail.com)

Ref. No. BBMKU/CCDC/R/ 7/8 /2020, Dhanbad Date 14/08/2020

## Notification

In exercise of the powers vested in him under the Jharkhand State Universities Act 2000 as amended up-to-date, the Vice-Chancellor is pleased to constitute a Board of Studies (BOS) in the Department of Home Science, comprising of following members for the period of one year from the date of this notification.

### For UG

- |  |                   |
|--|-------------------|
| 1. Dr. Seema Kumari, Associate Professor<br>HEAD, University Dept. of Home Science, BBMKU, Dhanbad     | - Chairman        |
| 2. Dr. Manju Kumari, Associate Professor<br>University Dept of Home Science, Ranchi University, Ranchi | - External Member |
| 3. Dr. Reshma Xalxo, Associate Professor<br>University Dept of Home Science, Ranchi University, Ranchi | - External Member |
| 4. Dr. Chanchala Verma, Assistant Professor<br>University Dept. of Home Science, BBMKU, Dhanbad        | - Member          |
| 5. Dr. Asha Singh, Assistant Professor<br>Dept. of Home Science, Bokaro Mahila College, Bokaro         | - Member          |
| 6. Dr. Anju Verma, Assistant Professor<br>Dept of Home Science, BSSM College, Dhanbad                  | - Member          |

### For PG

- |   |                   |
|---|-------------------|
| 7. Dr. Seema Kumari, Associate Professor<br>HEAD, University Dept. of Home Science, BBMKU, Dhanbad                    | - Chairman        |
| 8. Dr. Gayatri Sahu, Associate Professor<br>HEAD, University Dept. of Home Science, VBU, Hazaribag                    | - External Expert |
| 9. Dr. Asha Kumari Prasad, Associate Professor<br>HEAD, University Dept of Home Science,<br>Ranchi University, Ranchi | - External Expert |
| 10. Dr. Chanchala Verma, Assistant Professor<br>University Dept. of Home Science, BBMKU, Dhanbad                      | - Member          |

BOS will prepare syllabi for various programmes keeping in view the objectives of the institution, interest of stakeholders and national requirements for consideration and approval of the Academic Council. Three members including the Chairperson shall constitute a Board quorum for the meeting.

By order of the Vice Chancellor

Sd/-

Registrar

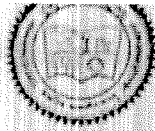
Memo No. BBMKU/CCDC/R/ \_\_\_\_/20, Dhanbad Date \_\_\_\_

Copy to:-

1. Person Concerned
2. Esstt. Section, BBMKU, Dhanbad.
3. P.A. to VC/PVC/R for information to VC/PVC/R.
4. Guard File.

Colonel (Dr.) M. K. Singh (Retd.)  
Registrar

Associate Professor  
P.G. Dept. of Home Science  
Ranchi University  
Ranchi - 834008, Jharkhand



Ashwani  
C/o Mr. Shital Ghosh  
Near Dr. Raghav Sharan Residence  
Bariatu Road, Ranchi-8, Jharkhand  
Ph. 09431103818

Ref. No. \_\_\_\_\_

Date 31/09/2022

This is to certify that for B.A (4yr U.G) Courses in Home Science (Hons.) at BMMK University, Bhubaneswar, Introductory Course, Major Course, Minor Course and advance major Course Under UGR-NEP proposed syllabus are approved.

External Member

*Reshma*

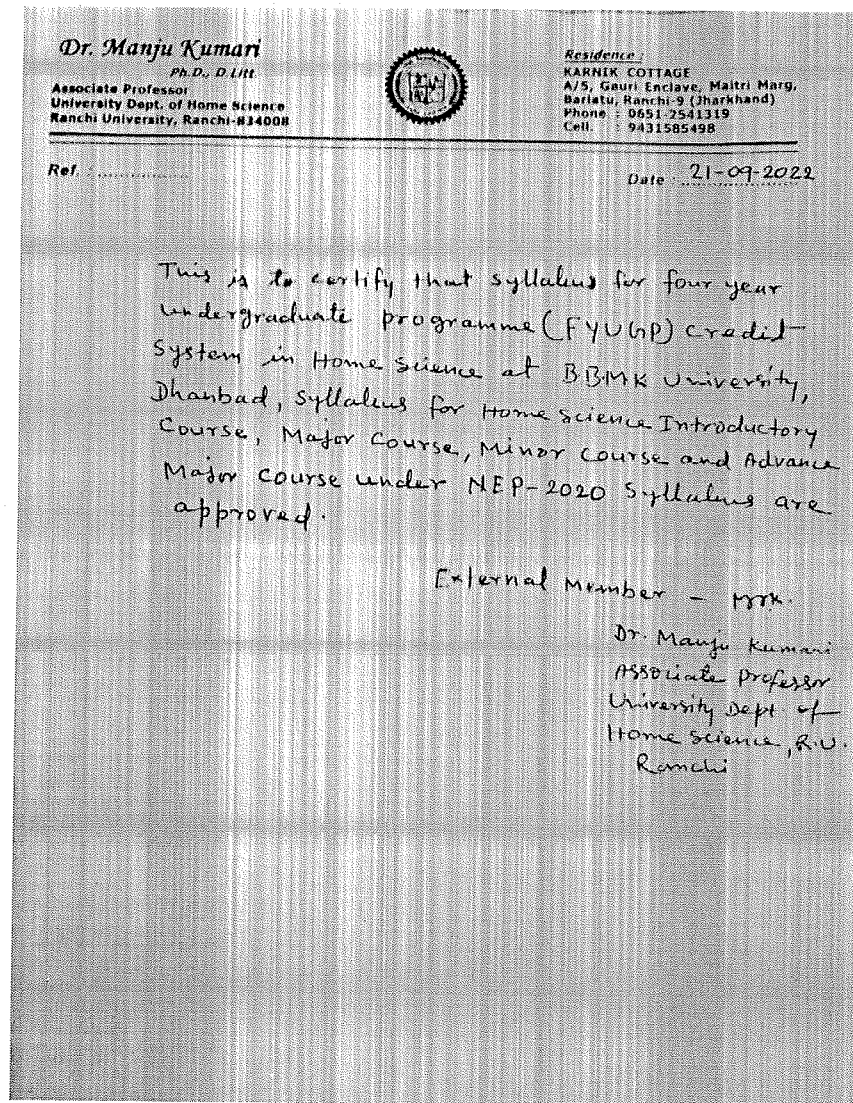
21/09/2022

Dr. Reshma Saloo  
Associate Professor

Department of Home Sci.,  
Ranchi University Ranchi




ManjuRanchi  
today at 07:54



**Members of Board of Studies of Four Years Under-Graduate Programme (FYUGP) syllabus as per Guidelines of the (NEP-2020)  
Binod Bihari Mahto Koyalanchal University, Dhanbad**

1. Chairman : Dr. Seema Kumari
2. External expert member : Dr. Manju Kumari
3. External expert member : Dr. Reshma Xalxo
4. Members : Dr. Chanchala Verma

  
(Dr. Seema Kumari) 22/04/2022  
Head

University Department of Home Science  
BBMKU, Dhanbad

**Dr. Seema Kumari**  
**Head of the P.G. Deptt. of Home Science**  
**B.B.M.K. University**  
**Dhanbad-826001 (Jharkhand)**

## Course Structure for Four Year Undergraduate Programme in Home Science

### Semester wise Course Code, Marks, Credit Points:

### Course Structure for Undergraduate Certificate Programme (Semester I & II)

Semester	Course Code	Name of Paper		Credit	Full Marks		Semest er Internal	End Semester		Pass Marks	
I	CC-1	Language and Communication Skills (Modern Indian Language including TRL)	MIL (Hindi)	6	100		--	100		40	
			NH	3	50		-	50		20	
			TRL/Oth er Language	3	50		-	50		20	
		CC-2	Understanding India		2	100		--	100		40
	CC-3	Heath & Wellness, Yoga Education, Sports Fitness		2	100		--	100		40	
	IRC-1	Introductory Regular Course-1		3	100		--	100		40	
	IVS-1A	Introductory Vocational Studies-1		3	100		--	100		40	
	MJ-1	Major Paper I		6 (4+2)	T	P	T	T	P	T	P
					75	25	15	60	25	30	10
II	CC-4	Language and Communication Skills (English)		6	100		--	100		40	
	CC-5	Mathematical & Computation Thinking Analysis		2	100		--	100		40	
	CC-6	Global Citizenship Education & Education for Sustainable Development		2	100		--	100		40	
	IRC-2	Introductory Regular Course-2		3	100		--	100		40	
	IVS-1B	Introductory Vocational Studies-2		3	100		--	100		40	
	MJ-2	Major Paper 2		6 (4+2)	T	P	T	T	P	T	P
					75	25	15	60	25	30	10
		Total Credits		44							
Course Structure for Undergraduate Diploma Programme (Semester III & IV)											
III	CC-7	Environmental Studies		3	100		--	100		40	
	CC-8	Digital Education (Elementary Computer Application)		3	100		--	100		40	
	CC-9	Community Engagement Service (NSS/NCC/Adult Education)		3	100		--	100		40	
	IRC-3	Introductory Regular Course-3		3	100		--	100		40	
	IAP	Internship/Apprenticeship/Pro ject		4	100		--	100		40	
	MJ-3	Major Paper 3		6 (4+2)	T	P	T	T	P	T	P
					75	25	15	60	25	30	10

IV	MJ-4	Major Paper-4	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	MJ-5	Major Paper -5	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	MN-1	Minor Paper-1	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	VS-1	Vocational Studies -1	4	100		--	100		40	
		Total Credits	44							
<b>Course Structure for Bachelor's Degree Programme (Semester V &amp; VI)</b>										
V	MJ-6	Major Paper 6 (Disciplinary /Interdisciplinary Major)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	MJ-7	Major Paper 7 (Disciplinary /Interdisciplinary Major)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	MN-2	Minor Paper 2(Disciplinary /Interdisciplinary Minor)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	VS-2	Vocational Studies 2 (Minor)	4	100		--	100		40	
VI	MJ-8	Major Paper 8 (Disciplinary /Interdisciplinary Major)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	MJ-9	Major Paper 9 (Disciplinary /Interdisciplinary Major)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	MN-3	Minor Paper 3(Disciplinary /Interdisciplinary Minor)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	VS-3	Vocational Studies 3 (Minor)	4	100		--	100		40	
		Total Credits	44							
<b>Course Structure for Bachelor's Degree with Hons/Research Programme (Semester VII &amp; VIII)</b>										
VII	AMJ-1	Advance Major Paper 1 (Disciplinary /Interdisciplinary Major)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	AMJ-2	Advance Major Paper 2 (Disciplinary /Interdisciplinary Major)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	RC-1	Research Methodology	6	100		--	100		40	
	RC-2	Research Proposal	4	100		--	100		40	
VIII	AMJ-3	Advance Major Paper 3 (Disciplinary /Interdisciplinary Major)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	AMJ-4	Advance Major Paper 4 (Disciplinary /Interdisciplinary Major)	6 (4+2)	T	P	T	T	P	T	P
				75	25	15	60	25	30	10
	RC-3	Research Internship/Field Work)	4	100		--	100		40	
	RC-4	Research Report)	4	100		--	100		40	
	VSR	Vocational Studies (Associated with Research)	2	100		--	100		40	
		Total Credit	44							
		Grand Total Credits	176							

**Abbreviations:**

CC – Common Courses

IRC – Introductory Regular Courses

IVS – Introductory Vocational Studies

IPA – Internship/Apprenticeship/Project

VS – Vocational Studies

MJ – Major Disciplinary/Interdisciplinary Courses

MN – Minor Disciplinary/Interdisciplinary Courses

AMJ – Advance Major Disciplinary/Interdisciplinary Courses

RC – Research Courses

VSR – Vocational Studies Associated with Research

# **UNIVERSITY: Binod Bihari Mahto Koylanchal University, Dhanbad**

## **Subject: Home Science**

### **Major/Advanced Major Paper**

**Credits: 6 (Theory:4, Practical: 2)**

Paper	Semester	Course Code	Paper Title	Credit
Major Paper I	I	MJ-1	Fundamentals of food and nutrition.	6(4+2)
Major Paper II	II	MJ-2	Introduction to Human Development	6(4+2)
Major Paper III	III	MJ-3	Fundamentals of family Resource Management	6(4+2)
Major Paper IV	IV	MJ-4	Introduction to clothing and Textile	6(4+2)
Major Paper V		MJ-5	Applied food and nutrition	6(4+2)
Major Paper VI	V	MJ-6	Introduction to extension education	6(4+2)
Major Paper VII		MJ-7	Family Relationship	6(4+2)
Major Paper VIII	VI	MJ-8	Early childhood care and education	6(4+2)
Major Paper IX		MJ-9	Food Preservation and Processing	6(4+2)
Advance Major Paper I (Choice to choose any one paper)	VII	AMJ-1A	Community Nutrition-I	6(4+2)
		AMJ-1B	Children with Disabilities	6(4+2)
		AMJ-1C	Traditional Indian Textile	6(4+2)
Advance Major Paper II (Choice to choose any one paper)		AMJ-2A	Human Physiology	6(4+2)
		AMJ-2B	Extension Management	6(4+2)
		AMJ-2C	Communication for Development	6(4+2)
Advance Major Paper III (Choice to choose any one paper)	VIII	AMJ-3A	Therapeutic Nutrition	6(4+2)
		AMJ-3B	Child Rights and Gender Empowerment	6(4+2)
		AMJ-3C	Consumer Education and Safety	6(4+2)
Advance Major Paper IV (Choice to choose any one paper)		AMJ-4A	Community Nutrition-II	6(4+2)
		AMJ-4B	Basics of Design application	6(4+2)
		AMJ-4C	Entrepreneurship Management	6(4+2)

### **Year wise structure of U.G. Programme in Home Science**

**UNIVERSITY: Binod Bihari Mahto Koylanchal University, Dhanbad**

**Subject: Home Science**

**Minor Paper**

**Credits: 6 (Theory: 4, Practical: 2)**

<b>Paper</b>	<b>Semester</b>	<b>Code</b>	<b>Paper Title</b>	<b>Credit</b>
Minor Paper – I	IV	MN-1	Introduction to Home Management and Interior Decoration	<b>6(4+2)</b>
Minor Paper – II	V	MN-2	Fundamentals of Food and Nutrition	<b>6(4+2)</b>
Minor Paper – III	VI	MN-3	Therapeutic Nutrition	<b>6(4+2)</b>

**Year wise structure of U.G. Programme in Home Science**

## • **Learning Outcome Based Approach to Curriculum Planning**

The degree is awarded on the basis of demonstrated achievement of outcomes of knowledge, skill and community interventions and academic standards expected from Home Science. Learning outcomes specify what graduates completing a particular programme of study are expected to know, understand and be able to do at the end of their programme of study.

### **The main objectives of the U.G. Home Science Programme are :-**

- Enable students with knowledge, skills, attitudes and values to do community work in all areas of Home Science.
- Ensure global competitiveness and excellence in theory and practice
- Prepare the students for higher education.
- Train the students to take science from lab to community to improve quality of life of people.

### **Some of the characteristics attributes of U.G. Home Science include:-**

- **Disciplinary Knowledge:** Students are able to demonstrate comprehensive knowledge and understanding of major concepts of the five Home Science disciplines (Food & Nutrition, Human Development & Childhood Studies, Fabric & Apparel Science, Development Communication & Extension, Resource Management & Design Application) with support of different allied subjects of Life Science, Physical Science and the Social Science.
- **Communication Skills:** Students are competent in public speaking, writing and interpersonal skills. Students are exposed to technical and soft skills. Communication is a core area in the discipline of Home Science.
- **Critical thinking:** Students develop critical sensitivity towards both community issues and process. They learn to do lateral thinking developing out of the box solution and effective problem solving skills to address community issues.
- **Cooperative/team work:** Students have basic management skills for independently organizing events, resource mobilization and leading community based projects and initiatives.
- **Multicultural competence:** Students are confident of working in diverse socio-cultural contexts. They are able to effectively engage with multicultural groups and teams. They have sensitivities of cross cultural and ethnic diversity which they can apply to different settings.
- **Lifelong learning:** Students are capable to self-directed/paced learning for the continued learning and holistic development for meeting their professional and personal needs in varying environment and changing contexts.

### **Program Outcomes (POs)**

- The program has been framed in such a manner that students receive real feel of quality education by touching all aspects of human lifecycle.
- Designed to enhance the capacity of students to understand universal and domain-specific values in Home Science.

- Develop the ability to address the complexities and interface among of self, social and national priorities.
- Inculcate both generic and subject-specific skills to succeed in the employment market and standards of life.
- Promote research and innovation and design (product) development favouring all the disciplines in Home Science.
- This programme develops scientific and practical approach among the students which helps in their day-to-day life.
- Develop professional skills in food, nutrition, textiles, housing, product making, communication technologies and human development.

# **Syllabus For Undergraduate Certificate Programme**

## **Introductory Regular Course, Theory Paper**

### **Home Science**

HSC-IRC-1(T)

Full Marks: 100

Credits: 3 (Lecture-45)

Pass Marks: 40

#### **Instructions to Question setter for End Semester Examination (ESE)**

There will be two groups of questions. Group A is compulsory which will contain three questions. Question no. 1 will be Very Short Answer Type (Fill in the blanks, MCQ etc.) Consisting of ten questions of 1 marks each. Question No. 2 and 3 will be Short Answer Type Questions of 5 marks each. Group B will contain descriptive type six questions of 20 marks each, out of which any four are to be answered.

#### **Objectives**

1. To understand the basic concept of food and nutrition, role of various nutrients and their requirements.
2. To learn about basic concepts of human development and their stages and principles.
3. To understand about management process and family resource.
4. To understand basic concept of different textiles.
5. To understand the widening concept of Extension.

#### **Theory unit**

- I. Introduction of nutrition, nutrients and food, Definition and functions of food. Food Guide -Basic five food groups.
- II. Human development: meaning, stages, importance and principles of development.
- III. Home management: Concepts, process and importance.
- IV. Textile: Introduction, classification and importance. Identification of textile fibers.
- V. Meaning, scope, objectives and importance of Extension education.

#### **Recommended Books**

1. Aahar and Poshan :Barma and Pandey
2. Manav Vikash: Barma and Pandey
3. Home Management: Dr. Rina Khanuja
4. Vastra Vigyan KeSidhant: Dr. Rina Khanuja
5. Prashar Shiksha: Dr. Harpalani

# **Syllabus for Undergraduate Certificate Programme:**

## **Semester-I**

### **Major Theory Paper - I**

#### **Home Science**

#### **Fundamentals of Food and Nutrition**

**HSC-MJ-1(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To understand the basic concept of Food and Nutrition, role of various nutrients & their requirements, deficiency, excess and metabolism of nutrients.
2. To learn about nutritional contributions of different food and different methods of improving nutritional quality of food.

#### **Theory Units:**

- I. Meaning and Definition of Nutrition, Nutrients and Food. Functions of Food.
- II. Structure, Classification, Function, Sources, recommended dietary allowances, deficiency and excess (in brief) of Carbohydrate, Protein and Fat.
- III. Structure, Classification, Function, Sources, recommended dietary allowances, deficiency and excess (in brief) of Vitamins, Minerals and Water.
- IV. Digestion, Absorption and Metabolism of Carbohydrate, Protein and Fat.

#### **Recommended Books:**

- |                             |                  |
|-----------------------------|------------------|
| 1. Food & Nutrition         | M Swaminathan    |
| 2. Food Science             | Mudambi, S.R.    |
| 3. Nutritional Science      | B. Sri Lakshmi   |
| 4. Aahar & Poshan           | Verma & Pandey   |
| 5. Aahar evam Poshan Vigyan | Dr. Aasha Kumari |

# **Syllabus for Undergraduate Certificate Programme**

## **Semester-I**

### **Major Practical Paper – I**

#### **Home Science**

**HSC-MJ-1(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

#### **Objectives**

1. To acquire skills in different cooking methods.
2. Awareness regarding balanced diet.

#### **Unit**

- I. Preparation of following items by using different cooking methods: Dhokla, Poha, Veg Rolls, Gulab Jamun, Veg Soup, Roasted Veg Kebab.
- II. Preparation of balanced diet of one day for infancy, childhood and adolescents.

# **Syllabus for Undergraduate Certificate Programme:**

## **Semester-II**

### **Major Theory Paper - II**

#### **Home Science**

#### **Introduction to Human Development**

**HSC-MJ-2(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To learn about basic concepts of human development and their stage & principles.
2. To understand pre-natal and post-natal development of children.
3. To sensitize the students towards intervention in the field of human development.

#### **THEORY UNIT**

- I. Human development: Meaning, stages, importance and principle of development. Development task.
- II. Prenatal development: Stages & Prenatal influences.
- III. A. Meaning, Development aspects of infancy and childhood:- Physical, social, motor, emotional, languages and cognitive development.  
B. Adolescence: Physical, social, emotional, cognitive, moral development.
- IV. Personality development: Definition, stages of personality development and determinants.

#### **Recommended Books:**

1. Bal Vikas & Parivarik Sambandh : Dr. Mathureshwar Parik.
2. Mantrikala & Shishu Klayan : Dr. G.P. Shairi
3. Manav Vikash : Barma & Pandey
4. Parivarik Sambandh : Barma & Pandey
5. Child Development : Hurlock, E.B.
6. Bal Vikas : Nita Agarwal

# **Syllabus for Undergraduate Certificate Programme**

## **Semester-II**

### **Major Practical Paper – II**

#### **Home Science**

**HSC-MJ-2(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

#### **UNIT**

- I. Prepare: (a) Height & Weight chart of growing children (b) Pictorial chart of motor development for the child of zero to one year.
- II. Characteristics features of children's cloth & books.
- III. Write a report on the personal and social development of adolescents.

# **Syllabus for Undergraduate Diploma Programme:**

## **Semester-III**

### **Major Theory Paper - III**

#### **Home Science**

#### **Fundamentals of Family Resource Management**

**HSC-MJ-3(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To understand about management process and family resource.
2. To learn about management of money, energy and time.

#### **THEORY UNIT**

- I. Home Management: Concept, process and importance. Decision making process.
- II. Motivating factors of management: Value, goals & standards. Types, Importance.
- III. A. Family resources: Types, characteristics & importance  
B. Money Management: Family income & expenditure. Family Accounts: Importance & types. Budget: Meaning, types & importance.  
C. Saving & Investment: Meaning, objectives & importance. Means of saving i.e. Bank, Insurance, Private & Public sectors schemes, provident fund scheme. Types of Investments.
- IV. Management of energy: Work simplifications.

#### **Recommended Books:**

- |                                  |                    |
|----------------------------------|--------------------|
| 1. Grih Prabandh                 | : Dr. G.P. Shairi  |
| 2. Grih Sazza & Grin Vayvastha   | : Dr. S.P. Sukhiya |
| 3. Parivarik Sadhno ki Vavyastha | : Barma & Pandey   |
| 4. Home Management               | : Vargese M.A.     |

# **Syllabus for Undergraduate Diploma Programme**

## **Semester-III**

### **Major Practical Paper – III**

#### **Home Science**

**HSC-MJ-3(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Preparation of Family Budget for all income groups.
2. Survey on the service of Bank in context of saving & investment.

#### **Recommended Books:**

- |                            |                   |
|----------------------------|-------------------|
| 1. Vastr Vigyan ke Sidhant | : Dr. J.P. Shairy |
| 2. Vastr Vigyan            | : Barma & Pandey  |

# **Syllabus for Undergraduate Diploma Programme:**

## **Semester-IV**

### **Major Theory Paper - IV**

#### **Home Science**

#### **Introduction to Clothing and Textile**

**HSC-MJ-4(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. Acquaint with different textiles and their performances.
2. Impart knowledge on different textiles.

#### **THEORY UNIT**

- I. Textile: Introduction, classification & importance.
- II. A. Composition, Chemical & Physical properties & uses of cotton, wool, silk, nylon & polyester.  
B. Identification of textile fibers.
- III. Methods of Yarn making & weaving and their effects on quality of fabrics.
- IV. Finishes: Meaning, aims and methods.

#### **Recommended Books:**

1. Vastr Vigyan ke Sidhant : Dr. Rani Khanuja
2. Vastr Vigyan : Barma & Pandey

# **Syllabus for Undergraduate Diploma Programme**

## **Semester-IV**

### **Major Practical Paper – IV**

#### **Home Science**

**HSC-MJ-4(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Different Method of Weaving.
2. Identification of Textile Fiber: Visual & Burning test.
3. Classification of Textile Fiber.

#### **Recommended Books:**

- |                            |                   |
|----------------------------|-------------------|
| 3. Vastr Vigyan ke Sidhant | : Dr. J.P. Shairy |
| 4. Vastr Vigyan            | : Barma & Pandey  |

# **Syllabus for Undergraduate Diploma Programme:**

## **Semester-IV**

### **Major Theory Paper - V**

#### **Home Science**

#### **Applied Food & Nutrition**

**HSC-MJ-5(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To learn about nutritional contributions of different food items
2. Different methods of improving nutritional quality of food.

#### **THEORY**

##### **UNIT**

- I. Composition & nutritional contributions of cereals, pulses, fruits, vegetables, milk & milk products, nut & oilseeds, meat, fish & poultry, eggs, sugars, beverages, spices & condiments.
- II. Different Method of cooking, their advantages & disadvantages.
- III. Changes take place during cooking and their effect on nutritive value of food.
- IV. Methods of improving nutritional quality of food: Germination, Fermentation, Supplementation, Fortification and Enrichment.

#### **Recommended Books:**

- |                        |                   |
|------------------------|-------------------|
| 1. Food & Nutrition    | : MS. Swaminathan |
| 2. Food Science        | : Mudambi, S.R.   |
| 3. Nutritional Science | : B. Srilakshmi   |
| 4. Ahhar & Poshan      | : Barma & Pandey  |
| 5. Poshan Vigyan       | : S.P. Sukhiya    |
| 6. Aahar Poshan Vigyan | : Dr. Asha Kumari |

# **Syllabus for Undergraduate Diploma Programme**

## **Semester-IV**

### **Major Practical Paper – V**

#### **Home Science**

**HSC-MJ-5(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

#### **UNIT**

1. Development of Food products by germination : Sporouts
2. Development of Food products by fermentation : Idle & Dhokla
3. Nutritional contribution of different type of milk products.

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-V**

### **Major Theory Paper - VI**

#### **Home Science**

#### **Introduction to Extension Education**

**HSC-MJ-6(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. Understand the widening concept of extension.
2. Be aware of the extension models in practice and their scope in facilitating development.

#### **THEORY UNIT**

- I. Meaning, scope, objectives & importance of extension education.
- II. Philosophy & principle of extension education.
- III. Extension teaching methods: Classification, factors affecting choice & use of methods.
- IV. A. Rural sociology & its importance for extension workers.  
Characteristics of rural life.  
B. Leader: functions, qualities & Identifications.

#### **Recommended Books:**

1. Prasar Shiksha & Sanchar Vayvastha : Shaw & Shaw
2. Prashar Shiksha : Dr. Harpalini.

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-V**

### **Major Practical Paper – VI**

#### **Home Science**

**HSC-MJ-6(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

#### **UNITS:-**

- I. Poster making
- II. Visit of specific measures for women and children such as DWCRA, ICDS, Anganwadi.
- III. Preparation of Flash Card, Puppets.

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-V**

### **Major Theory Paper - VII**

#### **Home Science**

#### **Family Relationship**

**HSC-MJ-7(T)**  
Credit -04 (Lecture-60)

Full Marks 75  
SIE-15  
ESE-60  
Pass Marks-30  
Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

#### **The student will**

1. Acquire knowledge and insight about marriage and family systems in India.
2. Became aware of the changing roles and relationship within family.
3. Understand the families in crisis.

#### **THEORY UNIT**

- I. The Family: Definition, Type and Life Cycle.
- II. Marriage: Goal, Functions and challenges.
- III. Interrelationship within family: Role, right and responsibilities with the family.
- IV. A. Families & Problems: Marital disharmony, families in distress, violence, dowry, violence against women.  
B. Intervention for families in trouble-scope, needs, counselling: pre marital & marital. Welfare & rehabilitations policies & programme implemented by government.

#### **Recommended Books:**

1. The Urban family: A study of Hindu social system: A. K. Lal
2. Parivarik Sambandh : Barma & Pandey

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-V**

### **Major Practical Paper – VII**

#### **Home Science**

**HSC-MJ-7(P)**

**Credit: 02(Lecture 60)**

**Full Marks:25**

**Pass Marks: 10**

**Hours: 6**

#### **UNIT**

1. A comparative study on rural and urban family on social economical and religious perspective.
2. A survey on the problems of women in society.
3. Visit to Old Age Home.

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-VI**

### **Major Theory Paper - VIII**

#### **Home Science**

#### **Early Childhood Care & Education**

**HSC-MJ-8(T)**  
Credit -04 (Lecture-60)

Full Marks 75  
SIE-15  
ESE-60  
Pass Marks-30  
Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To understand about intelligence, early childhood education.
2. To understand importance of play & family relationship.

#### **UNIT**

- I. Child rearing practices: Introduction & different techniques of child rearing.
- II. Early childhood education and its importance, nursery, school-role, scope & importance.
- III. Child parent relationship: Introduction, over protection: cause & impact.
- IV. A. Play: Introduction, utility & importance in development. Types of play & characteristics of child play.  
B. Substitute care at home & outside: Introduction, importance.

#### **Recommended Books:**

1. Bal vikash & parivarik Sambandh : Dr. Mathureshwar Parik.
2. Matrikala & Shishu Kalyan : Dr. G.P. Shairi
3. Manav Vikash : Barma & Pandey
4. Parivarik Sambandh : Barma & Pandey
5. Child Development : Hurlock, E.B.
6. Bal Vikas : Nita Agarwal



# **Syllabus for Bachelor's Degree Programme:**

## **Semester-VI**

### **Major Practical Paper – VIII**

#### **Home Science**

**HSC-MJ-8(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Preparation of play material for child.
2. Preparation of food items for early childhood.
3. A comparative survey on development of children having both parents working and signal parent working.

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-VI**

### **Major Theory Paper - IX**

#### **Home Science**

#### **Food Preservation & Processing**

**HSC-MJ-9(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

- I. A). Food which can be preserved – Food which need to preserved at various seasons.  
B). Food preservation – Physical methods, drying, freeze drying, heat treatment, irradiation, high pressure processing, chemical preservatives & normal anti microbial compounds biologically based preservation, system & probiotic bacteria.
- II. A). Spoilage of different groups of food.  
B). Importance of microorganism in food.
- III. Fermentation technology – Use of yeast, milk product, fermented vegetables, beer, vinegar, fermented soy products.
- IV. A. Fruits and vegetables processing : Canning with special reference to fruit & vegetables syrup and canned food, precaution to be taken. Principle of food concentration, fruit, concentration, Jam, Jelly.  
B. Packaging : Pickles, Chutney, Sauces.

#### **Recommended Books:**

1. Bal vikash & parivarik Sambandh : Dr. Mathureshwar Parik.
2. Matrikala & Shishu Kalyan : Dr. G.P. Shairi
3. Manav Vikash : Barma & Pandey
4. Parivarik Sambandh : Barma & Pandey
5. Child Development : Hurlock, E.B.
6. Bal Vikas : Nita Agarwal

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-VI**

### **Major Practical Paper – IX**

#### **Home Science**

**HSC-MJ-9(P)**

**Credit: 02(Lecture 60)**

**Full Marks:25**

**Pass Marks: 10**

**Hours: 6**

1. Jam, Jelly Preparation.
2. Preparation of pickels, chutnieys and sauces.
3. Preparation of food items using fermentation technology.

# **Syllabus for Diploma Programme:**

## **Semester-IV**

### **Minor Theory Paper - I**

#### **Home Science**

#### **Introduction to Home Management and Interior Decoration**

HSC-MN-1(T)

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To understand about interior decoration & different types of Flower arrangement, Furniture and Furnishing materials.

#### **THEORY UNIT**

- I. Interior decoration: Elements and principle of design.
- II. Colour & its role in home decoration. Lighting Arrangement in different rooms.
- III. Flower arrangement: Meaning and Types.
- IV. Furniture & Furnishing: Types & factors affecting purchasing of furniture & home furnishing materials. Care of furniture & furnishing materials.

#### **Recommended Books:**

1. Grih Prabandh : Dr. G.P. Shairi
2. Grih Sazza & Grin Vayvastha : Dr. S.P. Sukhiya
3. Parivarik Sadhno ki Vavyastha : Barma & Pandey
4. Home Management : Vargese M.A.

# **Syllabus for Diploma Programme:**

## **Semester-IV**

### **Minor Practical Paper – I**

#### **Home Science**

**HSC-MN-1(P)**

**Credit: 02(Lecture 60)**

**Full Marks:25**

**Pass Marks: 10**

**Hours: 6**

1. Flower arrangement in different styles.
2. Colour wheel preparation.
3. Market survey on furnishing materials.

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-V**

### **Minor Theory Paper - II**

#### **Home Science**

#### **Fundamentals of Food & Nutrition**

**HSC-MN-2(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To understand of basic concepts of food & nutrition, role of various nutrients & their requirements, role of deficiency & excess and metabolism of nutrients.

#### **THEORY UNIT**

- I. Meaning & definition of nutrition, nutrients & food. Function of food.
- II. Structure, classification, functions, sources, recommended dietary allowance, deficiency & excess (in brief) of carbohydrates, fats and proteins.
- III. Vitamins, Minerals & Water.
- IV. Digestion, absorption metabolism of carbohydrates, fats & proteins.

#### **Recommended Books:**

- |                        |                    |
|------------------------|--------------------|
| 1. Food & Nutrition    | : MS. Swaminathan  |
| 2. Food Science        | : Mudambi, S.R.    |
| 3. Nutritional Science | : B. Srilakshmi    |
| 4. Aahar & Poshan      | : Barma & Pandey   |
| 5. Poshan Vigyan       | : S.P. Sukhiya     |
| 6. Aahar Poshan Vigyan | : Dr. Asha Kumari. |

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-V**

### **Minor Practical Paper – II**

#### **Home Science**

**HSC-MN-2(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Cooking: (a) Dhokla, (b) Poha, (c) Veg rolls, (d) Gulab Jamun, (e) Pastas, Ice-Cream, (f) Veg Soups, (g) Chikki.
2. Preparation of chart on vitamins or minerals.

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-VI**

### **Minor Theory Paper - III**

#### **Home Science**

#### **Therapeutic Nutrition**

HSC-MN-3(T)

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To gain knowledge about therapeutic diet in different disease and mode of feeding.

#### **CONTENTS UNIT**

- I. Principles of diet therapy
- II. Modification of diet –Types, importance
- III. Nutritional management & diet planning for:
  - Under weight & over weight
  - Typhoid
  - Constipation
  - Heart disease: Hypertension
  - Diabetes
  - Peptic ulcer
  - Hepatitis
  - Kidney disease: Kidney failure
- IV. Feeding methods: Meaning & Types.

#### **Recommended Books:**

- |                              |                    |
|------------------------------|--------------------|
| 1. Aahar & Upchararth Poshan | : B.D. Harpalani   |
| 2. Aahariki                  | : Barma & Pandey   |
| 3. Aahar & Poshan            | : Barma & Pandey   |
| 4. Dietetics                 | : Sri Lakshmi, B.  |
| 5. Food & Nutrition          | : M.S. Swaminathan |

# **Syllabus for Bachelor's Degree Programme:**

## **Semester-VI**

### **Minor Practical Paper – III**

#### **Home Science**

**HSC-MN-3(P)**

**Credit: 02(Lecture 60)**

**Full Marks:25**

**Pass Marks: 10**

**Hours: 6**

1. Prepare modified diet for constipation, diabetes and cardio vascular disease.
2. Planning a day meal for deficiency disease
  - a. Vitamin 'A' deficiency
  - b. Calcium deficiency
  - c. Anemia
  - d. Protein calorie malnutrition.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VII**

### **Advance Major Theory Paper – IA**

#### **Home Science**

#### **Community Nutrition-I**

**HSC-AMJ-1A(T)**

**Credit -04 (Lecture-60)**

**Full Marks 75**

**SIE-15**

**ESE-60**

**Pass Marks-30**

**Hours:3**

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To be familiar with community nutritional problem, cause and its eradication.
2. To know common health hazards and methods of nutritional assessment.

#### **THEORY UNIT**

- I. Basic concepts of community nutrition & factors influencing community nutrition.
- II. Common nutritional problems in India: Causes & eradications.
- III. A. Assessment of the nutritional status of community: Anthropometry, clinical examinations, vital statistics.  
B. Immunization schedule of infant & children.
- IV. Food habits: Meaning & factors affecting food habits.

#### **Recommended Books:**

- |   |                  |
|---|------------------|
| 1. Upcharath Aahar tha Samudayik Poshan | : B.K. Bakshi    |
| 2. Aahar & Poshan                       | : Barma & Pandey |

**Syllabus for Bachelor's Degree with Hons/Research Programme:**  
**Semester-VII**  
**Advance Major Practical Paper – IA**  
**Home Science**

HSC-AMJ-1A(P)

Full Marks:25

Credit: 02(Lecture 60)

Pass Marks: 10

Hours: 6

1. Assessing nutritional status of children by using anthropometric measurement.
2. Clinical methods prepare a project on specific nutritional deficiency disease – identification of symptoms, causes, effect and developing awareness to prevent them.
3. Prepare an immunization chart of infant and children.



# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VII**

### **Advance Major Theory Paper – IB**

#### **Home Science**

#### **Children with Disabilities**

**HSC-AMJ-1B(T)**

**Credit -04 (Lecture-60)**

**Full Marks 75**

**SIE-15**

**ESE-60**

**Pass Marks-30**

**Hours:3**

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Unit 1 Introduction to Childhood Disabilities**

- Defining disabilities
- Models of disability
- Classifying disabilities
- Social construction of disability
- Demography

#### **Unit 2 Common Childhood Disabilities**

Identification, Assessment and etiology with reference to

- Locomotor disability
- Visual disability
- Auditory and speech disability
- Intellectual disability
- Autism
- Learning Disability

#### **Unit 3 Children with Disabilities and Society**

- Families of children with disability
- Prevention and management of different disabilities
- Educational practices-Special education and inclusion
- Policy and laws

#### **Recommended Books:**

1. Chopra, G., (2012), Early Detection of Disabilities and persons with disabilities in the community. New Delhi: Engage publications.
2. Chopra, G., (2012), Stimulating Development of Young Children with Disabilities Anganwadi and at Home: A Practical Guide. New Delhi: Engage publications.

**Syllabus for Bachelor's Degree with Hons/Research Programme:**

**Semester-VII**

**Advance Major Practical Paper – IB**

**Home Science**

**HSC-AMJ-1B(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Visits to organizations working for children with disabilities.
2. A survey on children with disabilities in families and institutions.
3. Prepare a chart on policy and laws implemented for children with disabilities.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VII**

### **Advance Major Theory Paper – IC**

#### **Home Science**

#### **Traditional Indian Textiles**

**HSC-AMJ-1C(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Unit 1 Study of Textile Crafts of India:**

- Woven Textiles-Banaras Brocades, Jamdanis and Balucharies of Bengal, Kani Shawls of Kashmir.
- Embroidered Textiles-Kanthas of Bengal, Kasuti of Karnataka, Phulkari of Punjab, Chikankari of Uttar Pradesh, Kashida of Kashmir, Gujarat embroideries.
- Painted and Printed textiles – Kalamkaris of Andhra Pradesh, Dabu printing of Rajasthan, Ajarakh prints of Gujarat
- Dyed textiles – Bandhnis of Rajasthan and Gujarat, Ikats- Patola of Gujarat, Bandhase of Orissa. Telia Rumal.

#### **Unit 2 Status of Traditional Textiles in Modern India**

- Evolution and socio-economic significance of Khadi, Handloom and Handicraft Sector.
- Sustenance of traditional textile crafts
- Interventions by organizations.

#### **Unit 3 Conservation of Textiles**

- Care and storage of textiles.

#### **Recommended Books:**

1. Agarwal, O.P., 1977, Care and Presentation of Museum projects-II NRL
2. Chattopadhyaya, K.D., 1995. Handicrafts of India, Wiley Eastern Limited, N Delhi
3. Das, Shukla, 1992, Fabric Art-Heritage of India, Abhinav Publications, N Delhi.

**Syllabus for Bachelor's Degree with Hons/Research Programme:**

**Semester-VII**

**Advance Major Practical Paper – IC**

**Home Science**

**HSC-AMJ-1C(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Embroidery stitches of traditional embroideries.
2. Tie & dye using various techniques, Batik printing, Block printing.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VII**

### **Advance Major Theory Paper – 2A**

#### **Home Science**

#### **Human Physiology**

**HSC-AMJ-2A(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

#### **To become acquainted with:**

1. An elementary idea about human physiology.
2. Role of enzymes & hormones in the body.

#### **UNIT**

- I. Human cell, tissues and its functions.
- II. Cardiovascular system: Structure and function of heart.
- III. Digestive System: Structure & functions of digestive organs. Enzymatic action with special reference to digestion, absorption and metabolism of food.
- IV. Endocrine glands and hormones: Thyroid, Adrenal, Pituitary, Pancreas and Reproductive.

#### **Recommended Books:**

- |                        |                    |
|------------------------|--------------------|
| 1. Food & Nutrition    | : MS. Swaminathan  |
| 2. Food Science        | : Mudambi, S.R.    |
| 3. Nutritional Science | : B. Srilakshmi    |
| 4. Aahar & Poshan      | : Barma & Pandey   |
| 5. Poshan Vigyan       | : S.P. Sukhiya     |
| 6. Aahar Poshan Vigyan | : Dr. Asha Kumari. |

**Syllabus for Bachelor's Degree with Hons/Research Programme:**  
**Semester-VII**  
**Advance Major Practical Paper – 2A**  
**Home Science**

HSC-AMJ-2A(P)

Full Marks:25

Credit: 02(Lecture 60)

Pass Marks: 10

Hours: 6

1. Draw the diagram of different internal physiological system with pointing out the subparts and their name.
2. Prepare a chart on different enzymes and their functions.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VII**

### **Advance Major Theory Paper – 2B**

#### **Home Science**

#### **Extension Management**

**HSC-AMJ-2B(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Unit 1 Extension: Concept**

- Extension Education : concept, goals, philosophy and history
- Adult learning components of extension education
- Principles of extension education
- Relationship between communication and extension education – role of extension education in development.

#### **Unit 2 Methods and Approaches of Extension**

- Stakeholders in development
- People's participation and social mobilization in development
- Extension systems- types, advantages and disadvantages
- Diffusion of innovation and adoption
- Extension methods and approaches – classification, characteristics and selection

#### **Recommended Books:**

1. Mikkelsen, Britha, (2002), Methods for Development Work and Research. New Delhi: Sage Publications.
2. Dale. R, (2004) Evaluating Development Programmes and Projects. New Delhi: Sage Publications.
3. Kumar & Hansra, (1997) Extension Education for Human Resource Development. New Delhi: Concept Publishers.

**Syllabus for Bachelor's Degree with Hons/Research Programme:**

**Semester-VII**

**Advance Major Practical Paper – 2B**

**Home Science**

**HSC-AMJ-2B(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Analysis of development programmes in extension system.
2. Evaluate strategies used by development agencies for implementation of development programmes.
3. Survey on Adult Education System.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VII**

### **Advance Major Theory Paper – 2C**

#### **Home Science**

#### **Communication for Development**

**HSC-AMJ-2C(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Unit 1 Concept of Development Communication**

- Concept of development, characteristics of developing countries
- Measuring development – Indices of measuring development and classification of countries based on development indices.
- Models of Development – Dominant Paradigm, Basic Needs Model, New Paradigm of development.

#### **Unit 2 Understanding Paradigms of Development**

- Press theories: Normative: Authoritarian, Libertarian, Social Responsibility, Democratic Participant theory: Sociological: Uses & Gratification, Agenda setting: Two-Step Flow: Psychological: Bullet Theory
- Success stories in Development Communication

#### **Unit 3 Development Communication and Media**

- Traditional Media: Types, characteristics, role in development communication.
- News reporting: Definition of news, ingredients and qualities of news, news value, types of news reports, structure of news reports.
- Television: Programs and genres: Role in development communication

#### **Recommended Books:**

1. Narule Uma (1994) Development Communication, New Delhi, Hariand Publication.
2. Servaes, Jan (2008) Communication for Development and Social changes, New Delhi, Sage Publication.
3. Paulo Mefalopulos, Development Communication Sourcebook- Broadening the boundaries of communication, The World Bank, 2008.

**Syllabus for Bachelor's Degree with Hons/Research Programme:**

**Semester-VII**

**Advance Major Practical Paper – 2C**

**Home Science**

**HSC-AMJ-2C(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Analysis of media for development communication.
2. Analysis of development indicators – National and International perspectives.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VIII**

### **Advance Major Theory Paper – 3A**

#### **Home Science**

#### **Therapeutic Nutrition**

HSC-AMJ-3A(T)

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

2. To gain knowledge about therapeutic diet in different disease and mode of feeding.

#### **CONTENTS UNIT**

- i. Principles of diet therapy
- ii. Modification of diet –Types, importance
- iii. Nutritional management & diet planning for:
  - Under weight & over weight
  - Typhoid
  - Constipation
  - Heart disease: Hypertension
  - Diabetes
  - Peptic ulcer
  - Hepatitis
  - Kidney disease: Kidney failure
- iv. Feeding methods: Meaning & Types.

#### **Recommended Books:**

- |                              |                    |
|------------------------------|--------------------|
| 5. Aahar & Upchararth Poshan | : B.D. Harpalani   |
| 6. Aahariki                  | : Barma & Pandey   |
| 7. Aahar & Poshan            | : Barma & Pandey   |
| 8. Dietetics                 | : Sri Lakshmi, B.  |
| 9. Food & Nutrition          | : M.S. Swaminathan |

**Syllabus for Bachelor's Degree with Hons/Research Programme:**

**Semester-VIII**

**Advance Major Practical Paper – 3A**

**Home Science**

**HSC-AMJ-3A(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Prepare modified diet for constipation, diabetes patient.
2. Planning and preparation of diet and calculation of nutrient for the patients of :  
Cardio – Vascular disease – Hypertension and antherosclerosis  
Gastrointestinal Problems – Diarrhiea, Obesity and peptic ulcer.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VIII**

### **Advance Major Theory Paper – 3B**

#### **Home Science**

#### **Child Rights and General Empowerment**

**HSC-AMJ-3B(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. **Understanding Child Rights**
  - Meaning of Child Rights and Convention of Child Rights
  - Knowing disadvantage and exclusion in relation to children
  - Demographic profile of the child in India
  - The role of state, family and children in promotion and protection of child rights
2. **Children in Different circumstances**
  - Street children, working children and homeless children
  - Child Abuse
  - Child Trafficking
  - Children in conflict with law
  - Laws and policies
3. **Conceptualizing Gender**
  - Defining terms sex, gender, masculinity, femininity
  - Socialisation for gender- gender roles, gender stereotypes
  - Patriarchy and social institutions
  - Perspectives on feminism
4. **Gender Empowerment**
  - Demographic profile
  - Issues and concerns related to girls and women in India
  - Media and gender
  - Laws, policies and programmes for girls and women in India

#### **Recommended Books**

1. Agarwal, A & Rao, B.V. (2007), Education of Disabled Children, New Delhi: Eastern Book Corporation.
2. Agnes, F. (1999) Law and Gender Inequality: The politics of Women's Right in India. Oxford University Press.
3. Bajpai, A (2006) Child Rights in India: Law, Policy and Practice. Oxford University Press.
4. Kishwar, M. (1999) Off the Beaten Track: Rethinking Gender Justice for India Women. New Delhi: Oxford University Press.

**Syllabus for Bachelor's Degree with Hons/Research Programme:**  
**Semester-VIII**  
**Advance Major Practical Paper – 3B**  
**Home Science**

HSC-AMJ-3B(P)

Full Marks:25

Credit: 02(Lecture 60)

Pass Marks: 10

Hours: 6

1. Understanding child rights and children in diverse social groups through visits.
2. Interactions with children in difficult circumstances.
3. Organizing a departmental seminar on policies and programmes implemented by government for girls and women in India.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VIII**

### **Advance Major Theory Paper – 3C**

#### **Home Science**

#### **Consumer Education and Consumer Safety**

**HSC-AMJ-3C(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

**Unit – I – Consumer Education: Brief History, Definition, Concept and Significance, needs, objectives.**

**Unit – II – Consumer Protection : Need, Measure and methods. Role of consumer organization- National and International Consumer, International Regional Offices at Pune, India.**

**Unit – III – Future of consumer Education : Needs for research, organizing implementing. Organization role – Agencies conducting and supporting research. Formulation of projects in consumer research. Empowerment of consumers.**

**Unit – IV- Quality Control and Standardization for : Food, Textile, Consumer durable, Building materials.**

#### **Recommended Books**

1. Chandra, R. (1995) : The emerging consumer, New Age International Publishers Ltd. and Wiley Eastern Ltd, New Delhi.
2. Margery, K. Schiller (1989) : A guide book for teaching consumer.

**Syllabus for Bachelor's Degree with Hons/Research Programme:**  
**Semester-VIII**  
**Advance Major Practical Paper – 3C**  
**Home Science**

HSC-AMJ-3C(P)

Full Marks:25

Credit: 02(Lecture 60)

Pass Marks: 10

Hours: 6

1. Study of labels of consumer goods for safety, instructions for care and maintenance, quality marks etc.
2. Preparation of a list for quality control and standardization for food and building material.
3. Preparation of chart on polices and laws implemented for consumers.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VIII**

### **Advance Major Theory Paper – 4A**

#### **Home Science**

#### **Community Nutrition-II**

**HSC-AMJ-4A(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

1. To be familiar with community nutritional problem, cause and its eradication.
2. To understand about role of welfare programme and organization for community health.
3. To know common health hazards and methods of nutritional assessment.

#### **THEORY UNIT**

- I. National nutritional programme.
- II. Nutrition education: Objectives, Methods & Importance.
- III. Role of National & International Organization in improving nutritional status of the community.
- IV. Hazards of community nutritional status:
  - Food adulteration
  - Food poisoning
  - Pesticide residues in food
  - Food contamination
  - Food spoilage preservation: Type & Importance.
- V. Food Preservation: Methods and Importance.

#### **Recommended Books:**

1. Upchararth Aahar and Samudayik Poshan : B.K. Bakshi
2. Aahar & Poshan : Barma & Pandey

**Syllabus for Bachelor's Degree with Hons/Research Programme:**  
**Semester-VIII**  
**Advance Major Practical Paper – 4A**  
**Home Science**

HSC-AMJ-4A(P)

Full Marks:25

Credit: 02(Lecture 60)

Pass Marks: 10

Hours: 6

1. Prepare a chart on the National Nutritional Programmes.
2. Prepare a chart on objectives of National and International Organizations working for improving nutritional status of community.
3. Produce sample of preserved food items consisting different methods of preservation.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VIII**

### **Advance Major Theory Paper – 4B**

#### **Home Science**

#### **Basics of Design Application**

**HSC-AMJ-4B(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

#### **Objectives:**

##### **Unit 1 Design Fundamentals**

- Objectives of Arts & Interior Design.
- Types of Design: Structural & Decorative.
- Elements of Design: Space, Point, Line, Shape, Form, Texture, Light & Color
- Principles of Design – Rhythm, Balance, Proportion, Emphasis, Unity, (Variety, Simplicity/Economy/Suitability).
- Composition of a Drawing – Harmony, Clarity, Adequacy.
- Color & Application.
  - Dimension of color.
  - Importance of color & its role in creation of the design.
  - Color system & Theories.
  - Color Harmonies.
  - Principles of Design as applied to color use.
  - Color Forecasting.

##### **Unit 2 Furniture & Furnishings: Historical Perspectives & Contemporary Trends**

- History of Interior Design – including periods like Mughal Architecture, Colonial style Renaissance.
- Furniture – Type, Construction, Selection and purchase, Arrangement, Care at maintenance.
- Furnishings – selection, care and maintenance of fabrics used for –  
Soft furnishings: curtains and draperies, upholstered furniture, cushions at pillows etc.  
Floor coverings
- Accessories – Uses, Classification, Design, Selection & Arrangement.
- Traditional and Modern Surface Finishes – types and uses
  - Furniture
  - Wall
  - Floor
  - Ceilings
  - Roofing

#### **Recommended Books**

1. Lawrence M. (1987), Interior Decoration, New Jersey: Chartwell Books.
2. Riley & Bayen, (2003), The Elements of Design, Mitchell Beazley.

**Syllabus for Bachelor's Degree with Hons/Research Programme:**  
**Semester-VIII**  
**Advance Major Practical Paper – 4B**  
**Home Science**

**HSC-AMJ-4B(P)**

**Full Marks:25**

**Credit: 02(Lecture 60)**

**Pass Marks: 10**

**Hours: 6**

1. Color – Color wheel Dimension & Harmoies of color.
2. Furniture & Furnishing plans of specific areas: Middle income group house, office.
3. Preparation of Rangoli and Alpana.

# **Syllabus for Bachelor's Degree with Hons/Research Programme:**

## **Semester-VIII**

### **Advance Major Theory Paper – 4C**

#### **Home Science**

#### **Entrepreneurship Management**

**HSC-AMJ-4C(T)**

Credit -04 (Lecture-60)

Full Marks 75

SIE-15

ESE-60

Pass Marks-30

Hours:3

#### **Instructions to Question Setter for End Semester Exam (ESE):**

There will be two group of questions Group A is compulsory which will contain three questions. Question no, 1 will be very short answer type (MCQs, True/False, Fill in the blanks etc.) consisting of five questions of 1 mark each. Question nos. 2 and 3 will be short answer type of 5 marks each. Group B will contain Descriptive type five questions of fifteen marks each, out of which any three are to answer.

**Unit – I – Conceptual Framework:** Concept need and process in entrepreneurship development. Government policies and schemes for enterprise development. Institutional support in enterprise development and management.

**Unit – II – The Entrepreneur :** Developing Entrepreneurial competencies self awareness, interpersonal skills, creativity assertiveness, achievement, factors affecting entrepreneur's role.

**Unit – III – Growth strategies :** Performance appraised and assessment

**Unit – IV – Consumer Protection :** Need, measure and methods. Consumer laws-role and provision of the implication.

#### **Recommended Books**

1. Akhauri M.M.P. (1990) : Entrepreneurship for women in India, NIESBUB, New Delhi.
2. Hisrich, R.D. and Brush, C.G. (1986) The Women Entrepreneurs, D.C. Health and Co. Toronto

**Syllabus for Bachelor's Degree with Hons/Research Programme:**  
**Semester-VIII**  
**Advance Major Practical Paper – 4C**  
**Home Science**

HSC-AMJ-4C(P)

Full Marks:25

Credit: 02(Lecture 60)

Pass Marks: 10

Hours: 6

1. SWOT analysis with respect to entrepreneurial competencies through case profiling of successful entrepreneurs and enterprises.
2. Preparation of tools of evaluation, observation sheet.

# FORMAT OF QUESTION PAPER FOR SEMESTER INTERNAL EXAMINATION



**Binod Bihari Mahato Koylanchal University, Dhanbad**

## Question format for 10 Marks:

F.M.=10	Subject/Code Time=1Hr.	Exam Year
<b>General Instruction:</b>		
i. Group A carries very short answer type compulsory question. ii. Answer 1 out of 2 subjective/descriptive questions given in Group B. iii. Answer in your own words as far as practicable. iv. Answer all sub parts of a question at one place. v. Numbers in right indicate full marks of the question.		
<b><u>Group A</u></b>		
1.		[5x1=5]
	i. ....	
	ii. ....	
	iii. ....	
	iv. ....	
	v. ....	
<b><u>Group B</u></b>		
2. ....		[5]
3. ....		[5]
<b>Note:</b> There may be subdivisions in each question asked in Theory Examination.		

# FORMAT OF QUESTION PAPER FOR SEMESTER INTERNAL EXAMINATION



Binod Bihari Mahato Koylanchal University, Dhanbad

## Question format for 20 Marks:

F.M.=20	Subject/Code Time=1Hr.	Exam Year
<b>General Instruction:</b>		
i. Group A carries very short answer type compulsory question. ii. Answer 1 out of 2 subjective/descriptive questions given in Group B. iii. Answer in your own words as far as practicable. iv. Answer all sub parts of a question at one place. v. Numbers in right indicate full marks of the question.		
<b><u>Group A</u></b>		
1.		[5x1=5]
	i. .... ii. .... iii. .... iv. .... v. ....	
2.	.....	[5]
<b><u>Group B</u></b>		
3	.....	[10]
4	.....	[10]
<b>Note:</b> There may be subdivisions in each question asked in Theory Examination.		

# FORMAT OF QUESTION PAPER FOR END SEMESTER UNIVERSITY EXAMINATION



Binod Bihari Mahato Koylanchal University, Dhanbad

## Question format for 50 Marks:

F.M.=50	Subject/Code Time=3Hrs.	Exam Year
<b>General Instruction:</b>		
<ul style="list-style-type: none"><li>i. Group A carries very short answer type compulsory question.</li><li>ii. Answer 3 out of 5 subjective/descriptive questions given in Group B.</li><li>iii. Answer in your own words as far as practicable.</li><li>iv. Answer all sub parts of a question at one place.</li><li>v. Numbers in right indicate full marks of the question.</li></ul>		
<b><u>Group A</u></b>		
1.	<ul style="list-style-type: none"><li>i. ....</li><li>ii. ....</li><li>iii. ....</li><li>iv. ....</li><li>v. ....</li></ul>	[5x1=5]
<b><u>Group B</u></b>		
2. ....		[15]
3. ....		[15]
4. ....		[15]
5. ....		[15]
6. ....		[15]
<b>Note:</b> There may be subdivisions in each question asked in Theory Examination.		

# FORMAT OF QUESTION PAPER FOR END SEMESTER UNIVERSITY EXAMINATION



Binod Bihari Mahato Koylanchal University, Dhanbad

## Question format for 60 Marks:

F.M.=60	Subject/Code Time=3Hrs.	Exam Year
<b>General Instruction:</b>		
i.	Group A carries very short answer type compulsory question.	
ii.	Answer 3 out of 5 subjective/descriptive questions given in Group B.	
iii.	Answer in your own words as far as practicable.	
iv.	Answer all sub parts of a question at one place.	
v.	Numbers in right indicate full marks of the question.	
<b><u>Group A</u></b>		
1.		[5x1=5]
i.	.....	
ii.	.....	
iii.	.....	
iv.	.....	
v.	.....	
2.	.....	[5]
3.	.....	[5]
<b><u>Group B</u></b>		
4.	.....	[15]
5.	.....	[15]
6.	.....	[15]
7.	.....	[15]
8.	.....	[15]
<b>Note:</b> There may be subdivisions in each question asked in Theory Examination.		

# FORMAT OF QUESTION PAPER FOR END SEMESTER UNIVERSITY EXAMINATION



**Binod Bihari Mahato Koylanchal University, Dhanbad**

## Question format for 75 Marks:

F.M.=75	Subject/Code Time=3Hrs.	Exam Year
<b>General Instruction:</b>		
i.	Group A carries very short answer type compulsory question.	
ii.	Answer 4 out of 6 subjective/descriptive questions given in Group B.	
iii.	Answer in your own words as far as practicable.	
iv.	Answer all sub parts of a question at one place.	
v.	Numbers in right indicate full marks of the question.	
1.		[5x1=5]
i.	.....	
ii.	.....	
iii.	.....	
iv.	.....	
v.	.....	
2.	.....	[5]
3.	.....	[5]
<b><u>Group B</u></b>		
4.	.....	[15]
5.	.....	[15]
6.	.....	[15]
7.	.....	[15]
8.	.....	[15]
9.	.....	[15]
<b>Note:</b> There may be subdivisions in each question asked in Theory Examination.		

# FORMAT OF QUESTION PAPER FOR END SEMESTER UNIVERSITY EXAMINATION



**Binod Bihari Mahato Koylanchal University, Dhanbad**

## Question format for 100 Marks:

F.M.=100	Subject/Code Time=3Hrs.	Exam Year
<b>General Instruction:</b>		
i. Group A carries very short answer type compulsory question. ii. Answer 4 out of 6 subjective/descriptive questions given in Group B. iii. Answer in your own words as far as practicable. iv. Answer all sub parts of a question at one place. v. Numbers in right indicate full marks of the question.		
<b><u>Group A</u></b>		
1.	i. .... ii. .... iii. .... iv. .... v. ....	vi. .... vii. .... viii. .... ix. .... x. ....
		[10x1=10]
2. ....		[5]
3. ....		[5]
<b><u>Group B</u></b>		
4. ....		[20]
5. ....		[20]
6. ....		[20]
7. ....		[20]
8. ....		[20]
9. ....		[20]
<b>Note:</b> There may be subdivisions in each question asked in Theory Examination.		