

FACULTY OF SCIENCES

SYLLABUS

FOR

B.Sc. HOME SCIENCE

(SEMESTER: I - VI)

Examinations: 2019-20



GURU NANAK DEV UNIVERSITY AMRITSAR

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Scheme of Examination**(Semester-I)**

S.No	Name	Theory			Practical			Total
		No. of Paper	Duration	Marks	No. of Papers	Duration	Marks	
1	Introduction to Human Development	1	3 hrs	50	----	-----	---	50
2	Applied Art	1	3 hrs	60	1	3hrs	40	100
3	Basic Food & Nutrition	1	3 hrs	60	1	3hrs	40	100
4	Hygiene	1	3 hrs	50	-	-	-	50
5	Computer Basics	1	3 hrs	60	1	3hrs	40	100
6	Communication Skills in English-I	1	3 hrs	50	-	-	-	50
7	Punjabi (Compulsory) OR *ਮੁਢਲੀ ਪੰਜਾਬੀ OR **Punjab History & Culture	1	3 hrs	50	-	-	-	50
8	***Drug Abuse: Problem, Management and Prevention (Compulsory)	1	3 hrs	50				

Total Marks: 500**Note:**

1. *Special Paper in lieu of Punjabi Compulsory.
2. **For those students who are not domicile of Punjab
3. ***This paper marks will not be included in the total marks.

(Semester-II)

S.No	Name	Theory			Practical			Total Marks
		No. of Paper	Duration	Marks	No. of Papers	Duration	Marks	
1	Family and Social welfare	1	3 hrs	50				50
2	Introduction to Family Resource Management	1	3 hrs	60	1	3hrs	40	100
3	Advanced Food & Nutrition	1	3 hrs	60	1	3hrs	40	100
4	Elementary Physiology	1	3 hrs	50				50
5	Applied Computer	1	3 hrs	60	1	3hrs	40	100
6	Communication Skill in English-II	1	3 hrs	35			15	50
7	Punjabi (Compulsory) OR *ਮੁੱਢਲੀ ਪੰਜਾਬੀ OR **Punjab History & Culture	1	3 hrs	50				50
8	***Drug Abuse: Problem, Management and Prevention (Compulsory)	1	3 hrs	50				

Total Marks: 500

Note:

1. *Special Paper in lieu of Punjabi Compulsory.
2. **For those students who are not domicile of Punjab
3. ***This paper marks will not be included in the total marks.

(Semester-III)

Sr. No.	Subject	THEORY			PRACTICAL			Total Marks
		No. of Papers	Duration (hrs)	Marks	No. Of Paper	Duration (hrs)	Marks	
1.	Developmental Stages Upto Childhood	1	3	50	-	-	-	50
2.	Housing	1	3	60	1	3	40	100
3.	Meal Management	1	3	60	1	3	40	100
4.	Textile Science	1	3	60	1	3	40	100
5.	Basic Concepts of Economics	1	3	50	-	-	-	50
6.	Basic Physics	1	3	50	-	-	-	50
7.	Basic Chemistry	1	3	50	-	-	-	50
Total Marks								500

(Semester-IV)

Sr. No.	Subject	THEORY			PRACTICAL			Total Marks
		No. of Papers	Duration (hrs)	Total Marks	No. Of Paper	Duration (hrs)	Total Marks	
1.	Developmental Stages Till Old Age	1	3	50	-	-	-	50
2.	Kitchen Design & its Equipment	1	3	60	1	3	40	100
3.	Quantity Food Production & Service	1	3	60	1	3	40	100
4.	Traditional Embroideries, Textiles & Costumes of India	1	3	60	1	3	40	100
5.	Consumer Economics	1	3	50	-	-	-	50
6.	Applied Physics	1	3	30	1	3	20	50
7.	Applied Chemistry	1	3	30	1	3	20	50
8.	* ESL-221 : Environmental Studies (Compulsory)	1	3	100	-	-	-	
Total Marks								500

Note: *This paper marks will not be included in the total marks.

(Semester-V)

Sr. no.	Name of the Subject	Theory			Practical				Total Marks
		No. of papers	Duration	Total Marks	No. of papers	Duration	Marks	Total marks	
1.	Child Psychology	1	3	50	-	-	-	-	50
2.	Interior Space Designing	1	3	60	1	3	40	40	100
3.	Therapeutic Nutrition	1	3	60	1	3	40	40	100
4.	Basic Concepts of Sewing and Fashion	1	3	60	1	3	40	40	100
5.	Introduction to Extension Education and Community Development	1	3	50	-	-	-	-	50
6.	Basic Nutritional Biochemistry	1	3	50	-	-	-	-	50
7.	Applied Botany & Home Gardening	1	3	60	1	3	40	40	100
						Total			550

(Semester-VI)

S. No	Name of the Subject	Theory			Practical			Total Marks
		No. of papers	Duration	Marks	No. of papers	Duration	Marks	
1.	Behavioural Psychology	1	3	30	1	3	20	50
2.	Interior Decoration	1	3	60	1	3	40	100
3.	Community Nutrition	1	3	60	1	3	40	100
4.	Garment Designing & Construction	1	3	60	1	3	40	100
5.	Communication and Audio-visual in Extension work	1	3	30	1	3	20	50
6.	Applied Nutritional Biochemistry	1	3	30	1	3	20	50
7.	Applied Zoology and Food Microbiology	1	3	60	1	3	40	100
						Total		550

**INTRODUCTION TO HUMAN DEVELOPMENT
(Theory)****Time=3 Hrs
Pds 6 pds/week****Max. Marks: 50****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES:-

- To introduce students to the field of Human Development.
- To prepare students for motherhood.

CONTENTS**SECTION-A**

Introduction to the field of Human development.

- Definition
- Scope and opportunities.
- Brief historical perspective.

Growth and development

- Definition
- Principles of Development
- Factors affecting growth & development, heredity, environment, learning and maturation.
- General Characteristics of various stages of Human life.

SECTION-B

Pre-natal Development

- Definition
- Importance of Fertilization
- Stages of prenatal development.
- Time Table of prenatal development.
- Factors affecting prenatal development.
- Hazards during prenatal development.
- Symptoms of pregnancy.
- Care & Complication during Pregnancy.

SECTION-C

Birth of a Baby

- Birth Process
- Complications during birth.
- Types of Delivery.
- Preterm babies – Characteristics and care

New born.

- Reflexes of a new born.
- Characteristics of new-born.
- Breast feeding & weaning.
- Immunization schedule of new born.

SECTION-D

Care of the new born

- Equipments for nursery
- Bathing of child
- Sleeping schedules & making beds.
- Sterilization of feeders & other equipments.

Psychological aspects of parenthood.

- Psychological fatigue after birth symptom and care
- Role of father during pregnancy & after birth

REFERENCES:

1. Child Development by Laura E Berk
2. Child Development by Rajamal P.Devdas
3. Human Development by Grace J. Craig .s

**Applied Art
(Theory)**

Time: 3 Hrs. Max.

Marks: 100

Theory: 60

Practical:40

Pds- 2 pds/ week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE

- To develop an understanding of elements and principles of design and their application
- To develop the creative ability in student by making simple craft objects

CONTENTS

SECTION-A

Art Introduction

- Definition of Art, fine art & applied art
- Importance of Art
- Different art media like pencils colours crayons etc.
- Tools and techniques in art.

Elements of art

- Line: Types of Lines & their effect & optical illusion created by lines
- Form & shape- types & their use
- Texture- types & their use
- Color Use of Color
- Pattern Light & space

SECTION-B

Colour

- Source of colour, dimensions of colour characteristics of colours, emotional effects of colours, classification of colour according to pigment color system and color schemes.
- Optical illusion crated through colour

Principles of design

- Proportion & scale
- Balance
- Rhythm
- Emphasis
- Harmony

SECTION-C

Objective of Art

a) Beauty b) Functionalism c) Expressiveness

Design & motif

- Natural, Geometrical, Stylized and abstract.
- Types of Design: Decorative and structural & their characteristics
- Enlargement & reduction in size of the design

SECTION-D

Rangoli

- Significance of Rangoli
- Rangoli in different states
- Materials used for Rangoli
- Points to be considered in Rangoli

REFERENCE BOOKS:

1. Family Resource Management & Health Science Rajwinder K. Randhawa, Pardeep Publications 2010.
2. Crafts & Drawing Book
3. The Art of flower Arrangement, Rekha Sareen.

**Applied Art
(Practical)**

Time: 3 Hrs.

Max. Marks: 40

Pds- 6 pds/ week

Note: Paper will be set on the spot by the examiner

Instructions for paper setter.

1. Any article from syllabus. (10 marks)
2. Rangoli (10 marks)
3. Scheme work 12 marks.
4. File (8 marks)

Practicals:

1. Drawing different types of lines and their use
2. Draw different types of shapes & form and draw any object using this form and do pencil shading
3. Make a design through motif.
4. Enlarge any design in size.
5. Draw Rangoli designs for different occasions-Diwali, Exhibition Hall, Entrance, Grah parvesh, and Childs Birthday and draw on floor & fill into colored material.
6. Make pigment color wheel.
7. Draw value scale and tone of primary and secondary colors.
8. Make colour schemes and use them in design.
9. Make different types of texture using different objects.
10. Calligraphy- makes any slogan on poster.
11. Make any flower with water color shading.
12. Make one simple landscaping using water shading technique
13. Make an article of each

- 1) Fabric Painting
- 2) Glass painting
- 3) Menu Card
- 4) Collage work.
- 5) Greeting card
- 6) Flowers from paper and stockings
- 7) Pot decoration

Basic Food & Nutrition
(Theory)

Time: 3 Hrs. Max.

Marks: 100
Theory: 60
Practical: 40

Pds- 4 pds/ week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To gain knowledge about food preparation.
- To gain basic knowledge of Nutrients.

CONTENTS

SECTION-A

Introduction to nutrition- Food as a sources of nutrients, functions of food, definition of nutrition, nutrients , adequate, optimum and good nutrition, malnutrition.

Brief introduction of food commodities, their types, selection.

Storage & Use :- cereals & pulses, eggs fish poultry, vegetable & fruit sugar, & mild, oil & ghee, spice & condiments.

SECTION-B

Food Preparation

Basic terminology used in Cooking.

Different methods of cooking - Dry heat, moist heat, frying and microwave cooking.

Effect of cooking on nutritive value of food.

SECTION-C

Carbohydrates - Composition, classification, functions, food sources, requirement, deficiencies.

Fats and Oils- Composition, Classification, Saturated, Unsaturated fatty acids, food sources, functions, requirement and deficiencies.

Protein - Composition, Classification, Essential and Non- essential amino acids, food Sources, functions, deficiencies.

SECTION-D

Energy- Unit of energy, food as a source of energy, energy value of food. The body need of energy. Factors affecting energy requirement

1. Determination of energy value of foods using calorimeter
2. Specific Dynamic action
3. Basal Metabolism
4. Determination of basal metabolism
5. Factors affecting the BMR

References:

1. Guthrie, Hele, Andrews, Intoductory Nutrition, 6th ed. St. Louts, Times Mirror/Mosby College: 1988.
2. Mudambi S.R. M.V. Rajgopal. Fundamental of Foods & Nutrition (2nd ed.) Wilay Eastern Ltd. 1990.
3. Swaminathan S: Advanced text book on foods Nutrition, Vol. I, II (2nd ed. Revised & enlarged) B. app C-1985.
4. Willson, EVAD Principles of Nutrition 4thed New York John Willey & Sons. 1979.

**Basic Food & Nutrition
(Practical)****Time: 3 Hrs.****Max Marks: 40
Pds- 6 pds/ week****Note:** Paper will be set on the spot by the examiner**Instructions for the Paper Setter:**

- 1) Any starter dish (10 marks)
- 2) Main dish (20 marks)
- 3) Recipe file (5 marks)
- 4) Viva(5marks)

Paracticals:

- 1) Identification of different food stuffs, weight and measures and cooking terms.
- 2) Beverage- e.g. Hot and cold (Tea, Coffee, fruit and milk based, beverage) etc.
- 3) Prepare 5 dishes using following methods
 - (a) Boiling: Pulses, rice, soups, desserts, etc.
 - (b) Shallow Frying: Pancakes, snacks, etc.
 - (c) Deep Frying: Sweet and savoury snacks, maindishes, etc.
 - (d) Fermenting and Steaming: Idli, dosa, dhokla, etc.
- 4) Daily and occasional cleaning of kitchen equipments, utensils, counter, floor and cupboards.

Hygiene (Theory)

Time: 3 Hrs.
Pds- 4 pds/ week

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE

1. To gain knowledge about health, hygiene and common diseases.

CONTENT

SECTION-A

Health & Hygiene

- a) Definition of health Hygiene infection sources prevention, immunity & immunization schedule
- b) Personal hygiene

SECTION-B

Brief study of diseases cause mode of spread incubation period symptoms prevention& control

- a) Disease caused by ingestion Typhoid, Jaundice, cholera, Diarrhea and Dysentery & Food poisoning
- b) Diseases caused by inhalation Measles, mumps, and tuberculosis chickenpox.

SECTION-C

- c) Diseases caused by vectors Malaria Dengue.
- d) Disease caused by sexual contact HIV, AIDS
- e) Disease caused by contact- Eczema

SECTION-D

Water supply

- a) Sources of contamination
- b) Types of water
- c) Purification of water at home
- d) Modern Methods of purification of water (different types of filter – Aqua guard, R.O filter etc)

Reference Book:

- 1. Family resource management & Hygiene by Randhawa.

COMPUTER BASICS
(Theory)

Time=3 Hrs

Max. Marks: 100

Theory: 60

Practical:40

Periods= 3 pds/week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Objective: - To provide the Fundamental knowledge of Computer and its uses.

Contents

SECTION-A

Introduction to computer and its characteristic:

History of computers, Generations of Computers, Types of Computers, input devices, output devices, memory devices, software and its types, working with windows, features, desktop, using context menu, creating shortcut, working with dialog box, arranging windows, setting properties of desktop, transfer from CD,DVD. Pen Drive to Hard disk and vice versa, copying files.

Definition of Virus, Malware, Spyware and removal.

SECTION-B

MS Word

- How to open MS word document from file and to exit from a document.
- How to edit a document.
- Formatting the whole Text in different fonts and sizes and colors.
- Inserting pictures from a file, inserting a Table or a chart.
- How to use Mail merge, how to copy one document or Text from one document to another.
- How to put headers and footers on a document.

SECTION-C

MS-Power Point.

Presentation & its features, components, viewing a slide show using blank presentation adding text, saving, closing, opening the presentation, viewing presentation, normal view, Outline view, slide sorter view, slide show, creating a wizard using presentation, editing presentations, adding new slide, changing the new slides, editing text type, deleting the text object, interesting text boxes, formatting text, modifying slides, working with slide outlines, moving objects , copying objects, searching text, replacing text, spell check, using clip art, word Art, auto shapes.

SECTION-D

Internet and E-mail:

What Internet Provides, Internet terms, Internet requirements, getting started Internet, Surfing Net, moving about the Web, E-Mail, its features, creating and E-Mail message, Reading Mail, replying mail, draft message, sending mail. Phishing and SPAM mail.

COMPUTER BASICS (PRACTICAL)

Time: 3 Hrs.
Pds - 3 pds/ week

Max. Marks: 40

Note: Paper will be set on the spot by the examiner.

- Window Basics
- Internet Usage
- MS word
- MS Power Point

COMMUNICATION SKILLS IN ENGLISH-I

Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The syllabus is divided in four sections as mentioned below:

Section–A

Reading Skills: Reading Tactics and strategies; Reading purposes–kinds of purposes and associated comprehension; Reading for direct meanings.

Section–B

Reading for understanding concepts, details, coherence, logical progression and meanings of phrases/ expressions.

Activities:

- Comprehension questions in multiple choice format
- Short comprehension questions based on content and development of ideas

Section–C

Writing Skills: Guidelines for effective writing; writing styles for application, personal letter, official/ business letter.

Activities

- Formatting personal and business letters.
- Organising the details in a sequential order

Section–D

Resume, memo, notices etc.; outline and revision.

Activities:

- Converting a biographical note into a sequenced resume or vice-versa
- Ordering and sub-dividing the contents while making notes.
- Writing notices for circulation/ boards

Recommended Books:

- *Oxford Guide to Effective Writing and Speaking* by John Seely.
- *English Grammar in Use* (Fourth Edition) by Raymond Murphy, CUP

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

ਸਮਾਂ : 3 ਘੰਟੇ

ਕੁਲ ਅੰਕ : 50

ਅੰਕ-ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹੋਣਗੇ। ਹਰ ਭਾਗ ਵਿੱਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਭਾਗ ਵਿੱਚੋਂ ਇੱਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿੱਚ ਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਪਾਠ-ਪੁਸਤਕਾਂ

ਸੈਕਸ਼ਨ-ਏ

ਆਤਮ ਅਨਾਤਮ (ਕਵਿਤਾ ਭਾਗ),
(ਸੰਪ. ਸੁਹਿੰਦਰ ਬੀਰ ਅਤੇ ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ)
ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
(ਪ੍ਰਸ਼ਗ ਸਾਹਿਤ ਵਿਆਖਿਆ, ਸਾਰ)

ਸੈਕਸ਼ਨ-ਬੀ

ਇਤਿਹਾਸਕ ਯਾਦਾਂ (ਇਤਿਹਾਸਕ ਲੇਖ-ਸੰਗ੍ਰਹਿ)
ਸੰਪਾ. ਸ.ਸ.ਅਮੋਲ,
ਪੰਜਾਬੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ। (ਲੇਖ 1 ਤੋਂ 6)
(ਨਿਬੰਧ ਦਾ ਸਾਰ, ਲਿਖਣ-ਸ਼ੈਲੀ)

ਸੈਕਸ਼ਨ-ਸੀ

(ੳ) ਪੈਰਾ ਰਚਨਾ
(ਅ) ਪੈਰਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ।

ਸੈਕਸ਼ਨ-ਡੀ

(ੳ) ਪੰਜਾਬੀ ਧੁਨੀ ਵਿਉਂਤ : ਉਚਾਰਨ ਅੰਗ, ਉਚਾਰਨ ਸਥਾਨ ਤੇ ਵਿਧੀਆਂ, ਸਵਰ, ਵਿਅੰਜਨ,
ਸੁਰ-ਪ੍ਰਵਾਹ।
(ਅ) ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ : ਭਾਸ਼ਾ ਦਾ ਟਕਸਾਲੀ ਰੂਪ, ਭਾਸ਼ਾ ਅਤੇ ਉਪ-ਭਾਸ਼ਾ ਦਾ ਅੰਤਰ, ਪੰਜਾਬੀ
ਉਪਭਾਸ਼ਾਵਾਂ ਦੇ ਪਛਾਣ-ਚਿੰਨ੍ਹ।

ਮੁੱਢਲੀ ਪੰਜਾਬੀ
(In lieu of Compulsory Punjabi)

ਸਮਾਂ : 3 ਘੰਟੇ

ਕੁਲ ਅੰਕ: 50

ਅੰਕ-ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹੋਣਗੇ। ਹਰ ਭਾਗ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਭਾਗ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠ-ਕ੍ਰਮ

ਸੈਕਸ਼ਨ-ਏ

ਪੌਤੀ ਅੱਖਰੀ, ਅੱਖਰ ਕ੍ਰਮ, ਪੈਰ ਬਿੰਦੀ ਵਾਲੇ ਵਰਣ ਅਤੇ ਪੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਵਰਣ ਅਤੇ ਮਾਤ੍ਰਵਾਂ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ)
ਲਗਾਖਰ (ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ) : ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ

ਸੈਕਸ਼ਨ-ਬੀ

ਪੰਜਾਬੀ ਸ਼ਬਦ-ਬਣਤਰ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ
(ਸਾਧਾਰਨ ਸ਼ਬਦ, ਸੰਯੁਕਤ ਸ਼ਬਦ, ਮਿਸ਼ਰਤ ਸ਼ਬਦ, ਮੂਲ ਸ਼ਬਦ, ਅਗੇਤਰ ਅਤੇ ਪਿਛੇਤਰ)

ਸੈਕਸ਼ਨ-ਸੀ

ਨਿੱਤ ਵਰਤੋਂ ਦੀ ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ : ਬਾਜ਼ਾਰ, ਵਪਾਰ, ਰਿਸ਼ਤੇ-ਨਾਤੇ, ਖੇਤੀ ਅਤੇ ਹੋਰ ਧੰਦਿਆਂ ਆਦਿ ਨਾਲ ਸੰਬੰਧਤ।

ਸੈਕਸ਼ਨ-ਡੀ

ਹਫ਼ਤੇ ਦੇ ਸੱਤ ਦਿਨਾਂ ਦੇ ਨਾਂ, ਬਾਰ੍ਹਾਂ ਮਹੀਨਿਆਂ ਦੇ ਨਾਂ, ਰੁੱਤਾਂ ਦੇ ਨਾਂ, ਇਕ ਤੋਂ ਸੌ ਤਕ ਗਿਣਤੀ ਸ਼ਬਦਾਂ ਵਿਚ ।

Paper-II: Punjab History & Culture (From Earliest Times to C 320)
(Special Paper in lieu of Punjabi compulsory)
(For those students who are not domicile of Punjab)

Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section A

1. Physical features of the Punjab and its impact on history.
2. Sources of the ancient history of Punjab

Section B

3. Harappan Civilization: Town planning; social, economic and religious life of the Indus Valley People.
4. The Indo-Aryans: Original home and settlements in Punjab.

Section C

5. Social, Religious and Economic life during *Rig* Vedic Age.
6. Social, Religious and Economic life during Later Vedic Age.

Section D

7. Teachings and impact of Buddhism
8. Jainism in the Punjab

Suggested Readings

1. L. M Joshi (ed.), *History and Culture of the Punjab*, Art-I, Patiala, 1989 (3rd edition)
2. L.M. Joshi and Fauja Singh (ed.), *History of Punjab*, Vol.I, Patiala 1977.
3. Budha Parkash, *Glimpses of Ancient Punjab*, Patiala, 1983.
4. B.N. Sharma, *Life in Northern India*, Delhi. 1966.
5. Chopra, P.N., Puri, B.N., & Das, M.N.(1974). *A Social, Cultural & Economic History of India*, Vol. I, New Delhi: Macmillan India.

**Drug Abuse: Problem, Management and Prevention
(COMPULSORY PAPER)****PROBLEM OF DRUG ABUSE****Time: 3 Hours****Max. Marks: 50****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section – A**Meaning of Drug Abuse:**

Meaning, Nature and Extent of Drug Abuse in India and Punjab.

Section – B**Consequences of Drug Abuse for:**

Individual	:	Education, Employment, Income.
Family	:	Violence.
Society	:	Crime.
Nation	:	Law and Order problem.

Section – C**Management of Drug Abuse:**

Medical Management: Medication for treatment and to reduce withdrawal effects.

Section – D

Psychiatric Management: Counselling, Behavioural and Cognitive therapy.

Social Management: Family, Group therapy and Environmental Intervention.

References:

1. Ahuja, Ram (2003), *Social Problems in India*, Rawat Publication, Jaipur.
2. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
3. Inciardi, J.A. 1981. *The Drug Crime Connection*. Beverly Hills: Sage Publications.
4. Kapoor. T. (1985) *Drug epidemic among Indian Youth*, New Delhi: Mittal Pub.
5. Kessel, Neil and Henry Walton. 1982, *Alcoholism*. Harmond Worth: Penguin Books.

6. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.
7. National Household Survey of Alcohol and Drug abuse. (2003) New Delhi, Clinical Epidemiological Unit, All India Institute of Medical Sciences, 2004.
8. Ross Coomber and Others. 2013, *Key Concept in Drugs and Society*. New Delhi: Sage Publications.
9. Sain, Bhim 1991, *Drug Addiction Alcoholism, Smoking obscenity* New Delhi: Mittal Publications.
10. Sandhu, Ranvinder Singh, 2009, *Drug Addiction in Punjab: A Sociological Study*. Amritsar: Guru Nanak Dev University.
11. Singh, Chandra Paul 2000. *Alcohol and Dependence among Industrial Workers*: Delhi: Shipra.
12. Sussman, S and Ames, S.L. (2008). *Drug Abuse: Concepts, Prevention and Cessation*, Cambridge University Press.
13. Verma, P.S. 2017, "*Punjab's Drug Problem: Contours and Characteristics*", Economic and Political Weekly, Vol. LII, No. 3, P.P. 40-43.
14. World Drug Report 2016, United Nations office of Drug and Crime.
15. World Drug Report 2017, United Nations office of Drug and Crime.

**FAMILY AND SOCIAL WELFARE
(THEORY)**

Time=3 Hrs
Pds= 6 pds/week

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES:-

- To create awareness about Family & Social welfare.

CONTENTS**SECTION-A**

Marriage.

- Meaning, Objectives , Types , Adjustments.
- Problems in adjustment.

Family

- Definition, Characteristics, Types, Functions, Changes in the world family, Characteristics of a modern family.
- Problems of family.
- Merits & demerits of Nuclear & Joint families.
- Factors disintegrating joint family.

SECTION-B

Family Planning

- Need and importance of family planning
- Family planning methods and care.

Parenting techniques

- Authoritarian
- Permissive
- Disciplined

SECTION-C

Role of family & Society in Socialization

Social welfare.

- Meaning of Social welfare.
- Social welfare as distinguished from social work, social service, social reform & social Action

SECTION-D

Family and child welfare

Social Welfare agencies involved in family & child welfare

- ICDS
- Balwadi
- Anganwadi
- All India women's conference
- Local organization official & non-official involved in social welfare

Awareness of current laws related to women & child welfare.

References:

1. E. Wilson, Everett E and Convener, Merrill B, The field of social work, Henry holt and company , New York 1958.
2. Nagpaul , Hans , the study of India society, sociological analysis of social welfare and welfare education, S. Chand and Co Pvt Ltd, New Delhi, 1972.

**INTRODUCTION TO FAMILY RESOURCE MANAGEMENT
(Theory)**

Time: 3 Hrs.

Max. Marks: 100

Theory: 60

Practical: 40

Pds- 6 pds/ week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To understand the fundamentals of Resource Management in changing scenario.
- To recognize the importance of wise use of resources in order to achieve goals.
- To develop the organizational skills.

CONTENT

SECTION-A

Introduction to family resource management

- Definition and importance of family resource Management.
- Challenges of family resource management.
- Family life cycle and its effect on management of resources.
- Managerial responsibilities of families.
- Major Motivating forces-Values, Goals, Standards, Needs and Wants.

Resources.

- Definition and classification of resources.
- Characteristics of resources.
- Factors affecting the use of resources.

SECTION-B

Decision Making Process

- Steps in Decision making process.
- Factors affecting Decision Making.
- Problem solving through resolving conflicts.

Management process

- Planning
- Organizing
- Supervising
- Controlling
- Evaluation
- Role of communication in effective management
- Application of management process in resource utilization.

SECTION-C

Management of specific resources

- Money management – types of income and steps in money management (budgeting), methods of handling money.
- Importance of saving & investment.
- Time management -tools of time management , steps of making time plans
- Energy management-concepts of energy cost of various household activities.
- Fatigue – types ,causes ,effects and remedies
- Steps in reducing energy costs.

SECTION-D

Work simplification

- Interrelationship of time and energy.
- Techniques of studying work -pathway, process & operation chart.
- General principles (Mundel's classes of change of work simplification)

Ergonomics

- Definition and importance
- Disciplines involved in ergonomics
- Use of ergonomics.

REFERENCES:

1. Gross, I.H; Crandall, E.W and Knoll .M.M Management for modern families, sterling Publishers, New Delhi, 1967.
2. Nickell, P; Dorsey, J.N. Management in Family living, John Willy and sons Inc, New York, 1975.
3. Fire baugh & Deacon-Home management concepts and contents.
4. Randhawa, Rajwinder K; Family Resource Management and Health Science, Pardeep Publication, Jalandhar, 2009.

**INTRODUCTION TO FAMILY RESOURCE MANAGEMENT
(PRACTICALS)**

Time- 3 Hrs (Exam)
Period-2 pds/week

Total Marks: 40

(Note: Paper will be set on the spot by the examiner).

Instructions for the paper setter:

1. Budget / Path way or Process chart or Time plan (10 marks)
2. Table setting (10 marks)
3. Utility article made in the session. (10 marks)
4. File (5 marks)
5. Viva (5 marks)

Practicals:

1. Planning of budget for different income groups.
2. Preparing time plans of working and non-working homemakers.
3. Simplify any household task using pathway, process & operation chart.
4. Table setting for different meals- Formal, Informal and Buffet and Napkin folding.
5. Make any utility article that will be judged by the external examiner.

**ADVANCED FOOD & NUTRITION
(THEORY)**

Time-3 hrs

Max. Marks: 100

Theory: 60

Practical: 40

Pds-4/Week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE:

- To understand the relationship between nutrition and human well being.
- To know the functions, sources and deficiencies of nutrient in human body.

COURSE CONTENT

SECTION-A

Vitamin- Classification, unit of measurements sources, requirements functions and deficiency and Toxicities of following vitamins.

(a) Fat Soluble vitamins A,D,E and K

(b) Water Soluble vitamins- C,B1-B2,B3,B6, B12 and Folic acid.

Mineral- Functions, Sources, Bio-availability requirement and deficiency/excess of following minerals calcium, iron, iodine, fluorine , Sodium, Potassium, Phosphorus, and Magnesium

Importance of water in Nutrition.

SECTION-B

Food Preservation

Importance and scope of food preservation.

Causes of food spoilage.

Principles of food preservation.

Household Methods of food preservation.

SECTION-C

Food adulteration and standards

Definition.

Common adulterants & their test in different food stuffs.

Toxic Effects of food adulteration.

Food standards.

SECTION-D

Food hygiene

Purchasing

Preparation.

Cooking

Serving

**ADVANCED FOOD & NUTRITION
(PRACTICAL)**

Time-3 hrs
Pds- 6 Pds/Week

Max. Marks: 40

Note: Paper will be set on the spot by the examiner

Instructions for Paper Setters:

1. One dish of any cooking method. (15 Marks)
2. Preservation (15 marks)
3. Recipe file. (5 Marks)
4. Viva (5 Marks)

Practicals:

(1) Prepare 5 dishes using following methods

- a) Baking- e.g. Cakes & Biscuits, Continental dishes etc.
- b) Grilling- e.g. Pizza and variation of sandwiches, grilled and tandoori snacks etc.
- c) Sprouting

(2) Preservation - Pickles, Chutney, Jam & Squashes.

**ELEMENTRY PHYSIOLOGY
(THEORY)**

Time: 3 Hrs.
Pds- 4 pds/ week

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE

1. To gain knowledge about health, hygiene and common diseases.
2. To understand basic structure and functioning of various systems of body.

CONTENT

SECTION-A

Physiology elementary knowledge of structure of cell, tissue and organ , Skin
Elementary knowledge of structure and function of digestive system

- Digestion of carbohydrates protein & fats

SECTION-B

Elementary knowledge of structure and function of cardiovascular system blood composition and function & blood vessels

- Blood groups and RH factor.
- Heart structure & function
- Basic Knowledge of blood pressure & heart beat.

Elementary knowledge of structure and function of respiratory system

Structure and function lungs

SECTION-C

Elementary knowledge of structure and function of urinary system

- Structure & function of nephron & formation of Urine

Elementary Knowledge of structure and function of male and female reproductive organs

Menstrual cycle

SECTION-D

Elementary knowledge of location and function of endocrine glands present in body

Elementary knowledge of structure & function of Brain.

Reference Books

- 1) Text book of Biology for 10+2 students (NCERT)
- 2) Family Resource Management and Health science Rajwinder K Randhawa Pardeep Publication.

**APPLIED COMPUTER
(Theory)****Time: 3 Hrs.****Max. Marks: 100****Theory: 60****Practical: 40****Pds- 3 pds/ week****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE

- 1) To lean computer application for data manipulation
- 2) To explore information on internet

CONTENTS**SECTION-A****Microsoft excel**

Workbook worksheet spreadsheet working with Microsoft excel work book entering data editing cell contents Inserting and deleting rows column cell) using auto-fill, creating list formatting data in excel formulas in excel

SECTION-B**Microsoft Access**

Meaning of data base crating table entering records in table detailing table, modifying table filed, linking table queries form reports adding graphs to report

SECTION-C**Internet**

Introduction to internet, searching information on internet

SECTION-D**Multimedia & its appications**

Introduction to Multimedia and its usage, CD player, record sound, using scanner, Fax, Web Camera.

REFERENCE BOOKS

- 1) Window based computing Hemant Kapila Dinesh Publication
- 2) Computer fundamental Rashpal Singh Kalayani Publication
- 3) Computers fundamentals P.K Sinha Preeti Sinha, B.P.B Publication

**APPLIED COMPUTER
(Practical)****Time: 3 Hrs.****Max. Marks: 40****Pds- 3 pds/ week****Note:** Paper will be set on the spot by the examiner.

- 1) Microsoft Excel
- 2) Microsoft Access
- 3) Searching on Internet
- 4) Multimedia Usage
- 5) Project to Create simple (10 design using coral draw)

COMMUNICATION SKILLS IN ENGLISH-II**Time: 3 Hours****Max. Marks: 50**
Theory Marks: 35
Practical Marks: 15**Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Course Contents:**SECTION-A**

Listening Skills: Barriers to listening; effective listening skills; feedback skills.

Activities: Listening exercises – Listening to conversation, News and TV reports

SECTION-B

Attending telephone calls; note taking and note making.

Activities: Taking notes on a speech/lecture

SECTION-C

Speaking and Conversational Skills: Components of a meaningful and easy conversation; understanding the cue and making appropriate responses; forms of polite speech; asking and providing information on general topics.

Activities: 1) Making conversation and taking turns

2) Oral description or explanation of a common object, situation or concept

SECTION-D

The study of sounds of English,
Stress and Intonation,
Situation based Conversation in English,
Essentials of Spoken English.

Activities: Giving Interviews

PRACTICAL / ORAL TESTING**Marks: 15****Course Contents:-**

1. Oral Presentation with/without audio visual aids.
2. Group Discussion.
3. Listening to any recorded or live material and asking oral questions for listening comprehension.

Questions:-

1. Oral Presentation will be of 5 to 10 minutes duration (Topic can be given in advance or it can be student's own choice). Use of audio visual aids is desirable.
2. Group discussion comprising 8 to 10 students on a familiar topic. Time for each group will be 15 to 20 minutes.

Note: Oral test will be conducted by external examiner with the help of internal examiner.

ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

ਸਮਾਂ : 3 ਘੰਟੇ

ਕੁਲ ਅੰਕ : 50

ਅੰਕ-ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹੋਣਗੇ। ਹਰ ਭਾਗ ਵਿੱਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਭਾਗ ਵਿੱਚੋਂ ਇੱਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿੱਚ ਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਪਾਠ-ਪੁਸਤਕਾਂ

ਸੈਕਸ਼ਨ-ਏ

ਆਤਮ ਅਨਾਤਮ (ਕਹਾਣੀ ਭਾਗ),
(ਸੰਪ. ਸੁਹਿੰਦਰ ਬੀਰ ਅਤੇ ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ)
ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
(ਵਿਸ਼ਾ-ਵਸਤੂ, ਪਾਤਰ ਚਿਤਰਨ)

ਸੈਕਸ਼ਨ-ਬੀ

ਇਤਿਹਾਸਕ ਯਾਦਾਂ (ਇਤਿਹਾਸਕ ਲੇਖ-ਸੰਗ੍ਰਹਿ)
ਸੰਪਾ. ਸ.ਸ.ਅਮੋਲ,
ਪੰਜਾਬੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ। (ਲੇਖ 7 ਤੋਂ 12)
(ਸਾਰ, ਲਿਖਣ ਸ਼ੈਲੀ)

ਸੈਕਸ਼ਨ-ਸੀ

(ੳ) ਸ਼ਬਦ-ਬਣਤਰ ਅਤੇ ਸ਼ਬਦ ਰਚਨਾ : ਪਰਿਭਾਸ਼ਾ, ਮੁੱਢਲੇ ਸੰਕਲਪ
(ਅ) ਸ਼ਬਦ ਸੂਚੀ

ਸੈਕਸ਼ਨ-ਡੀ

(ੳ) ਸੰਖੇਪ ਰਚਨਾ
(ਅ) ਮੁਹਾਵਰੇ ਅਤੇ ਅਖਾਣ

ਮੁੱਢਲੀ ਪੰਜਾਬੀ
(In lieu of Compulsory Punjabi)

ਸਮਾਂ: 3 ਘੰਟੇ

ਕੁਲ ਅੰਕ: 50

ਅੰਕ-ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹੋਣਗੇ। ਹਰ ਭਾਗ ਵਿੱਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਭਾਗ ਵਿੱਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿੱਚ ਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠ-ਕ੍ਰਮ

ਸੈਕਸ਼ਨ-ਏ

ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ
(ਨਾਂਵ, ਪੜਨਾਂਵ, ਕਿਰਿਆ, ਵਿਸ਼ੇਸ਼ਣ, ਕਿਰਿਆ ਵਿਸ਼ੇਸ਼ਣ, ਸਬੰਧਕ, ਯੋਜਕ ਅਤੇ ਵਿਸਮਿਕ)

ਸੈਕਸ਼ਨ-ਬੀ

ਪੰਜਾਬੀ ਵਾਕ ਬਣਤਰ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ
(ੳ) ਸਾਧਾਰਨ ਵਾਕ, ਸੰਯੁਕਤ ਵਾਕ ਅਤੇ ਮਿਸ਼ਰਤ ਵਾਕ (ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ)
(ਅ) ਬਿਆਨੀਆ ਵਾਕ, ਪ੍ਰਸ਼ਨਵਾਚਕ ਵਾਕ ਅਤੇ ਹੁਕਮੀ ਵਾਕ (ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ)

ਸੈਕਸ਼ਨ-ਸੀ

ਪੈਰ੍ਹਾ ਰਚਨਾ
ਸੰਖੇਪ ਰਚਨਾ

ਸੈਕਸ਼ਨ-ਡੀ

ਚਿੱਠੀ ਪੱਤਰ (ਘਰੇਲੂ ਅਤੇ ਦਫ਼ਤਰੀ)
ਅਖਾਣ ਅਤੇ ਮੁਹਾਵਰੇ

Paper-II: Punjab History & Culture (C 320 to 1000 B.C.)
(Special Paper in lieu of Punjabi compulsory)
(For those students who are not domicile of Punjab)

Time: 3 Hours

Max. Marks : 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section A

1. Alexander's Invasion and its Impact
2. Punjab under Chandragupta Maurya and Ashoka.

Section B

3. The Kushans and their Contribution to the Punjab.
4. The Panjab under the Gupta Empire.

Section C

5. The Punjab under the Vardhana Emperors
6. Socio-cultural History of Punjab from 7th to 1000 A.D.

Section D

7. Development of languages and Education with Special reference to Taxila
8. Development of Art & Architecture

Suggested Readings

1. L. M Joshi (ed), *History and Culture of the Punjab*, Art-I, Punjabi University, Patiala, 1989 (3rd edition)
2. L.M. Joshi and Fauja Singh (ed.), *History of Punjab* , Vol.I, Punjabi University, Patiala, 1977.
3. Budha Parkash, *Glimpses of Ancient Punjab*, Patiala, 1983.
4. B.N. Sharma: *Life in Northern India*, Delhi. 1966.

**Drug Abuse: Problem, Management and Prevention
(COMPULSORY PAPER)**

DRUG ABUSE: MANAGEMENT AND PREVENTION

Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section – A

Prevention of Drug abuse:

Role of family: Parent child relationship, Family support, Supervision, Shaping values, Active Scrutiny.

Section – B

School: Counselling, Teacher as role-model. Parent-teacher-Health Professional Coordination, Random testing on students.

Section – C

Controlling Drug Abuse:

Media: Restraint on advertisements of drugs, advertisements on bad effects of drugs, Publicity and media, Campaigns against drug abuse, Educational and awareness program

Section – D

Legislation: NDPs act, Statutory warnings, Policing of Borders, Checking Supply/Smuggling of Drugs, Strict enforcement of laws, Time bound trials.

References:

1. Ahuja, Ram (2003), *Social Problems in India*, Rawat Publication, Jaipur.
2. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
3. Inciardi, J.A. 1981. *The Drug Crime Connection*. Beverly Hills: Sage Publications.
4. Kapoor. T. (1985) *Drug epidemic among Indian Youth*, New Delhi: Mittal Pub.
5. Kessel, Neil and Henry Walton. 1982, *Alcoholism. Harmond Worth*: Penguin Books.
6. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.
7. National Household Survey of Alcohol and Drug abuse. (2003) New Delhi, Clinical Epidemiological Unit, All India Institute of Medical Sciences, 2004.
8. Ross Coomber and Others. 2013, *Key Concept in Drugs and Society*. New Delhi: Sage Publications.
9. Sain, Bhim 1991, *Drug Addiction Alcoholism, Smoking obscenity* New Delhi: Mittal Publications.
10. Sandhu, Ranvinder Singh, 2009, *Drug Addiction in Punjab: A Sociological Study*. Amritsar: Guru Nanak Dev University.

11. Singh, Chandra Paul 2000. *Alcohol and Dependence among Industrial Workers*: Delhi: Shipra.
12. Sussman, S and Ames, S.L. (2008). *Drug Abuse: Concepts, Prevention and Cessation*, Cambridge University Press.
13. Verma, P.S. 2017, "*Punjab's Drug Problem: Contours and Characteristics*", Economic and Political Weekly, Vol. LII, No. 3, P.P. 40-43.
14. World Drug Report 2016, United Nations office of Drug and Crime.
15. World Drug Report 2017, United Nations office of Drug and Crime.

DEVELOPMENTAL STAGES UPTO CHILDHOOD
(Theory)

Time: 3 Hrs.
Pds- 4 pds/ week

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE

- To understand developmental stages from infancy to childhood.
- To get insight into the different areas of development across the life span i.e. physical, motor ,cognitive, language, social and emotional
- To discuss the factors affecting development till childhood.

CONTENT

SECTION-A

- 1 Developmental tasks from infancy to childhood.
- 2 Early childhood care and education
 - a) Concepts, significance and programs.
 - b) Infrastructure & curriculum planning for different age groups.

SECTION-B

Domains of development from infancy to childhood and factors affecting and facilitating these developments

- 1) Physical development
 - a) Body size
 - b) Skeletal growth
 - c) Cardio Vascular System
 - d) Brain and nervous system
 - e) Factors affecting physical development
- 2) Motor development
 - a) Sequence of motor development
 - b) Some motor skills of childhood
 - c) Factors affecting motor development and facilitating motor skills.

SECTION-C

- 3) Language development
 - Stages of language development
 - Factors affecting language development and facilitating language development
 - Speech Defects

SECTION-D

Psycho Social development from infancy to childhood

1. Social development
 - a) Meaning of social development
 - b) Agencies of socialization
 - c) Factors affecting socialization
 - d) Play- its types and importance

- 2) Emotional Development
 - a) Definition of emotion
 - b) Different childhood - emotions and their role in development of child
 - c) Characteristics of children's emotion
 - d) Factors affecting emotional development

REFERENCE BOOK

- 1) Essentials of life span development, Johan W santrock McGraw Hill publishing company
- 2) Human Development Thomas L. Crandell MC Graw Hill Publishing Company
- 3) Human Development Paplia Mc Graw Hill Publishing company
- 4) Growth and development Hurlock E.B Tata, Mac Graw Hill Company
- 5) Child Development P. Rajamal & Devads Machmulitan India Ltd.
- 6) Nutrition and Child development Rajinder Randhawa Pardeep Publications.

B.Sc. Home Science (Semester-III)

**HOUSING
(Theory)****Time: 3 Hrs.****Max. Marks: 100****Theory: 60****Practical: 40****Pds- 4 pds/ week****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To Understand the fundamentals of house planning & material used for construction of house

CONTENT**SECTION-A****House & related concepts**

- Concept of House & home.
- Functions of home.
- Housing needs and factors affecting housing needs.
- Rented/ owned house/ house provided by public or private sector.
- Type of houses, row, semidetached, detached, independent house, flats, apartment & multistoried building.

SECTION-B**Selection & principles of house planning**

- Selection of Site , soil, locality and neighborhood
- Principles of planning - Orientation, aspect, prospect, privacy, grouping, circulation, flexibility, roominess future requirement & practical considerations.
- Ventilation.
- Water supply, Drainage and drainage of rainwater, sewage system.
- Provision of light according to the need in different areas.
- Economy in house construction.

SECTION-C**Building Materials used in construction of house**

- Low cost, Eco friendly innovative building materials.
- Materials for foundation.
- Materials for walls & floors.
- Materials for electricity, sewerage & drainage.

SECTION-D**Housing financing agencies**

- Various government and non-government agencies, general terms & conditions.
- Advantage and disadvantage of taking loan.

Building by laws used for house construction & terminologies used.

REFERENCE BOOK

- 1) Randhawa, Rajwinder K family Resource Management and Health Science, Pardeep publication
- 2) Despande, R.S Modern Ideal Homes for India United book corporation
- 3) Agan Tessie M.S The house its plan & use Gulab primlani
- 4) Peett L.J thye, L.S, House hold equipment, Johan villey and sons inc. New York.
- 5) Indian Home Plans- Jain H.L.

B.Sc. Home Science (Semester-III)

**HOUSING
(Practical)**

Time: 3 Hrs.
Pds- 2 pds/ week

Max. Marks: 40

Note: Question paper will be set on the spot by the examiner.

Housing :-

- 1) Symbols and common terms used for house planning
- 2) Types of floor-plans, elevation structural drawing and perspective view
- 3) Draw following house plan, considering in mind principle of planning
 - Row house- 100- 150 sq yard
 - Semi detached house 250-300 sq yard
 - Detached house- 500 sq yard and above
 - One room apartment
 - Flat
 - Double story house

B.Sc. Home Science (Semester-III)

**MEAL MANAGEMENT
(Theory)****Time-3 hrs****Max. Marks: 100****Theory: 60****Practical: 40****Pds-4/Week****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE:

- To enable the students to acquire knowledge of the principles of planning diets for various stages of life cycles.
- Develop ability to plan balanced diet for various activity groups and for various socio-economic level .

COURSE CONTENT:**SECTION-A**

Balanced diet: Concept of Balanced Diet, Food Groups, Exchange Lists, Definition and Objectives of RDA, RDA for different age groups. (ICMR).
Calorie consumption units in planning meals for a family.

SECTION-B

Meal planning: Introduction and Principles of Meal planning.

SECTION-C

Physiological changes and nutritional requirement during pregnancy and lactation.
Growth & development and nutritional requirement during infancy breast feeding /vs bottle feeding and weaning.

SECTION-D

Growth development, food habits and nutritional requirement of preschoolers, school going children & adolescent boy and girl.

Nutritional requirement for adult male & female, Sedentary, moderate & heavy worker.
Physiological changes during old age and meeting their nutritional requirements.

References:

1. Guthrie, Hele, Andrews, Introductory Nutrition, 6th Ed, St. Louts, Times Mirror/Mosby College : 1988
2. Mudambi S.R. M.V. Rajgopal. Fundamental of Foods & Nutrition (2nd ed.) Wilay Eastern Ltd. 1990.
3. Swaminathan S: Advanced Text Book on Foods Nutrition, Vol. I, II (2nd ed. Revised & enlarged) B. app C-1985
4. Willson, EVAD Principles of Nutrition 4th Ed, New York John Willey & Sons. 1979.

**MEAL MANAGEMENT
(Practical)****Time-3 hrs
Pds- 6 Pds/Week****Max. Marks: 40****Note:**

1: Paper will be set on the spot by the examiner

2: Planning of diet (10 marks)

Cooking of 2 dishes from the diet plan(20 marks)

Viva (5 marks)

Files(5 marks)

1. Cook following dishes for different meals. standardize portion size and calculate their nutritive value.

- 1) Breakfast dishes- Stuffed Paranthas, Pancakes, Poha, Dalia etc.
- 2) Lunch & Dinner dishes- Main Dishes- Dal, Channa, Rajmah, Koftas etc., Rice- Pulaos, Paneer dishes, Side dishes, Dry. Vegetables, Stuffed Vegetables etc. Dessert - Puddings, Kheer etc. Salads, Soups etc.
- 3) Evening Sweet & Salty snacks - at least 5 each.

2. Plan balanced diet for the following age groups calculating calories, protein, one important vitamin and mineral as per requirement for the given age group.

- (a) Infancy-Weaning foods
- (b) pre-schooler
- (c) school going child.
- (d) adolescent girl and boy
- (e) adult male and female(sedentary moderate and heavy worker)
- (f) Pregnant and lactating Women
- (g) Geriatric

B.Sc. Home Science (Semester-III)

TEXTILE SCIENCE
(Theory)**Time: 3 Hrs.****Max. Marks: 100****Theory: 60****Practical: 40****Pds- 6 pds/ week****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To impart knowledge about textile fiber, yarn, fabric construction, finishes, dyeing and printing.

CONTENTS**SECTION-A**

Introduction to textile fibers, classification of fibers based on length and source.

- Primary properties of textile fibers in relation to use for the consumer.

Origin, Production and Properties of cotton, linen, rayon –viscose, polynosic, cupramonium, cellulose acetate

- Wool and silk.
- Nylon – polyester acrylics and elastomeric fibers.

SECTION-B

Yarn manufacturing

- Classification of yarns carded and combed yarn, woollen and worsted yarns, filament and spun yarns.
- Types of yarns simple yarns, novelty yarns, textured yarns and their types & uses.
- Yarn properties, yarn count, size&, twist .

Fabric construction techniques

- Weaving Procedure (description of loom)
- Types: simple weave & its variations, twill , satin ,novelty weaves and their types
- Characteristics of woven fabrics: on grain, off grain, thread count, balance cloth, selvedge.

Other Methods of fabric construction:

- Felting
- Bonding
- Knotting
- Looping
- Knitting

SECTION-C**Bleaches and finishes**

- Types – oxidizing and reducing bleaches and their suitability
- Importance of finishes.
- Classification of finishing process on the basis of method of application, stability, types & purpose.
- Description of some important finishes: preparatory finishes- Brushing and shearing, scouring, degumming, desizing and bleaching
- Stabilizing finishes – Texturing, sanforizing, mercerization,
- Textural finishes – calendering, beetling, glazing, sizing, weighting, napping, moiring and embossing.
- Functional finishes- crease resistance waterproof and water repellent flame retardent and flame proof

Laundering & care of textile fabrics

- Principles of washing
- Methods of washing of cotton wool, silk & synthetics, starches & blue
- Dry-cleaning principle & use.
- Storage of clothes.

SECTION-D**Dyeing**

- Types of dyes
- Method of dyeing - Home dyeing (simple) resist dying-tie & dye and batik.

Printing

- Techniques used in printing direct discharge and resist.
- Methods of printing block, stencil ,screen
- Machine Printing, roller, screen.

Reference Books:

1. Randhawa Rajwinder K Clothing Textiles & Their care, pardeep publication.
2. Traditional Indian Textiles Gillow Jorn Barnard Nicholas
3. Fundamentals of Textiles and their care sushela dantyagi
4. Household textile and laundry work durga Deulkar
5. Textile Fiber to fabric corbman Bernard
6. Textile, Hollen Nerma & Sadder Jane.
7. Clothing textiles & their care, Rajwinder K. Randhawa.

TEXTILE SCIENCE
(Practical)**Time: 3 Hrs.****Max. Marks: 40****Pds- 4 pds/ week****Note:** Question Paper will be set on the spot by the examiner

1. Fiber Identification- Physical, burning, microscopic test.
2. Stain removal of basic stains- Tea coffee, Ball pen, ink, ghee & oil haldi, Nail paint, Lipstick, Boot polish.
3. Make sample & an article of each:
 - 1) Tie & Dye
 - 2) Block, screen and stencil.
4. Make sample of weaves: 1) Plain 2) Twill 3) Satin
5. Make sample of basic hand knitting stitches- knit, purl, moss, rib & garter.
6. Make 1 sample of design for male, female and children each.
7. Collection of labels of different garment & samples of different weave.

BASIC CONCEPTS OF ECONOMICS**(Theory)****Time: 3 Hrs.****Marks: 50****Pds- 4 pds/ week****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE

- To understand some basic economic concepts
- To understand the basic concepts of banking & different saving schemes.

CONTENTS**SECTION-A**

- Basic Economic concepts :- Goods, wealth, economic and non economic activities, utility, Value and price
- Basic concepts in consumer economics
- Consuming unit, Plane of Consumption
- Level of consumption, standard of living
- Cost of living, plane of living, level of living, Price, Price level, market, marketing.

SECTION-B**Human wants and needs**

- Difference between desire, want, and need, hierarchy of need characteristics of needs, classification of wants, forces influencing wants.
- Production & Consumption-definition features, significance laws and their importance

Basic Knowledge of market-definition, features and types of market

SECTION-C**Consumer Credit**

- Definition and significance of credit
- Need and basis of credit
- Sources of consumer credit
- Legal credit instruments
- Points to be considered while borrowing
- Merits & demerits of credit
- E- marketing

SECTION-D

Brief Knowledge of banking, insurance schemes saving & investment and taxation

- Banking – Types of account, how to open an account
- How to deposit and withdraw money by cheque & cash
- Internet banking
- Insurance-General and life insurance policies terms and conditions & advantages
- Savings-Bank saving scheme, Post office saving schemes
- Shares & debentures (only introduction)
- Taxation-Types of Taxes & how to calculate income tax & file income tax return.

REFERENCE BOOKS

- 1) Consumer Economics by Surinder jit Kaur R.K. Lakhi and Joginder Singh
- 2) Consumer Pattern in India B.D Gupta Tata Mcgraw Hill
- 3) Consumer Buying for better living Fitzrimmons C John willey & sons Inc.
- 4) Consumer Behaviors Schiffman Leon Prentice hall Pub.

B.Sc. Home Science (Semester-III)

BASIC PHYSICS
(Theory)

Time= 3 Hrs
Pds= 4 pds/week

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To understand the role of physics in working various household devices
- To understand the natural phenomenon in our life.

CONTENTS**SECTION-A**

Measurements: SI units and their advantages, Dimensions of basic physical quantities, simple idea of velocity, relative velocity, angular velocity, acceleration, angular acceleration, centripetal acceleration, centrifugal acceleration.

SECTION-B

Force and Motion. Work, Power and Energy. Types of Energies. Friction and its use in daily life. Simple Machines: Lever, Wheel, pulley, inclined plane, wedges, gears, and their applications like Scissors, tongs, egg beater cork opener

SECTION-C

Concept of Pressure, Fluid pressure, atmospheric pressure and its consequences. Lift pump, gas stove, syringe flush tank, vacuum cleaner. Archimedes Principle. Concept of surface tension and viscosity and their role in daily life.

SECTION-D

Heat: Expansion in solids, transmission of heat- conduction, convection, radiation, heat conductors and insulators (examples only).

Books Recommended:

1. Avery House Physics.
2. Fundamentals of Physics Halliday Resnick, Walker.
3. N.C.E.R.T. Books of Physics For XI and XII

**BASIC PHYSICS
(Practical)****(There Will be No Practical Exam in this Semester)****Pds- 2 pds/ week**

1. Concept of least count and precise measurement of different instruments.
2. Measurement of diameter of a metallic sphere, cylinder, volume of a cube of a small glass slab, determine its density.
3. Measurement of diameter of a knitting needle, sewing needle, thickness of cloth, thickness of a coin using screw gauge.
4. Measurement of height of concave/convex mirror using spherometer.
5. Newton law of cooling of liquids.
6. Measurement of coefficient of friction.
7. Demonstration of centrifugal force in cloth dryer.
8. Comparison of specific gravities of different cooking oils.
9. Verification of Archimede's Principle.
10. Demonstration of atmospheric pressure and read atmospheric pressure from a barometer in your laboratory.

B.Sc. Home Science (Semester-III)

BASIC CHEMISTRY
(Theory)

Time= 3 Hrs
Periods= 4 pds/week

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To understand the composition and properties of different chemical compounds used in daily life.

Contents

SECTION-A

Symbols, formulae, valency, variable valency, elementary idea of mole concept, empirical formulae and molecular formulae, definition of atomic and molecular weight.

Chemical equation and reaction parts, types, essentials, implications and limitations of chemical equation, balancing of equation hit trial method, exothermic, endothermic, catalytic and reversible reaction.

SECTION-B

Atomic structure, elementary idea of electron, proton, neutron arrangement of fundamental particles in an atom. Rutherford atomic model, atomic number, mass number, isotopes, isobars, Bohr's atomic model (postulates)

SECTION-C

Chemical bonding, definition of chemical bond, cause of chemical combination, types of chemical bonds, ionic bonds, covalent bond, coordinate bond, (definition and simple examples based on electron dot picture) example include H_2 , Cl_2 , O_2 , NH_3 , CH_4 , C_2H_2 , MgF_2 , CaO , NH_4^+ , H_3O^+

SECTION-D

Elementary idea about normality, molarity, molality and strength of solution.

Structure of fibers (Natural and synthetic).

Elementary idea about pH of water, hard' water, its cause and type, heavy water with its uses.

Books recommended:

1. N.C.E.R.T. Books for XI & XII.
2. Modern Approach to Chemistry by S. P. Johar Vol. I & Vol. II.

B.Sc. Home Science (Semester-III)

**BASIC CHEMISTRY
(PRACTICAL)**
(There will be no practical Exam in this semester)

Pds- 2 pds/ week

Note: The paper will be set on the spot by the examiner:

1. Preparation of standard solution.
2. To determine the normality and strength of given alkali solution.
3. To determine the percentage purity of given sample of alkali solution
4. Volumetric titration for estimation of hardness of water.
5. Chemical testing of Textile fibres. (cotton, wool, silk, synthetic fibres)

**DEVELOPMENTAL STAGES TILL OLD AGE
(Theory)**

Time: 3 Hrs.

Max. Marks: 50

Pds- 4 pds/ week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE

- To understand developmental stages till old age.
- To discuss the factors affecting development till old age.

CONTENT

SECTION-A

Adolescence

- Puberty and related changes
- Problems of adolescence
 - a) Physical b) sexual c) social d) emotional
 - a) Role of parents and teachers in helping them

SECTION--B

Adulthood

1. Young adulthood
 - a) Developmental tasks of adulthood
 - b) Parenthood and other roles in society
 - c) Parenting techniques

SECTION-C

2. Middle adulthood

Midlife changes in both sexes
3. Late adulthood
 - a) Grand parenting

SECTION-D

Old age

- a) Retirement – a change in status.
- b) Physical and psycho-social aspects of aging.

REFERENCE BOOK

- 1) Essentials of life span development, Johan W santrock McGraw Hill publishing company
- 2) Human Development Thomas L. Crandell MC Graw Hill Publishing Company
- 3) Human Development Paplia Mc Graw Hill Publishing company
- 4) Growth and development Hurlock E.B Tata, Mac Graw Hill Company
- 5) Child Development P. Rajamal & Devads Machmulitan India Ltd.
- 6) Nutrition and Child development Rajinder Randhawa Pardeep Publications.

KITCHEN DESIGN & ITS EQUIPMENT

(Theory)

Time: 3 Hrs.

Max. Marks: 100
Theory: 60
Practical: 40

Pds- 4 pds/ week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To understand the fundamentals of kitchen planning.
- To get knowledge about material and finishes used for household equipment.
- To learn the efficient use of equipment.

CONTENT

SECTION-A

Kitchen

- Types of kitchen
- Efficient kitchen planning
- Principles of planning
- Planning of efficient storage areas in the kitchen
- Kitchen Geometry-work heights and space dimensions for different areas.
- Lighting , ventilation & drainage.
- Material specifications for kitchen floors, walls, sink, ceiling & Platform.

SECTION-B

Equipment

- Classification
- Selection & efficient use of equipment.

General characteristics, suitability & care of different material used for equipment construction and surface finish Aluminum, Iron. Steel, Stainless steel, Galvanized Iron, Tin, Copper, brass ,Nickel and chromium, monel, glass, earthenware and plastics.

SECTION-C**Finishes & their suitability**

- Classification
- Description of Porcelain Enamel, Synthetic baked Enamel, and Teflon coated non stick and surface finishes like copper claid, chromium, tin & Electroplated.

SECTION-D**Selection, operation and care of household equipment**

- Toasters, mixer grinder, Juicer, food processor, oven and micro wave oven, Iron, Vacuum cleaner, washing machine, pressure cooker and dishwasher, cutlery.

REFERENCE BOOKS

- 1) Randhawa, Rajwinder K family Resource Management and Health Science, Pardeep Publication
- 2) Despande, R.S Modern Ideal Homes for India United Book Corporation
- 3) Agan Tessie M.S The house its plan & use Gulab primlani
- 4) Peett L.J thye, L.S, House hold equipment, Johan Villey and Sons inc. New York.
- 5) Indian Home Plans- Jain H.L.

**KITCHEN DESIGN & ITS EQUIPMENT
(Practical)**

Time: 3 Hrs.
Pds- 2 pds/ week

Max. Marks: 40

Note: Question paper will be set on the spot by the examiner.

1. Draw different types of kitchen

- a) One wall b) Two wall c) L Shape d) U shape

2. Make elevation of L shape kitchen on wall & show color scheme

3. Cleaning of Brass, aluminum, steel, glass, gold, silver and crockery.

4. Cleaning of window panes.

5. Cleaning of wood & leather.

6. Cleaning of refrigerator, mixer, cooking range, microwave etc.

7. Cleaning of kitchen counters, floor and cupboards.

**QUANTITY FOOD PRODUCTION & SERVICE
(THEORY)**

Time-3 hrs

Max. Marks: 100

Theory: 60

Practical: 40

Pds-4/Week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE:

To develop skills in planning for bulk preparation and parties.

COURSE CONTENT:

SECTION-A

1. Aims and objectives of different food service and beverage outlets
 - (a) Hospitality industry,
 - (b) institutional/welfare.
2. Food and Beverage service methods
 - Table service
 - Assisted service
 - Self service-Types
 - Single point service
 - Specialized service.
3. Menu Planning- importance, factors, construction writing and display.
4. Service Areas- Planning of service area, Table sizes and decor of service area.

SECTION-B

5. Importance of personal hygiene of food handler – clothes, personality, health, attitude towards customers.
6. Waste product handling: Planning for waste disposal. Solid wastes and liquid wastes
7. Control of Infestation - rodent, flies, cockroaches control, use of pesticides.

SECTION-C

7. Food Management- Food Purchasing, receiving, storage, handling and preparation.
8. Food production – Food production system, food production process, effect of cooking methods on the nutritional quality of foods. Some large quantity cooking technique, Effective use of leftover, holding techniques.

SECTION-D

9. Characteristics of Food- Quality in food service, Quantitative, sensory and nutritional quality.
10. Cost Control- Standardization and portion size of recipe-calculating cost of dish, meal and event. Methods of calculation - Gross profit ratio food cost ratio. Methods of controlling cost.

Reference Book:

1. Mohini Sethi, Surjeet Malhan, Catering Management An Integrated Approach. New Age International (P) Limited Publisher Jalandhar.

**QUANTITY FOOD PRODUCTION & SERVICE
(Practical)**

Time-3 hrs
Pds- 6 Pds/Week .

M. Marks: 40

Note: Paper will be set on the spot by the examiner.

Course Outline

- 1) Standardization and cost calculation of a snacks & meals.
- 2) Preparation of High Teas/Lunches/Dinners for special occasions.
 - 1) Kitty party 2) New Year 3) Holi/Diwali 4) Lohri
 - 5) Anniversary 6) Birthday: 7) Picnic
- 3) Arrange one small party
- 4) Daily and occasional cleaning of kitchen equipments, utensils, counters, floor and cupboards.

**TRADITIONAL EMBROIDERIES, TEXTILES & COSTUMES OF INDIA
(Theory)**

Time: 3 Hrs.

**Max. Marks: 100
Theory: 60
Practical: 40**

Pds- 4 pds/ week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To familiarize the students with traditional embroideries , textiles & costumes of different states of India.

CONTENTS

SECTION-A

Traditional embroideries of various states in India

- Phulkari of Punjab
- Chikankari of U.P
- Kasida of Kashmir
- Kantha of Bengal
- Kasuti of Karnataka
- Kutch of Gujarat
- Kathiawar Embroidery

SECTION-B

Traditional fabrics of different states of India

- Kashmir – Shawl and carpets
- Bengal- Dakha, Mulmul, Baluchar and Jamdani.
- U.P -Brocades
- Gujarat – Patola

SECTION-C

Traditional fabrics of different states of India

- Rajasthan - Bandhani
- Andhra Pradesh- Pochampalli and kalamkari
- Orissa - Ikat
- M.P. - Chanderi

SECTION-D

Traditional costumes of different states of India

Punjab
Jammu & Kashmir
Rajasthan
Gujrat
Maharashtra
Bengal
Kerela
Kerela

**TRADITIONAL EMBROIDERIES & TEXTILES OF INDIA
(Practical)****Time: 3 Hrs.****Marks: 40****Pds- 4 pds/ week****Note:** Question paper will be set on the spot by the examiner.

1. Make one sample of basic embroidery stitches: stem, chain, laisy daisy, button whole, herring bone, feather satin French knot, bullion knot cross stitch and beading and make two handkerchief using at least 3 stitches in one design.
2. Make samples of traditional embroideries using traditional fabric, thread, colors & design, Phulkari, Chikankari, Kasida, Kantha, Kasuti, Kutch, Khatiawar.
3. Make one article of using any traditional embroidery.

CONSUMER ECONOMICS
(Theory)

Time: 3 Hrs.

Max Marks= 50

Pds- 4 pds/ week

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVE

- To train the students about their rights and responsibilities as consumer.

SECTION-A

Consumer education and Protection

- Need for consumer education
- Process for consumer protection
- Consumer legislation in India with special reference to consumer protection Act 1986
- Consumerism-scope, utility and measures for strengthening consumer movement

SECTION-B

Consumer rights and guidance for wise purchase

- Consumer rights & responsibilities
- Fraud and business malpractices

SECTION-C

Grading, standardization and packaging

- Definition and advantages, difference between grading and standardization.
- Labeling-types & labeling as guide to buying
- Branding and its advantages
- Packaging-its functions, advantages and problems with packaging

SECTION-D

Advertisement

- Objectives ,Reasons, advantages and mode of advertising

Entrepreneur and salesmanship

- Meaning, Function & Qualities of an entrepreneur
- Meaning, advantage and Qualities of an efficient salesman

REFERENCE BOOKS

- 1) Consumer Economics by Surinder jit Kaur R.K. Lakhi and Joginder Singh
- 2) Consumer Pattern in India B.D Gupta Tata Mcgraw Hill
- 3) Consumer Buying for better living Fitzrimmons C John willey & sons Inc.
- 4) Consumer Behaviors Schiffman Leon Prentice hall Pub.

**APPLIED PHYSICS
(THEORY)****Time= 3 Hrs****Max. Marks: 50****Theory: 30
Practical: 20****Pds= 4 pds/week****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To understand the role of physics in working various household devices
- To understand the natural phenomenon in our life.

CONTENTS**SECTION-A**

Thermostat

Concepts of home lighting: Illumination, illumination intensity levels in different parts of the house.

Sources of light, incandescent lamps, CFLs.

SECTION-B

reflection, refraction, total internal refraction, diffusion of light, dispersion of light.

Radiation and radiation spectra; uses of various radiations. (X- Rays, ultrasounds, microwaves, radio waves etc).

SECTION-C

Current Electricity, Principle of electrical energy generation and its transmission, Energy meter, Fuse, Types of Fuses, Essential components of wiring, safety precautions while using electricity.

SECTION-D

Heating effect of current and its use in household devices, magnetic effect of current and its use in electric motor, grinder etc.

Books recommended:

1. Avery House Physics.
2. Fundamentals of Physics Halliday Resnick, Walker.
3. N.C.E.R.T. Books of Physics For XI and XII

**APPLIED PHYSICS
(PRACTICAL)**

Time: 3 Hrs.
Pds- 2 pds/ week

Marks: 20

Note: Paper will be set on the spot by the examiner

Semester-III syllabus will also be include in the Practical.

1. Demonstration of light spectrum through prism.
2. Demonstration of repair/replacement of fuse in different household devices.
3. Demonstration of replacement of a capacitor in fan, starter in tube light, changes of a capacitor in fan.
4. To trace rays through a prism and prove that $\angle i + \angle e = \angle A + \angle D$.
5. To find refractive index.

**APPLIED CHEMISTRY
(THEORY)****Time= 3 Hrs****Max. Marks: 50****Theory: 30****Practical: 20****Periods= 4 pds/week****Instructions for the Paper Setters:-**

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

OBJECTIVES

- To understand the composition and properties of different organic compounds used in daily life.

Contents

SECTION-A

Nomenclature of organic compounds.

Soaps and detergents, their structure, properties and preparation.

SECTION-B

Plastics and rubber, their structure and uses.

SECTION-C

Elementary idea about composition of cosmetics.

SECTION-D

Fuels for home.

Books recommended:

1. N.C.E.R.T. Books for XI & XII.
2. Modern Approach to Chemistry by S. P. Johar Vol. I & Vol. II.

**APPLIED CHEMISTRY
(Practical)**

Time: 3 Hrs
Pds- 2 pds/ week

Marks: 20

Note: The paper will be set on the spot by the examiner:

‘Semester III syllabus will also be include in the Practical.’

1. Determination of melting point of Organic compound.
2. Preparation of soap
3. Determination of pH of some samples

ESL-221 : Environmental Studies (Compulsory Paper)**Time: 3 Hrs.****Max. Marks: 100****Teaching Methodologies**

The Core Module Syllabus for Environmental Studies includes class room teaching and field work. The syllabus is divided into 8 Units [Unit-1 to Unit-VII] covering 45 lectures + 5 hours for field work [Unit-VIII]. The first 7 Units will cover 45 lectures which are class room based to enhance knowledge skills and attitude to environment. Unit-VIII comprises of 5 hours field work to be submitted by each candidate to the Teacher in-charge for evaluation latest by 15 December, 2019.

Exam Pattern: **End Semester Examination- 75 marks**
 Project Report/Field Study- 25 marks [based on submitted report]
 Total Marks- 100

The structure of the question paper being:

Part-A, Short answer pattern with inbuilt choice – 25 marks

Attempt any five questions out of seven distributed equally from Unit-1 to Unit-VII. Each question carries 5 marks. Answer to each question should not exceed 2 pages.

Part-B, Essay type with inbuilt choice – 50 marks

Attempt any five questions out of eight distributed equally from Unit-1 to Unit-VII. Each question carries 10 marks. Answer to each question should not exceed 5 pages.

Project Report / Internal Assessment:**Part-C, Field work – 25 marks [Field work equal to 5 lecture hours]**

The candidate will submit a hand written field work report showing photographs, sketches, observations, perspective of any topic related to Environment or Ecosystem. The exhaustive list for project report/area of study are given just for reference:

1. Visit to a local area to document environmental assets: River / Forest/ Grassland / Hill / Mountain / Water body / Pond / Lake / Solid Waste Disposal / Water Treatment Plant / Wastewater Treatment Facility etc.
2. Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
3. Study of common plants, insects, birds
4. Study of tree in your areas with their botanical names and soil types
5. Study of birds and their nesting habits
6. Study of local pond in terms of wastewater inflow and water quality
7. Study of industrial units in your area. Name of industry, type of industry, Size (Large, Medium or small scale)
8. Study of common disease in the village and basic data from community health centre
9. Adopt any five young plants and photograph its growth
10. Analyze the Total dissolved solids of ground water samples in your area.
11. Study of Particulate Matter (PM_{2.5} or PM₁₀) data from Sameer website. Download from Play store.
12. Perspective on any field on Environmental Studies with secondary data taken from Central Pollution Control Board, State Pollution Control Board, State Science & Technology Council etc.

Unit-I**The multidisciplinary nature of environmental studies**

Definition, scope and importance, Need for public awareness

(2 lectures)**Unit-II****Natural Resources: Renewable and non-renewable resources:**

Natural resources and associated problems.

- (a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
- (b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
- (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
- (d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
- (e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
- (f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
 - Role of an individual in conservation of natural resources.
 - Equitable use of resources for sustainable lifestyles.

(8 Lectures)**Unit-III****Ecosystems**

- Concept of an ecosystem
- Structure and function of an ecosystem
- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids
- Introduction, types, characteristic features, structure and function of the following ecosystem: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

(6 Lectures)**Unit-IV****Biodiversity and its conservation**

- Introduction – Definition: genetic, species and ecosystem diversity
- Biogeographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values
- Biodiversity at global, national and local levels
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts
- Endangered and endemic species of India
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

(8 Lectures)

Unit-V**Environmental Pollution**

Definition

- Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear pollution
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution
- Pollution case studies
- Disaster management: floods, earthquake, cyclone and landslides

(8 Lectures)**Unit-VI****Social Issues and the Environment**

- From unsustainable to sustainable development
- Urban problems and related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns. Case studies.
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- Wasteland reclamation
- Consumerism and waste products
- Environmental Protection Act, 1986
- Air (Prevention and Control of Pollution) Act, 1981
- Water (Prevention and control of Pollution) Act, 1974
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness

(7 Lectures)**Unit-VII****Human Population and the Environment**

- Population growth, variation among nations
- Population explosion – Family Welfare Programmes
- Environment and human health
- Human Rights
- Value Education
- HIV / AIDS
- Women and Child Welfare
- Role of Information Technology in Environment and Human Health
- Case Studies

(6 Lectures)

Unit-VIII**Field Work**

- Visit to a local area to document environmental assets
river/forest/grassland/hill/mountain
- Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds
- Study of simple ecosystems-pond, river, hill slopes, etc

(Field work equal to 5 lecture hours)

References:

1. Bharucha, E. 2005. Textbook of Environmental Studies, Universities Press, Hyderabad.
2. Down to Earth, Centre for Science and Environment, New Delhi.
3. Heywood, V.H. & Waston, R.T. 1995. Global Biodiversity Assessment, Cambridge House, Delhi.
4. Joseph, K. & Nagendran, R. 2004. Essentials of Environmental Studies, Pearson Education (Singapore) Pte. Ltd., Delhi.
5. Kaushik, A. & Kaushik, C.P. 2004. Perspective in Environmental Studies, New Age International (P) Ltd, New Delhi.
6. Rajagopalan, R. 2011. Environmental Studies from Crisis to Cure. Oxford University Press, New Delhi.
7. Sharma, J. P., Sharma. N.K. & Yadav, N.S. 2005. Comprehensive Environmental Studies, Laxmi Publications, New Delhi.
8. Sharma, P. D. 2009. Ecology and Environment, Rastogi Publications, Meerut.
9. State of India's Environment 2018 by Centre for Sciences and Environment, New Delhi
10. Subramanian, V. 2002. A Text Book in Environmental Sciences, Narosa Publishing House, New Delhi.

CHILD PSYCHOLOGY

Time : 3 hrs.
Pds – 4 Pds/Week

Max. Marks: 50

Instructions for the paper setter.

- Theory paper will be of 3 hrs duration.
- Question paper should cover all the topics of the syllabus.
- There will be eight question in all. The students are to attempt 5 questions (10 marks each question).
- Question 1 is compulsory which contains short answer type questions.

Objective :-

- 1) To provide systematic knowledge of the foundation of human behaviour.
- 2) To link the study of development with the discipline of Psychology.

Content**Unit-I****Psychology related concept**

- a) Definition of Psychology
- b) Nature of Psychology
- c) Scope of Psychology
- d) Definition of Child psychology

Unit-II**Attention**

- a) Meaning of attention, span of attention, distraction in-attention.
- b) Nature of attention.
- c) Factors affecting attention.

Unit-III**Memory**

- a) Definition
- b) Aspects of Memory
- c) Factors affecting memory and improvement in memory.
- d) Forgetting and its causes.

Unit-IV**Learning and Motivation**

- a) Meaning, nature and types of learning.
- b) Primary and secondary motives.
- c) Role of Motivation in learning
- d) Factors affecting learning.

Unit-V**Theories related to different development of human life Span.**

- a) Cognitive theory- Jean Piaget.
- b) Psycho-Sexual theory – Sigmund Freud
- c) Psycho-Social theory – Erick-Erickson.
- d) Hierarchy of Needs – Maslow.

Reference Books :

- 1) Brooks, Flower, D & Shaffer, Laurence F child Psychology".
- 2) Developmental Psychology, by Elizabeth B Hurlock.
- 3) Child Development and personality by Mussen Conger, Kogan.

INTERIOR SPACE DESIGNING**Time : 3 hrs.****Max. Marks: 100****Theory: 60****Practical: 40****pds – 4 Pds/Week****Instructions for the paper setter.**

- Theory paper will be of 3 hrs duration.
- Question paper should cover all the topics of the syllabus.
- There will be eight questions in all the students are to attempt any five question (12 Marks for each question).
- Question one is compulsory which contains short answer type questions.

Objective

- To plan furniture arrangement and color schemes for different rooms.
- To orient the students towards current trends in furnishing material, furniture, flooring & curtain etc.

Content**Unit-I****Introduction to Interiors**

- Importance of Home environment
- Objectives of Home furnishing.
- Factors to be considered while designing interiors.

Unit-II**Furniture**

- Material used for furniture-wood, iron, plastic etc. constructional features – Type of joints.
- Factors to be considered for selecting furniture.
- Application of principles of design in furniture arrangement.
- Arrangement of furniture in drawing room, dining room, living cum dining room, bedroom master bedroom, children, adolescent boy & girl, guest room and lobby.
- Care of different type of furniture.

Unit-III**Planning of colour schemes**

- Factors to be considered while planning colour schemes for different rooms
- Development of colour schemes
- Planning of colour schemes for drawing room, drawing cum dining room bedroom, Master, children adolescent boy & girl and lobby.

Unit – IV**Wall finishes**

- Wall paper, wood panelling & their care.
- Paints – Types & suitability

Unit–V**Floor materials**

- Hard Material – stone, tile & wood
- Resilient Material – Vinyl and Linoleum
- Soft material – Carpets and rugs their selection, types, suitability and care.

Reference books

1. Home furnishing Anna Hong Rutt.
2. Home furnishing, Butter Winifred.
3. Home with character, Craig & Rush.
4. Family Resource Management & Health Science, Rajwinder K. Randhawa.

**INTERIOR SPACE DESIGNING
(Practical)****Time : 3 hrs.****Pds – 2 Pds/Week****Marks: 40****Note : Question paper will be set on the spot by the examiner :**

1. Measure furniture of home and make templates of different furniture items of standard size.
2. Plan furniture arrangement and colour schemes. (Use samples) in the following rooms.
 - i) Drawing room.
 - ii) Drawing cum dining room
 - iii) Bedroom, Master, Children, adolescent boy and girl.
3. Do market survey of furnishing material and make a scrap book.

THERAPEUTIC NUTRITION**(Theory)****Time: 3 Hrs.****Max. Marks: 100****Theory: 60****Practical: 40****Pds – 6 pds/week****Instruction for the paper setter.**

1. Theory paper will be of 3 hrs duration.
2. Question paper should cover all the topics of the syllabus.
3. There will be 8 questions in all. The students are to attempt any 5 questions (12 marks for each question).
4. Question 1 is compulsory, which contains short answer type questions.

Objectives :-

- 1) To gain knowledge about different diseases.
- 2) To learn therapeutic adaptation of the normal diet.

Content :-**Unit-I**

- 1) Basic concept of Therapeutic diet - meaning, importance, objectives, Therapeutic adaptations of the normal diet.
- 2) Types of routine hospital diets - normal diet, Soft diet, liquid diet, Special feeding methods Enteral nutrition and Parenteral Nutrition.
- 3) Role of Dietitian in feeding of patients. Effect of illness on food acceptance and utilization.

Unit-II

- 4) Nutrient and drug interaction. Effect of drug therapy on intake, absorption and utilization of nutrients.
- 5) Nutrition during infection and fevers - classification, etiology, symptoms and dietary management in - Typhoid, Tuberculosis and Dengue.

Unit-III

- 6) Nutrition in Gastro - intestinal disorders, etiology, symptoms and dietary management in Diarrhoea, constipation, Gastritis, Irritable bowel syndrome peptic ulcer.
- 7) Nutrition in disturbances of small and large intestine etiology, symptoms and dietary management in Celiac disease, Lactose intolerance, ulcerative colitis.

Unit-IV

- 8) Nutrition in disease of the liver, gall bladder and pancreas, etiology, symptoms and dietary management in - Jaundice, Hepatitis, cirrhosis of liver, Cholecystitis and Pancreatitis.

Unit-V

- 9) Nutrition in Diabetes Mellitus - Types etiology, symptoms metabolic changes, life style modification, Dietary management, Hypoglycemic agents, Medication, Insuline therapy, Acute Complication of diabetes.

Unit-VI

- 10) Nutrition in Renal disease, etiology, symptoms dialysis - Its type and dietary management in Glumerulonephritis, Nephrosis, Acute Renal failure.

Unit-VII

- 11) Nutrition in Cardiovascular diseases, etiology, symptoms, life style modification, brief knowledge of Dash Diet and dietary management in Atherosclerosis, Hypertension, Dislipidemia and Acute cardiovascular disease/Heart attack.

Unit-VIII

- 12) Nutrition in Cancer, types etiology, stages, symptoms diagnosis, factors inhibiting carcinogenesis, factors enhancing carcinogenesis and dietary management and Chemo & Radiation therapy (Brief Introduction).

Unit-IX

- 13) Nutrition in obesity - assessment of obesity, Hazards of obesity, etiology, nutritional management and other approaches.
14) Gout - etiology, symptoms & dietary management.
15) Food Allergy - Causes, symptoms & dietary management.

Reference books

1. Food and Nutrition - by Dr. M. Swamination
2. Text book of Nutrition & Dieteties - by Kumeed Khanna & others.

**THERAPEUTIC NUTRITION
(Practical)****Time: 3 Hrs.****Marks: 30****Periods: 6****Note :- Paper will be set on the spot by the examiner.**

1. Prepare following therapeutic recipes and calculate their nutritive value.
 - a. Prepare 5 recipes of liquid and soft diet.
 - b. Prepare 5 high protein and high energy recipes.
 - c. Prepare 5 high carbohydrate, moderate protein & low fat recipes.
 - d. Prepare 5 high fiber and low glycemic index recipes.
 - e. Prepare 5 low sodium, low fat and high fiber diet.
2. Plan and calculate nutritive value of diet for the following diseases. Typhoid, Diarrhoea, Constipation, Jaundice, peptic ulcer, Diabetes, Hypertension, atherosclerosis, renal disease and obesity.
3. Students are required to run Diet Clinics in the college

**BASIC CONCEPTS OF SEWING AND FASHION
(Theory)****Time : 3 hrs.****Max. Marks: 100****Theory: 60****Practical: 40****Pds – 4 Pds/Week****Instruction for the paper setter.**

- Theory paper will be of 3 hrs duration.
- Question paper should cover all topics of the syllabus.
- There will be eight questions in all the students are to attempt 5 questions. (12 marks each question).
- Question no. 1 is compulsory which contains short answer type question.

Objectives :-

- To impart knowledge regarding sewing equipments and techniques.
- To give knowledge about basic concepts of fashion.

Content :-**Unit-I****Sewing equipments**

- classification.
- Parts, function and care and sewing machine.
- common stitching faults, their causes and remedies.

Unit-II**Sewing techniques**

- Basic hand stitches – types and use.
- Seams and seam finishes – Type & use
- Fullness – Darts, tucks, pleats, gathers, shirring, their definition, types and application.
- Trimming & Frills types and uses

Unit-III**Sleeves types and uses**

- Pockets types and uses.
- Neck finishes types and uses

Unit-IV**Collars types and uses**

Yokes and skirt - types and uses

Unit-V**Plackets - Types and uses**

Fasteners – Types and uses

Unit-VI**Fashion Terminology**

Apparel, Fashion, Fad, Craze, High fashion, Mass fashion, style, change, classic, boutique, Croquet, Silhouette, designer, collection, adaptation.

Unit-VII**Fashion Trend, Fashion Cycle**

Sources of fashion, factors favouring fashion, selecting fashion, forecasting fashion, fashion show

Unit-VIII**Fashion merchandising**

- Distribution
- Marketing
- Merchandising
- Advertising
- Display

**BASIC CONCEPT OF SEWING AND FASHION
(Practical)**

Time : 3 hrs.

Pds – 6 Pds/Week

Marks: 40

Note :- Paper will be set on the spot by the examiner.

- 1) Demo of machine parts and operation.
- 2) Make sample of the followings.
 - Even, uneven, diagonal and machine basting.
 - Running stitch, back stitch, buttonhole stitch
 - Visible and invisible hemming
 - run and fell seam, counter hem, french and mantua maker.
 - Seam finishes – overlock, hand overcast, turned and stitch and binding.
 - Pleats – knife, box, inverted and kick pleat.
 - Gathers with band and shirring.
 - Tucks – Pin tucks, cross tucks, shell tucks, space tucks, release and blind tucks.
 - Frill and piping attachment.
 - Patch work.
- 3) Plackets – continuous, two piece and extended placket zipper attachment – simple and fly.
- 4) Fastner – hook & eye, button and button hole Press button, skirt hook & velcro tape (Attach fasteners on plackets only).
- 5) Pocket – Patch, in seam and cross pocket.
- 6) Make draft of child is bodice block and make sample of neck finishes on bodice block – bias piping bias facing and shaped facing.
- 7) Make draft and sample of plain sleeve, cape Magyar using the neck finishes block.
- 8) Make draft and sample of peter pan, raised, peter pan (only draft) chinese collar on child's bodice block.
- 9) Draft and stitch A-Line frock with cape collar and full sleeve.
- 10) Draft and stitch baby frock with baby collar and puff sleeve.
- 11) Draft and construct child's bloomer.
- 12) Draft and construct Roomper/suit.

B.Sc. Home Science (Semester-V)

Reference books :

1. Basic process of clothing construction by Doongaji S Deshpande
2. Clothing, Textile & their care – by Dr. Rajwinder K. Randhawa
3. Ministry of Fashion – by Manmeet Sodhia
4. Design Studies – by Manmeet Sodhia

INTRODUCTION TO EXTENSION EDUCATION & COMMUNITY DEVELOPMENT
(Theory)

Time : 3 hrs.
Pds – 6 Pds/Week

Max. Marks: 50

Instruction for the paper setter.

1. Theory paper will be of 3 hrs. duration.
2. Question paper should cover all the topics of the syllabus.
3. There will be eight questions in all. The students are to attempt 5 questions (10 marks each question)
- 4 Question 1 is compulsory which contains short answer type questions.

Objectives

- To understand the basic concepts of extension and community development.
- To appreciate the role of Home Science extension in community development.

Content**Unit-I**

- Education, is definition and types.
- Concepts, philosophy, principles and aims and scope extension education.
- Difference between formal, non-formal and extension education.

Unit-II

- Brief history of popular extension activities in India.
- Extension services in Agriculture Universities.

Unit-III

- Role of extension education in rural development.
- Role of Home Science extension in rural development.
- Field covered under extension education.

Unit-IV

- Role of extension worker
- Qualities of extension worker

Unit-V

- Motivation in Extension
- Motivating Village people
- Motivating Extension worker
- Techniques of Motivation

Unit-VI

- Community development – its definition, work, elements, objectives, philosophy, types, principles and process.

Unit-VII

- Role of voluntary organization in community development
- Panchayati Raj System organization & function
- Co-operative Societies – Organization & function.

Unit-VIII**Brief knowledge of famous Rural Development programme**

- The Integrated rural development programme (IRDP).
- Minimum Need programme
- National Rural employment programme. Family planning programme.

BASIC NUTRITIONAL BIOCHEMISTRY -I**(Theory)****Time : 3 hrs.****Max. Marks: 50****Pds – 4 Pds/Week****Instruction for the paper setter.**

1. Theory paper will be of 3 hrs duration.
2. Question paper should cover all the topics of the syllabus.
3. There will be eight questions in all. The students are to attempt 5 questions (10 marks each question).
4. Question 1 is compulsory which contains short answer type questions.

Objective

- To learn the structural formula and metabolism of carbohydrate, fat and inorganic element.

Content**Unit-I**

- Structural formulae of monosaccharides, disaccharides and polysaccharides.
- Intermediary Metabolism of Carbohydrates
- Glycolysis TCA Cycle, Gluconeogenesis.

Unit-II

- Structural formula of fatty acids, triglycerides and phospholipids.
- Rancidity of fat & its prevention.
- Acid value and saponification value of fat.
- Essential fatty acid.
- Study of intermediary metabolism of fat oxidation and biosynthesis of fatty acids.

Unit-III

- Metabolism of inorganic elements calcium, phosphorus, magnesium and iron

**APPLIED BOTANY AND HOME GARDENING
(Theory)**

Time: 3 Hrs.

**Max. Marks: 100
Theory: 60
Practical: 40**

Pds – 6 pds/week

INSTRUCTION FOR THE PAPER SETTERS:

- Theory paper will be of 3 hrs duration.
- Question paper should cover all the topics of the syllabus.
- There will be eight questions in all. The students are to attempt 5 questions (12 marks each questions).
- Questions one is compulsory which contains short answer type questions.

OBJECTIVE:

- To learn the art of home gardening.
- To indentify plants

CONTENTS :

Unit-I

Gardening

- Layout of a Garden
- Soil preparation – digging, tillage, drainage, watering and weeding.
- Manures and fertilizes

Unit-II

Propagation of plants

- Seed propagation
- Vegetative propagation by natural and artificial methods (Bulbs Rhizomes suckers Runners Tubers Budding and grafting)

Unit-III

Kitchen Garden

- Principle of planning and cultivation of vegetables with reference to potato tomato radish cauliflower brinjal, pea and spinach.

Unit-IV

Lawn and Hedges

- Principle of planning of lawn and hedges
- Brief description of care and cultivation of ornamental plants.
- Care and cultivation of seasonal flowers
- Care and cultivations of common indoor plants.

Unit-V

General characteristics, morphology and economic importance of algae, fungi and moulds.

REFERENCE BOOK:

- 1) Basic Gardening Gemmell Alam Penguin books publication.

**APPLIED BOTANY AND HOME GARDENING
(Practical)****Time: 3 Hrs.****Pds – 4 pds/week****Marks: 30****Note: Paper will be set on the spot by the examiner.**

1. Study of garden tools and accessories.
2. Identification of different types of plants i.e. vegetable flowers, ferns and ornamental plants.
3. Preparation of soil digging tillage drainage watering and weeding.
4. To prepare and manuring a seed bed for raising seedlings.
5. To prepare a bed for sowing potatoes and cultivate them.
6. To prepare a plot for raising seedlings.
7. To prepare a pot for repotting.
8. To prepare a plot and cultivate seasonal vegetable (as in theory).
9. Plant propagation.
 - a) From seeds guiding rules for seed sowing.
 - b) Vegetative propagation by cutting and grafting.
 - c) Maintenance of plants
 - d) Use of pesticides and fungicides
 - e) Identification of slides of algae fungi and moulds.

Project: Prepare Herbarium file Collection of specimen of ornamental plants flower.

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BEHAVIOURAL PSYCHOLOGY
(Theory)

Time: 3 Hrs.

Max. Marks: 50

Theory: 30

Practical: 20

Pds – 4 pds/week

Instruction for the paper setter.

- Theory paper will be of 3 hrs duration.
- Question paper should cover all the topics of the syllabus.
- There will be eight questions in all. The students are to attempt 5 questions. (6 marks each question).
- Question 1 is compulsory which contains short answer type of questions.

Objectives :-

- To provide an understanding of the complexities of human behaviour and dealing with them.

Content :-

Unit-I

Intelligence

- a) Nature of Intelligence
- b) Measurement of Intelligence

Unit-II

Personality

- a) Definition and concepts of personality.
- b) Social factors of personality.
- c) Assessment of personality.

Unit-III

Behaviour disorders

- a) Definition & types of Behaviour disorders.
- b) Factors leading to behaviour disorders.
- c) General way of preventing behaviour disorders.

Unit-IV**Person with disabilities**

- a) Concept of disability and classification system.
- b) Definition, classification, cause, prevention, education and rehabilitation.
 - Physical impairments.
 - Visual impairments.
 - Speech and hearing impairments
 - Learning disabilities
 - Behaviour disabilities
 - Nail biting, thumb sucking, bed wetting, Temper Tantrum, Stealing.
 - Dealing with Gifted children.

Reference Books

- 1) Child Development by Hurlock.
- 2) Educational Psychology by J.Walia.

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BEHAVIOURAL PSYCHOLOGY

(Practical)

Time: 3 Hrs.

Marks: 20

Pds – 2 pds/week

Note :- Question paper will be set on the spot by the examiner.

- 1) To conduct a case study on a child to study and Socio-psychological dimension of socialization in one of the following situations and submit report.
 - a) Slum child
 - b) Single parent child
- 2) Assessment of personality using any two different techniques.
- 3) Assessment of intelligence using any two different techniques.
- 4) Visit to guidance/counselling centre.

Reference Books :-

- 1) Brooks, flower D. & Shaffer Laurence F. Child Psychology.
- 2) Developmental Psychology by Elizabeth B. Hurlock child Development and personality by Mussen, Conger, Kagan

INTERIOR DECORATION**(Theory)****Time: 3 Hrs.****Max. Marks: 100****Theory: 60****Practical: 40****Pds – 4 pds/week****Instruction for the paper setter.**

1. Theory paper will be of 3 hrs duration.
2. Question paper should cover all the topics of the syllabus.
3. There will be eight questions in all the students are to attempt any five question (12 marks for each question).
4. Question one is compulsory which contains short answer type question.

Objectives :

- To learn about interior decoration and art of flower arrangement.

Content :**Unit-I**

- Ceiling Treatment and lighting
- Decorative and false ceiling.
- Types of lights.
- Characteristics of good lighting.
- Lighting needs for various activities & room.
- Effects of lighting on interior.
- Selection of lamps shade & fixture.

Unit-II**Window Treatment**

- Terms used for describing window.
- Types of window.
- Types of curtain, draperies and their suitability.
- Treatment of problematic window.
- Venetian blinds and rollers.
- Window accessories – Certain rods, rings frills, cords swag etc.

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Unit-III**Flower Arrangement**

- Importance
- Types with Special reference to I-Kebana.
- Equipments & accessories needed.
- Points to be considered for plucking & making flower arrangement.
- Application of elements & principles of design in flower arrangement.

Unit-IV**Accessories**

- Importance, types and selection of accessories in different room.
- Pictures types, selection and framing.

Unit-V

Selection of household furnishing towel, bed sheets, pillow cover, blankets, quilts upholstery slipcovers, cushions etc.

Reference books

1. Home furnishing – Anna Hong Rutt
2. Home furnishing – butter winifred
3. Home with character, Craig & Rush
4. Interior design & decoration. Ferguson?
5. Family Resource Management & health Science

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**INTERIOR DECORATION
(Practical)**

Time: 3 Hrs.

Pds – 2 pds/week

Marks : 40

Note : Paper will be set on the spot by the examiner.

- 1) Make elevation on walls of following room and show lighting, windows and accessories.
 - a) Drawing room
 - b) Master is bedroom
- 2) Make flower Arrangement :- with fresh flowers.
- 3) Make any one furnishing article.

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COMMUNITY NUTRITION
(Theory)

Time : 3 hrs.

Max. Marks: 100

Theory: 60

Practical: 40

Pds – 4 Pds/Week

Instruction for the paper setter.

- 1) Theory paper will be of 3 hrs duration.
- 2) Question paper should cover all the topics of the syllabus.
- 3) There will be 8 questions. Students are to attempt 5 questions (12 marks each question).
- 4) Question 1 is compulsory which contains short answer type questions.

Objectives :-

To impart nutrition education to vulnerable group of community.

Unit-I

1. Concept of community, health, malnutrition, maternal and infant mortality, morbidity, nutritional status.
2. Major nutritional problems prevalent in India - Protein - energy malnutrition, iron deficiency anemia, Vit - A deficiency, iodine deficiency disorder, Vit - D and calcium deficiency, flurosis.

Unit-II

3. Malnutrition and Infection - Nutritionally relevant infection and infestation.
4. Effect of malnutrition on defense mechanism.
5. Effect of infection on nutritional status and growth and development.

Unit-III

6. Assessment of nutritional status using different methods
 - a) Anthropometric measurement, standards for comparison age assessment, weight, height, skin folds, arm, head and chest circumference, use of growth chart.
 - b) Clinical sign and symptoms of malnutrition, classification of clinical sign and symptoms methods of reporting results.
 - c) Biochemical assessment - most commonly used biochemical methods and their standard ranges.
 - d) Diet Surveys - Population sampling, methods of dietary survey points requiring special attention, adult consumption unit analysis of diet survey data

Unit-IV

7. Channels of nutrition education in the community, Nutrition education method - lectures and Demonstration, workshops, films, posters, charts, exhibition, books, pamphlets, newspaper, radio & television, power point-presentations.
8. Planning and implementation of Nutrition education programme, objective, selecting topic, and audio visual aid for target group.

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Unit-V

9. Method of enhancing nutritive value of food - Supplementation, sprouting, fermentation, fortification, enrichment.
10. Food Fadism and Faculty Food habits.

Unit-VI

11. National Nutrition programme & policies.
 - a) Integrated Child Development Services. (ICDS)
 - b) Applied Nutrition Programme. (ANP)
 - c) Special Nutrition Programme. (SNP)
 - d) Mid-day meal Programme. (MMP)
 - e) Balwadi Nutrition Programme. (BNP)
12. Role of National and international agencies in community Nutrition.
 - a) Indian council of Agriculture Research. (ICAR)
 - b) Indian council of Medical Research. (ICMR)
 - c) Central Food Technological Research Institute, Mysore. (CFTRI)
 - d) National Institute of Nutrition, Hyderabad. (NIN)
 - e) Food and Agriculture organization. (FAO)
 - f) World Health organization. (WHO)
 - g) United Nations Children's Fund. (UNICEF)
 - h) CARE.

Reference Book :

1. Food and Nutrition by Dr. M. Swaminathan.

**COMMUNITY NUTRITION
(Practical)****Time : 3 hrs.****Pds – 6 Pds/Week****Marks: 40****Instruction for the paper setter.****Note :-** Paper will be set on the spot by the examiner.

1. Cook following recipe and calculate their cost and nutritive value.
 - a) Low cost energy and protein rich recipes.
 - b) Low cost iron rich recipes.
 - c) Low cost calcium rich recipes.
 - d) Value addition of cereal & pulses.
 - e) Weaning foods
2. Assessment of nutritional status of vulnerable group using anthropometry/dietary surveys. Project report will be judged by the external examiner.
3. Development of audio-visual aids for imparting nutrition education- eg. charts, posters, flashcards and power-point presentation.
4. Planning, implementation and evaluation of nutrition education for specific target groups.
5. Visit to see the functioning of mid-day meal programme in schools or any health oriented programme.

**GARMENT DESIGNING & CONSTRUCTION
(Theory)****Time: 3 Hrs.****Max. Marks: 100****Theory: 60****Practical: 40****Pds – 4 pds/week****Instruction for the paper setter.**

1. Theory paper will be of 3 hrs duration.
2. Question paper should cover all the topics of the syllabus.
3. There will be 8 questions in all. The students are to attempt 5 questions (12 marks each question).
4. Question one is compulsory.

Objectives :-

- To impart knowledge about the anthropometric measurement of basic dresses.
- To impart knowledge regarding various methods of dress designing.
- To develop the stitching skills.

Content :-**Unit-I**

- Identification of different types of fabrics suitable for different garment.
- Intelligent buying of fabrics and readymade garment.
- Importance of label-terminology, care, symbols & their usage.

Unit-II

- Importance of clothing.
- Factors affecting selection of clothing for different age groups infant's, toddler's pre schooler's school going, adolescent's adult and elderly person.

Unit-III

- Application of elements of art and principles of design in clothing.
- Use of lines in improving human figure.

Unit-IV

- Anthropometry – definition points to be considered while taking body measurements.
- Taking body measurement for different body parts.
- Measurement's required for stitching various garments calculating the amount of fabric required for different garments.

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Unit-V

- Different methods of developing design.
- Flat pattern making techniques. Drafting and paper pattern.
- Pattern manipulation.
- Important terms used in pattern production.
- Pattern making principles.
- Terms related to dart & seam.
- Draping equipment required & procedure.
- Difference between drafting, pattern making & draping.

Unit-VI

Common fitting problem and methods of correcting them.

Reference Books

1. Basic Process of clothing construction – by Doongaji S. Deshpande.
2. Clothing Textile & their care – by Dr. Rajwinder K. Randhawa.

**GARMENT DESIGNING & CONSTRUCTION
(Practical)****Time: 3 Hrs.****Marks:30****Pds – 6 pds/week****Note : Paper will be set on the spot by the examiner.**

1. Introduction to basic sketching technique – 8 head theory, 10 head croquis, division of body to make 8 head, 10 head and 12 head figures.
2. Dress designing and layout of formal frock.
3. Development of portfolio for designing practical – collage making by taking any theme. Taking inspiration from that theme and design any formal ladies wear and illustrate them on croquis.
4. Draft and stitch party wear frock.
5. Draft and stitch petticoat (Drafting should be done directly on cloth).
6. Draft and stitch ladies blouse.
7. Draft and stitch ladies shirt.
8. Draft and stitch ladies Salwar (Drafting should be done directly on cloth).
9. Draft and stitch churidar.
10. Draft and stitch ladies kurta.
11. Draft and stitch ladies nighty.

**COMMUNICATION AND AUDIO VISUALS IN EXTENSION WORK
(Theory)****Time: 3 Hrs.****Max. Marks: 50****Theory: 30****Practical: 20****Pds – 4 pds/week****Instruction for the paper setter.**

1. Theory paper will be of 3 hrs duration.
2. Question paper should cover all the topics of the syllabus.
3. There will be eight questions in all. The students are to attempt 5 questions (6 marks each question).
4. Question one is compulsory which contains short answer type questions.

Objectives :-

1. To understand the role of communication in extension work.
2. To prepare suitable aids for imparting extension education.

Course Content :-**Unit-I**

- Communication-definition, importance process model, scope, function and problem in communication.

Unit-II

- Selection of channel and teaching tools.
- Feedback in communication.

Unit-IV

- Audio-visual Aids – Meaning, types, choice planning and selecting theme, layout and design.
- Brief introduction of commonly used aids, posters, charts, flipcharts, exhibition, power-point presentation, bulletin, puppet, drama & talks, power-point presentation.

Unit-V

- Programme planning – meaning and principles.
- Development & plan of work, importance format & elements, selection of subject matter.

Reference Book :-

1. Education and Communication for development by O.P. Dhama and O.P. Bhatnagar.

**COMMUNICATION & AUDIO VISUAL IN EXTENSION WORK
(Practical)**

Time: 3 Hrs.

Max. Marks: 20

Pds – 2 pds/week

Note :- Paper will be set on the spot by the examiner.

1. Preparation of Visual Aid.

Posters, charts, flash cards, pamphlets , power-point presentation.

2. Prepare a lesson plan on any subject matter to impart knowledge to the rural people.
3. Field visit to imparting extension education to rural people, submit the report that will be judged by the external examiner.

**APPLIED NUTRITIONAL BIOCHEMISTRY
(Theory)****Time: 3 Hrs.****Max. Marks: 50****Theory: 30****Practical: 20****Pds – 4 pds/week****Instruction for the paper setter.**

1. Theory paper will be of 3 hrs duration.
2. Question paper should cover all the topics of the syllabus.
3. There will be eight question in all. The students are to attempt 5 questions (6 marks each question).
4. Question 1 is compulsory. Which contains short answer type question.

Objective :

- To study about protein, B.M.R. water & electrolyte balance.

Content :**Unit-I****Structural formulae of amino acids peptide bonds.**

- Hydrolytic breakdown of protein & essential amino acids.
- Nitrogen balance
- Protein efficiency ratio and biological value of protein.
- Elementary study of general metabolism of protein, building up of amino acid pool. General reaction of amino acid metabolism.
- Urea Cycle
- Essential amino acids

Unit-II

B.M.R. – Meaning and factors affecting B.M.R. specific dynamic action of good stuffs.

Unit-III

- Enzymes – definition, classification and specificity of enzymes.
- Factors affecting enzyme activity.

Unit-IV

- Urin composition, normal and abnormal constituents of urin.

Unit-V

- Water and electrolyte balance, water and electrolyte losses and their replenishment effect of dehydration.

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**APPLIED NUTRITIONAL BIOCHEMISTRY
(Practical)**

Time: 3 Hrs.

Marks: 20

Pds – 2 pds/week

Note : Paper will be set on the spot by the examiner.

1. Qualitative analysis of monosaccharide, disaccharide and polysaccharide.
2. Quantitative estimation of Glucose.
3. To test the reaction of protein fats and carbohydrate in bread, milk and egg.

**APPLIED ZOOLOGY AND FOOD MICROBIOLOGY
(Theory)**

Time: 3 Hrs.
Pds – 6 pds/week

Max. Marks: 100
Theory: 60
Practical: 40

Instruction for the Paper Setter.

1. Theory paper will be of 3 hrs duration.
2. Question paper should cover all, The topics of the syllabus.
3. There will be eight questions in all the students are to attempt 5 questions (12 marks each questions).
4. Question one is compulsory which contains short answer type questions.

OBJECTIVE :-

- To study useful and harmful insects.
- To study useful and harmful micro organisms.

CONTENTS :-**UNIT-I**

Elementary study of the following harmful insects Mosquito (Culex, anopheles, beg bogs and louse).

UNIT-II

Elementary study of economically important insects – honeybee, silk moth, lac and earthworm.

UNIT-III

Control of pest cereals pulses and stored products such as rice weevil lesser grain and borer.

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UNIV-IV

Introduction to microbiology and its relevance to food standards & safety. General morphology and Characteristics of micro organism-bacteria Virus protozoa.

UNIT-V

Microbiology of different food spoilage & Contamination & control of cereals and their products sugar and its products, vegetable and fruits, Meat and its products fish and other sea foods egg and poultry, milk and its products & canned foods.

UNIT-VI

Sources of food contamination, food poisoning Symptoms & control.

UNIT-VII

Beneficial effects of micro organism.

- Role of bacteria in milk and milk products industry.
- Soil fertility (Nitrogen Cycle)
- Economic Importance of moulds, Aspergillus Penicillium and yeast.

Reference Books:

- 1) Text Book of Zoology P.S. Dhami, Pardeep Publication.
- 2) Food Microbiology Frazier, William C and West off Dannis C. Tata McGraw will Publish Company Ltd.

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**APPLIED ZOOLOGY AND FOOD MICROBIOLOGY
(Practical)**

Time: 3 Hrs.

Pds – 4 pds/week

Marks: 40

Note : Paper will be set on the spot by the examiner.

1. Identification of insects (same as theory).
2. Identification and economic importance of Honey bee, silk moth, lac and earth worm.
3. Identification of pest with their morphological note (same as theory).
4. Identification of slides of following microbes-bacteria, Virus, protozoa.