GOVERNMENT OF PUDUCHERRY
BHARATHIDASAN GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRHY

PG & RESEARCH DEPARTMENT OF HOME SCIENCE
Minutes of UG – B.Sc (Clinical Nutrition & Dietetics) Board of Studies Meeting
27th February 2018, Time:

The Board of Studies for UG – B.sc (Clinical Nutrition & Dietetics) was held on 27th February 2018 at 9.30 a.m. Conference Hall. Dr. V. Raji Sugumar briefed the agenda of the meeting, Dr. L. Sucheta Soma Kirupa presented the Syllabi of B.Sc (Clinical Nutrition & Dietetics) 2016 – 0nwards & 2018 – onwards

The approval for the following was obtained.

- Approved the Semester I, II, III, papers introduced for 2016 batch onwards with retrospective effect
- Approval of Semester IV, V,VI Paper with following changes:-
  - Removal of Hospital Management paper and inclusion of Food Service Management paper
- Approved the New Syllabus for 2018 with the following changes
  - As per External Expert suggestion, Physiology I & II was combined as one paper.
  - Basic Nutrition was split as Macronutrients and Micronutrients included as two papers in 2nd semester
  - Food Science paper was changed from 2nd to 1st semester
  - Revamping of Preventive Nutrition Papers.
- Approval of Question paper patterns
  - Minor changes in the paper content was incorporated as suggested by the expert

LIST OF MEMBERS OF THE BOARD OF STUDIES IN CN&D 2016- 2018

Sl. No.	Name and Designation	Member Details	Signature
1.	Dr. V. Raji Sugumar Associate Professor & Head Department of Home Science Bharathidasan Govt. College for Women Puducherry	Chairman	
EXTERNAL MEMBERS			
2.	Dr. John Don Bosco Professor, Dept. of Food Science & Technology Pondicherry University, Puducherry.	Member – VC Nominee	

3.	Dr. V. Suganthi Associate Professor & Head Dept. of Home Science Anna Adarsh College for Women, Chennai.	External Subject Expert	
4.	Dr. A. Ananthalakshmi Associate Professor Dept. of Home Science Queen Mary's College.	External Subject Expert	
5.	Ms. Maghida Chief Dietitian & Assistant Professor Dept. of Clinical Nutrition & Dietetics Pondicherry Institute of Medical Sciences, Puducherry.	Member - Industry	
6.	Dr. V. Padma Assistant Professor Dept. of Nutrition & Dietetics Mount Carmel College, Bangalore.	Member - Alumnae	
INTERNAL MEMBERS, Department of Home Science, BGCW, Puducherry			
7.	Dr. Josephine Nirmala Many, Associate Professor	Member	
8.	Ms. D. Dhanalakshmi, Associate Professor	Member	
9.	Ms. P. Asha, Associate Professor	Member	
10.	Dr. S. Alamelu Mangai, Assistant Professor	Member	
11.	Dr. Kayalvizhi Balamurugan, Assistant Professor	Member	
12.	Ms. Malarvizhi Ravi, Assistant Professor	Member	
13.	Ms. M. Shobana, Assistant Professor	Member	
14.	Ms. M. Malliguesvary, Assistant Professor	Member	
15.	Dr. L. Sucheta Soma Kirupa, Assistant Professor	Member	
16.	Dr. Ch. Rajiny, Assistant Professor	Member	
17.	Dr. D. Brighty, Assistant Professor	Member	

Station: Puducherry
Date: 27.08. 2018

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)

Affiliated to Pondicherry University

PUDUCHERRY-605003

Programme: B. Sc Clinical Nutrition and Dietetics

Curriculum &Syllabus
(Choice Based Credit System)

EFFECTIVE FROM
2019

DEPARTMENT OF HOME SCIENCE

COURSE: CLINICAL NUTRITION AND DIETETICS

CURRICULUM WITH EFFECT FROM 2019

1. PROGRAMME OUTCOME

Clinical Nutrition and Dietetics explores the relationship between health and nutrition. The course has gained recognition in recent years with the upsurge in lifestyle disorders which has led to a demand for professional Nutritionists and Dietitians. The subject aims to comprehend the influence of food habits and suggest corrective measures in relation to age, health condition and food palate.

The course aims to inculcate an understanding of varied aspects of Nutrition including Medical Nutrition Therapy in disease management. The programme endeavours to develop a research bent in students and seeks to highlight social responsibility through public health education among vulnerable groups. The curriculum is designed to acquaint the learners with the concepts and innovations in Food Manufacture and Processing.

The current trend of the nations' incessant interest in disease awareness and management, demands competent Nutritionists and Dietitians which has opened up countless opportunities in the Service as well as Commercial Food and health sectors.

The Government sectors recruit Nutritionists and Dietitians to work in Government Hospitals, Nursing Homes, Government Schools, Community Health Centers, Government Schemes and Missions, Government Owned Factories, Government Organizations (office cafeteria) and Government Research and Development (R&D) units.

Nutritionists and Dietitians have opportunities in private Hospitals, Clinics, Nursing Homes, Restaurants, Star Hotels, Day Care Centers, Food Product Manufacturing Industries, Pharmaceutical Companies, Corporate Companies (Cafeteria), NGOs and private Research and Development (R&D) units.

Diverse opportunities are available for Nutritionists and Dietitians in Sports Clubs, Sports Hostels, Health and Recreation Clubs, Athlete Camps, Fitness Centers and Gyms and also as private consultants.

2. COURSE OUTCOME

Food Science	Comprehend the Principles of food preparation and apply the principles to achieve maximal utilization of nutrients
Human Physiology	Understand the general structure and functions of the different organs and systems of the body and employ the acquired knowledge to relate to the nutrient needs of the body
Nutrition Science	Introduce the basic concepts related to Nutrition and Health and translate the concepts to practice by employing sound nutritional knowledge
Microbiology	Understand and the nature of microorganisms involved in food spoilage and Devise sustainable strategies to prevent and protect food from spoilage
Nutritional Biochemistry	Develop an understanding of the concepts of nutrient metabolism and relate them to identify lacuna between intake and utilization
Fundamentals of Computers	Know the basics of computer for Education, Information and Research and Utilize the computers for basic necessities as well as identify the resources to research online for various academic needs
Family Meal Management	Acquire knowledge and develop ability to formulate balanced diets for various stages of Life cycle/ Activity/Income Level
Interior Decoration	Develop the skills in selection and use of appropriate materials for various decorations and utilize the knowledge to apply the concepts of interior decoration to adorn the public and private spaces
Clinical Nutrition in Specific Diseases	To understand causative factors, metabolic changes and rationale of prevention in various disease/disorders; Analyse metabolic changes and devise prevention strategies in relation to diseases/disorders
Diet in Specific Diseases	Understand the Principles of diet therapy, therapeutic modifications of diet for treating various disease conditionsand Apply them to treat various disease conditions through therapeutic modifications
Nutritional Assessment & Surveillance	Understand the aims and methods of assessing the nutritional status and Utilize the best method of need based assessment for an individual and community

Extension Education	Understand the principles and methods of Extension Education and to communicate effectively in the community employing various methods of extension education
Clinical Nutrition in Lifestyle diseases	To understand causative factors, metabolic changes and rationale of prevention in various disease/disorders; Analyse metabolic changes and devise prevention strategies in relation to diseases/disorders
Diet in Lifestyle Diseases	Understand therapeutic modifications of diet for treating various disease conditions, gain knowledge in diet counselling and employ diet counselling techniques to bring about food and lifestyle changes
Fitness & Sports Nutrition	Comprehend the interaction between fitness and nutrition, understand and formulate diet plans in accordance to the special needs for physical activities relatedto sports and exercise
Preventive Nutrition	Understand the importance of preventive nutrition, the role of food and nutritional security in National Development and create nutritional strategies for prevention of diseases/ disorders

3. COURSE GUIDELINES

Objectives of the course:

To understand the role of food and its components in maintaining good health and nourishment

To equip the students with an in – depth knowledge of the body's metabolism in relation to the nutrient intake, absorption and utilization

To impart the skills to translate the acquired knowledge through formulating and creating diet plans for the normal and therapeutic purposes

Course Updation:

A reputable team of external representatives from academia, industry and alumni form the board of studies for the course. Since Nutrition is a dynamic field and requires frequent updation, the department constantly seeks to upgrade the course by bringing in new subjects in tune with industry needs, adding topics of latest research interests and also providing on the field exposure to students to familiarize them with the demands of the career.

Scope for Higher Studies & Research:

Students who have completed the course are eligible to pursue their higher studies in the following fields:

Clinical Nutrition & Dietetics

Food Science & Nutrition

Food Service Management & Dietetics

Interior Decoration

Textiles & Clothing

Resource Management

Extension Education

Human Development

Biotechnology

Passing of UGC NET- JRF also enables them to secure admissions in research universities and institutions of repute.

4. REGULATION

4.1. ELIGIBILITY FOR ADMISSION

H.Sc. (+2) or its equivalent with Chemistry & Biology / Foundation Science/ Nutrition & Dietetics / Food Preservation as one of the subjects with 50% marks in English

4.2. DURATION OF THE PROGRAMME

The Programme duration is THREE academic years, containing SIX semesters.

4.3. MEDIUM OF INSTRUCTION

The medium of Instruction is English.

4.4. SCHEME OF EXAMINATION

The End-Semester Examination (ESE) for each course carries a maximum of 75 marks and the Continuous Internal Assessment (CIA) is for 25 marks

4.5. COMPONENTS OF INTERNAL ASSESSMENTS

Announced / Unannounced Tests	5 marks
Assignment	5 marks
Attendance	5 marks
Model Examination	10 marks
TOTAL	**25 marks**

5.6. ATTENDANCE SCALE

96% to 100%	- 5
91% to 95%	- 4
86% to 90%	- 3
81% to 85%	- 2
76% to 80%	- 1
Below 75%	- Admissible for the Examination with Condonation Fee
Below 60%	- Not admissible to appear for the Examination

5.7. CRITERIA FOR 'PASS MARK'

Minimum Pass Mark - 40
No Minimum Pass Mark for Internal Assessment
Minimum Pass Mark for ESE - 30

COURSE STRUCTURE

(For students admitted from the academic year 2019 onwards) CBCS

COURSE CODE: 5

FIRST YEAR **SEMESTER I**

Part	Paper Code	Title of Paper	Credits	Instruction Hrs/Week		Exam Hrs.	Marks		
				Th	Pract		CIA	ESE	Total
I	D9201 D9301 D9501	Tamil I French I Hindi I	3	6	-	3	25	75	100
II	D9001	English I	3	6	-	3	25	75	100
III	D0551	**DSC I**: Food Science	4	5	-	3	25	75	100
III	D0552	Food Science Practical	1	-	2	2	-	25	25
III	D0553	**DSC II:** Human Physiology	4	5	-	3	25	75	100
III	D0554	Human Physiology Practical	1	-	2	2	-	25	25
III	D9604	**AECC I:** Introduction to Public Administration	2	4	-	3	25	75	100
		TOTAL	**18**	**26**	**4**				**550**

FIRST YEAR **SEMESTER II**

Part	Paper Code	Title of Paper	Credits	Instruction Hrs/Week		Exam Hrs.	Marks		
				Th	Pract		CIA	ESE	Total
I	D9202 D9302 D9502	Tamil II French II Hindi II	3	6	-	3	25	75	100
II	C9002	English II	3	6	**-**	3	25	75	100
III	D0555	**DSC III:** Nutrition Science	4	5	-	3	25	75	100
III	D0556	Nutrition Science Practical	1	-	2	2	-	25	25
III	D0557	**DSC IV:** Microbiology	4	5	-	3	25	75	100
III	D0558	Microbiology Practical	1	-	2	2	-	25	25
III	D9701	**AECC II:** Environmental Studies	2	4	-	3	25	75	100
		TOTAL	**18**	**26**	**4**				**550**

SECOND YEAR **SEMESTER III**

Part	Paper Code	Title of Paper	Credits	Instruction Hrs/Week		Exam Hrs.	Marks		
				Th	Pract		CIA	ESE	Total
I	D9203 D9303 D9503	Tamil III French III Hindi III	3	6	-	3	25	75	100
II	C9003	English III	3	6	-	3	25	75	100
III	D0559	**DSC V:** Nutritional Biochemistry	4	5	-	3	25	75	100
III	D0560	Nutritional Biochemistry Practical	1	-	2	2	-	25	25
III	D0561	**DSE I:** Fundamentals of Computers	4	5	-	3	25	75	100
III	D0312	**SEC I:** Chemistry I	4	4	-	3	15	60	75
III	D0313	Chemistry I Practical	2	-	2	2	5	20	25
		TOTAL	**21**	**26**	**4**				**525**

SECOND YEAR **SEMESTER IV**

Part	Paper Code	Title of Paper	Credits	Instruction Hrs/Week		Exam Hrs.	Marks		
				Th	Pract		CIA	ESE	Total
I	D9204 D9304 D9504	Tamil IV French IV Hindi IV	3	6	-	3	25	75	100
II	C9004	English IV	3	6	-	3	25	75	100
III	D0562	**DSC VI:** Family Meal Management	4	5	-	3	25	75	100
III	D0563	Family Meal Management Practical	1	-	2	2	-	25	25
III	D0564	**DSE II:** Interior Decoration	4	5	-	3	25	75	100
III	D0317	**SEC I:** Chemistry II	4	4	-	3	15	60	75
III	D0318	Chemistry II Practical	2	-	2	2	5	20	25
		TOTAL	**21**	**26**	**4**				**525**

THIRD YEAR **SEMESTER V**

Part	Paper Code	Title of Paper	Credits	Instruction Hrs/Week		Exam Hrs.	Marks		
				Th	Pract		CIA	ESE	Total
III	D0565	**DSC VII**: Clinical Nutrition in Specific Diseases	4	5	-	3	25	75	100
III	D0566	Clinical Nutrition-Qualitative Analysis Practical	1	-	3	2	-	25	25
III	D0567	**DSC VIII**: Diet for Specific Diseases	4	5	-	3	25	75	100
III	D0568	Diet for Specific Diseases Practical	1	-	3	2	-	25	25
III	D0569	**DSC IX:** Human Development	4	5	-	3	25	75	100
III	D0570	**DSE III* :** Nutritional Assessment & Surveillance	4	4	-	3	25	75	100
	D0571	**DSE III***: Extension Education							
III	D0572	**SEC III:** Hospital Internship**	4	-	-	-	25	50	75
III	D9601	**GE I:** Surface Ornamentation in Textiles	3	5	-	3	50	50	100
		TOTAL	**25**	**24**	**6**				**625**

* To choose one subject

** To be undertaken for a period of 10 days in the month of May - June

THIRD YEAR **SEMESTER VI**

Part	Paper Code	Title of Paper	Credits	Instruction Hrs/ Week		Exam Hrs	Marks		Total
				Th	Pract		CIA	ESE	
III	D0573	**DSC X:** Clinical Nutrition in Lifestyle Diseases	4	5	-	3	25	75	100
III	D0574	Clinical Nutrition – Quantitative Analysis Practical	1	-	3	2	-	25	25
III	D0575	**DSC XI:** Diet for Lifestyle Diseases	4	5	-	3	25	75	100
III	D0576	Diet for Lifestyle Diseases Practical	1	-	3	2	-	25	25
III	D0577	**DSE IV**: Fitness & Sports Nutrition	4	4	-	3	25	75	100
	D0578	**DSE IV**: Preventive Nutrition							
III	D0579	**SEC IV:** Textiles & Clothing Care	4	5	-	3	25	75	100
III	D9607	**GE II:** Introduction to Interior Decoration	3	5	-	3	50	50	100
		TOTAL	**21**	**24**	**6**				**550**
		OVERALL TOTAL	**124**						**3325**

* To choose one subject

DSC – Discipline Specific Course
DSE – Discipline Specific Elective
SEC – Skill Enhancement Course
AECC - Ability Enhancement Compulsory Courses
GE – Generic Elective

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B Sc CLINICAL NUTRITION AND DIETETICS

Semester: I
DSC I
Paper Code: D0551
Credits: 4

Title of the Paper: FOOD SCIENCE

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable students to

- Understand the different food groups and their contribution to nutrition.
- Comprehend the Principle of food and its application in food preparation.

THEORY **HOURS**

UNIT I: Food Groups and Cooking Methods **10**

- Food groups – Classification
- Functions of food.
- Objectives of cooking.
- Preliminary preparations.
- Cooking methods — Principles, merits and demerits
    - Moist heat methods
    - Dry heat methods
    - Microwave cooking
    - Solar cooking.

UNIT II: Cereals, Millets, Pulses, Nuts and Oilseeds, Fats and Oils **20**

Cereals and Millets

- Composition, Nutritive Value and Structure of Wheat, Rice.
- Convenient Cereal products -Millets and its products
- Cereal cookery - Gluten formation, Gelatinization and Dextrinisation
- Role of cereals in cookery

Pulses

- Composition and Nutritive Value
- Toxic constituents
- Role of Pulses in cookery

Fats, Nuts and Oilseeds

- Composition and Nutritive value
- Types of oils
- Changes during storage and heating of fat
- Role of fat in cookery

UNIT III: Vegetables and Fruits **15**

- Classification and nutritional significance of Vegetables & Fruits.
- Pigments in vegetables and its effects on different method of cooking.
- Role of vegetables and fruits in cookery.

UNIT IV: Milk, Eggs and Fleshy foods **20**

Milk and Milk Products

- Composition and Nutritive value
- Processing- Clarification, Homogenization, Pasteurization and Freezing.
- Types of milk, Fermented and Non- fermented milk products
- Role of milk in cookery.

Egg

- Structure, Composition and Nutritive Value
- Egg quality and evaluation
- Egg cookery - Egg white foams, Iron sulphide formation
- Role of egg in cookery

Meat

- Classification, Composition and Nutritive Value
- Post mortem changes, Ageing, Tenderizing, Curing.
- Meat cookery.

Poultry

- Classification, Composition and Nutritive Value

Fish

- Classification, Composition and Nutritive Value
- Selection of Fish
- Fish cookery.

UNIT V: Sugars, Spices & Condiments **10**

Sugar and Related Products

- Types of sugars
- Stages of sugar cookery
- Role of sugar in cookery.

Spices and Condiments

- Types
- Role of spices in cookery

REFERENCES

1. Ward D.J, Ward. L, Principles of Food Science, Goodheart –Wilcox Publishers, 2015.
2. Roday. S, Food Science and Nutrition, OUP India, II Edition, 2012
3. B.Srilakshmi, Food Science, New Age International (P) Limited, Publishers, II Edition, 2018.
4. English, Lawless H. T., Sensory Evaluation of Food: Principles And Practices, CBS Publishers, II Edition, 2014.

5. Sumathi R. Mudambi, ShaliniM.Rao, Food Science, Wiley Ltd, New Age International Limited, New Delhi, IIND Edition, Reprint 2018.
6. Potter, N. and Hotchkiss, J.H, Food Science, CBS Publishers & Distributors, New Delhi, V Edition, 2007.
7. Vaclavik. V, Christian W. E, Essentials of Food Science, Springer-Verlag New York, III Edition , 2008
8. N.Shakunthala Manay, M.Shadakashraswamy , Foods, Facts and Principles, New Age International (P) Ltd, 2001

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: I
DSC I
Paper Code: D0552
Credits: 1

Title of the Paper: FOOD SCIENCE PRACTICAL

Hours of Instruction per week: 2

Maximum Marks: 25
CIA: -
ESE: 25

PRACTICALS **30 HOURS**

Exercise 1: Food Grouping

Exercise 2: Identification of food sources for various nutrients using food Composition tables

Exercise 3: Working instructions, weights and measures, and table setting.

Exercise 4: Determination of edible portion and effect of cooking on Volume and Weight

Exercise 5: Experimental cookery on Cereals. Recipes – Briyani, Stuffed Paratha

Exercise 6: Experimental cookery on Pulses. Recipes – Mixed Pulses Vadai, Dhal Payasam

Exercise 7: Experimental cookery on fruits and vegetables. Recipes -Avial, Veg. Pugath, Fruit halva, Fruit Mousse

Exercise 8: Experimental cookery on milk and its products. Recipes – Paneer Gravy, Gulab Jamun, Chandrakala

Exercise 9: Experimental cookery on egg. Recipes – Caramel Pudding, Egg Burji

Exercise 10: Demonstration on Stages of sugar cookery.

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B Sc CLINICAL NUTRITION AND DIETETICS

Semester: I
DSC II
Paper Code: D0553
Credits: 4

Title of the Paper: HUMAN PHYSIOLOGY

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives

To enable students to understand the

- General structure and functions of the different organs and systems of the body

THEORY **HOURS**

UNIT I: Cell and Digestive System **15**

Cell

- Structure
- Functions.
- Tissues – Structure and functions of epithelial, connective, muscular and nervous tissue.

Digestive System

- Structure of digestive tract
- Process of digestion and absorption
- Liver and its functions
- Pancreas and its functions

UNIT II: Circulatory System **15**

- Blood-Composition and functions – RBC, WBC and Platelets.
- Blood groups
- Coagulation
- Structure and functions of heart
- ECG
- Cardiac cycle
- Blood pressure-factors influencing blood pressure.

UNIT III: Respiratory and Excretory System **20**

Respiratory System

- Structure of the respiratory system
- Mechanism of respiration
- Exchange of Gases

Excretory system

- Kidney and Nephron – Structure and functions
- Urine Formation
- Composition of urine
- Micturition (in brief)

UNIT IV: Endocrine and Reproductive System **15**

Endocrine System

Structure and functions of

- Pituitary
- Thyroid
- Adrenal
- Islets of Langerhans

Reproductive System

- General Anatomy of Female and Male Reproductive organs
- Physiology of menstruation and fertilization
- Physiology of lactation

UNIT V: Nervous System **10**

- Structure and Functions of brain and spinal cord.

REFERENCES

1. Saradha Subramanyam, K. Madhavankutty, H.D. Singh, "Textbook of Human Physiology"' S. Chand and Company Ltd, 2015
2. Dr. C.C. Chatterjee, "Human Physiology Vol I" Medical Allied Agency, XI Edition, 2016
3. Dr. C.C. Chatterjee, "Human Physiology Vol II: Medical Allied Agency, XI Edition,2016
4. N. Arumugam, "Cell Biology", Saras Publication, 2001.
5. VidyaRatan, 'Handbook of Human Physiology", Jaypee Brothers, 2004
6. Ross and Wilson, "Anatomy and Physiology in Health and Disease". Churchill Livingstone. XI Edition

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B Sc CLINICAL NUTRITION AND DIETETICS

Semester: I
DSC II
Paper Code: D0554
Credits: 1

Title of the Paper: HUMAN PHYSIOLOGY PRACTICAL

Hours of Instruction per week: 2

Maximum Marks: 2
CIA: -
ESE: 25

PRACTICALS **30 HOURS**

Exercise 1: Estimation of Haemoglobin using Haemometer

Exercise 2: Identification of Blood Groups

Exercise 3: Determination of Bleeding and Coagulation time

Exercise 4: Counting of RBC and WBC using Haemocytometer (Demonstration)

Exercise 5: Determination of Arterial Blood pressure using Sphygmomanometer

Exercise 6: Recording of Pulse rate – Before and After exercise

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)

PUDUCHERRY – 3

Course: B Sc CLINICAL NUTRITION AND DIETETICS

Semester: I
AECC I
Paper Code: D9604
Credits: 2

Title of the Paper: INTRODUCTION TO PUBLIC ADMINISTRATION

Hours of Instruction per week: 4 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To introduce students to

- The elements of Public Administration
- Instill ethical seriousness in Indian Public Administration within the constitutional framework.

THEORY **HOURS**

UNIT1: Introduction **10**

- Meaning, Nature and Scope of Public Administration and its relationship with other disciplines
- Evolution of Public Administration as a discipline – Woodrow Wilson, Henry Fayol , Max Weber and others
- Evolution of Public Administration in India – Arthashastra – Colonial Administration upto 1947

UNIT II: Public Administration in India **15**

- Enactment of Indian Constitution - Union Government – The Cabinet – Central Secretariat
- All India Services – Training of Civil Servants – UPSC – NitiAyog
- Statutory Bodies: The Central Vigilance Commission – CBI - National Human Rights Commission – National Women's Commission –CAG

UNIT III: State and Union Territory Administration **20**

- Differential Administrative Systems in Union Territories compared to States
- Organization of Secretariat: -Position of Chief Secretary
- Functions and Structure of Departments
- Directorates – Ministry of Home Affairs
- Supervision of Union Territory Administration – Position of Lt. Governor in UT – Government of Union Territories Act 1963.
- Changing trend in UT Administration in Puducherry and Andaman and Nicobar Island

UNIT IV: Emerging Issues in Indian Public Administration **15**

- Changing Role of District Collector
- Civil Servants – Politicians relationship
- Citizens Charter
- Public Grievance Redressal mechanisms — The RTI Act 2005
- Social Auditing and Decentralization – Public Private partnership

REFERENCES:

1. A. R. Tyagi, Public Administration, Atma ram sons, New Delhi, 1983.
2. Appleby P.H, Policy and Administration, The University of Alabama Press, Alabama, 1949.
3. Avasthi and Maheswari, Public Administration in India, Agra: Lakshmi Narain Agarwal, 2013.
4. Gerald.E. Caden.Public Administration, Pablidas Publishers, California, 1982.
5. http://cic.gov.in/
6. http://www.mha.nic.in/
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9. R.B. Jain, Public Administration in India,21st Century Challenges for Good Governance, New Delhi: Deep and Deep,2002
10. Ramesh K Arora, Indian Public Administration, New Delhi:WishwaPrakashan
11. Ramesh K.Arora. Public Administration, Fresh Perspective. Alekh Publishers, Jaipur.
12. RumkiBasu, Public Administration: Concept and Theories, New Delhi: Sterling, 2013

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: II
DSC III
Paper Code: D0555
Credits: 4

Title of the Paper: NUTRITION SCIENCE

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable students to:

- Introduce the basic concepts and definitions related to Nutrition and Health
- Understand the functions, role, digestion and absorption and sources of nutrients

THEORY **HOURS**

UNIT I: Introduction **5**

- Concept and definitions – Nutrition, Health, Nutrients, Nutritional Status, Malnutrition – Undernutrition, Overnutrition, Imbalance, Specific Deficiency.
- Reference Man and Reference Women

UNIT II: Energy Metabolism. **15**

- Definition, Units of Energy
- Determination of energy value of foods – Bomb Calorimeter
- Physiological Fuel Value
- Total Energy Requirements - Basal Metabolic Rate (BMR) – Measurement – Direct, Indirect. Factors Influencing Basal Metabolic Rate
- Physical Activity – Factors affecting Physical Activity. Measurement – Indirect Calorimetry using Douglas Bag
- Thermic Effect of Food – Factors affecting Thermic Effect of Food
- Determination of Total Energy Requirement – Factorial method
- Resting Energy Expenditure

UNIT III: Major Nutrients in Food **20**

Carbohydrates

- Composition, Properties, Classification, function
- Digestion and Absorption of carbohydrates.
- Food Sources, Deficiency disorders.
- Dietary Fiber – Nutritional significance.

Proteins

- Composition, Properties, Classification, Function
- Digestion and Absorption of proteins.

- Food Sources, Deficiency Disorders
- Assessment of protein quality (BV, PER, NPU),
- Factors affecting protein bio – availability.

Lipids

- Composition, Properties, Classification, Function
- Digestion and Absorption of lipids.
- Food Sources, Deficiency disorders.
- Significance of SFA, MUFA, PUFA, & EFA

UNIT IV: Vitamins and Minerals **20**

Vitamins

- Classification - Fat soluble vitamins (A, D, E & K)
  - Water-soluble vitamin (B & C)
- Functions, Food sources, Deficiency disorders.

Minerals & Trace Elements

- Calcium, Phosphorous, Magnesium, Iron, Fluoride, Zinc, Iodine.
- Functions, Food Sources, Deficiency disorders.

UNIT V: Water & Electrolyte Balance **15**

Water

- Distribution of water in the body
- Functions, Requirements, Sources
- Water Balance
- Water depletion
- Water Intoxication

Electrolyte Balance

- Distribution of Electrolytes
- Disorders – Hyponatraemia, Hypernatraemia, Hypokalaemia, Hyperkalaemia, Odema

REFERENCES

1. Roday. S, Food Science and Nutrition, OUP India, II Edition, 2012
2. Yadav.S, Textbook of Nutrition and Health, Anmol Publishers 2002
3. Smolin.A, Grosvenor, M.B, Basic Nutrition, Infobase Publishing, 2009
4. Whitney. E, Rolfes R.S, Understanding Nutrition, Cengage Learning, 2010
5. Robinson, C.H, Marilyn Lawler. M Normal and Therapeutic Nutrition Paperback Macmillan USA; XVII Revised edition 1990
6. Insel, Ross. D, Bernstein. M, K McMahon. K, Discovering Nutrition, Jones & Bartlett Publishers, 2015
7. Schlenker. E, Roth S.L, WILLIAM'S Essentials of Nutrition and Diet Therapy, Mosby Publishers, X Edition, 2010

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B SC CLINICAL NUTRITION AND DIETETICS

Semester: II
DSC III
Paper Code: D0556
Credits: 1

Title of the Paper: NUTRITION SCIENCE PRACTICAL

Hours of Instruction per week: 2 Maximum Marks: 25
CIA: -
ESE: 25

PRACTICALS **30 HOURS**

QUALITATIVE ANALYSIS OF CARBOHYDRATES

Exercise 1: Qualitative test for Monosaccharide-Glucose

Exercise 2: Qualitative test for Monosaccharide-Fructose

Exercise 3: Qualitative test for Disaccharide-Lactose

Exercise 4: Qualitative test for Disaccharide-Sucrose

Exercise 5: Qualitative test for Disaccharide-Maltose

Exercise 6: Qualitative Analysis of Proteins

Exercise 7: Qualitative analysis of Minerals

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: II
DSC IV
Paper Code: D0557
Credits: 4

Title of the Paper: MICROBIOLOGY

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives

To enable students to

- Know about the different types of microbes and its significance
- Understand and the nature of microorganisms involved in food spoilage

THEORY **HOURS**

UNIT I: Introduction **10**

- Classification & Morphology of Micro- organisms -Bacteria, Virus, Yeasts, Moulds, Algae, Protozoa
- Factors influencing growth of Microorganism - Oxygen – Water Availability, Nutrition, Temperature, H+ ion Concentration, Light and Osmotic pressure.
- Economic Importance of Bacteria, Yeast, Moulds

UNIT II: Distribution and Role of Micro Organisms **20**

- Soil - Micro-organisms in the soil, Nitrogen Cycle
- Water- Micro-organisms in water, Total bacterial count in water, E Coli Test
- Air- Micro-organisms present in air, Total bacterial count of air
- Sewage - Composition of sewage, Treatment of Sewage by micro-organisms

UNIT III: Food Microbiology **20**

Types of spoilage of foods and methods of control

- Cereal and Cereal products
- Vegetables and fruits
- Meat, Poultry, Sea Foods
- Milk and Milk Products
- Packed and Canned Foods

UNIT IV: Microbial Diseases **15**

Causative agents, Incubation period, Symptoms, Prevention and Treatment

- Bacterial diseases-Tuberculosis, Diphtheria, Meningitis, Pneumonia, Cholera, Typhoid, Tetanus, Anthrax, Gonorrhoea, Leprosy, Salmonellosis, Botulism, Shigellosis
- Viral diseases- Influenza, Mumps, Measles, Chicken Pox, Dengue, Chikungunya, Swine flu, Polio, Viral hepatitis, Rabies, AIDS.
- Fungal diseases – Dermatomycosis
- Protozoan diseases-Amoebiosis, Malaria

UNIT V: Infection and Immunity **10**

- Infection – External and Internal, Antigen, Antibody
- Immunity – Active and Passive
- Vaccines – Types – Live, Dead, Toxoids
- Immunization Schedule

REFERENCES

1. Salle, A.J.: Fundamental Principles of Bacteriology – Read Books, 2007
2. Dubey, R.C & Maheshwari.D.K,: A Textbook of Micro – biology, S. Chand Publishing; IV Edition 2013
3. Pelczar J. Michael: Micro-biology Concepts and Applications, McGraw –Hill,1993
4. Ananthanarayan.R & Paniker C.K.J.: Textbook of Microbiology, Universities Press; Tenth edition 2017
5. Ray. B, Bhunia. A, Fundamental Food Microbiology, CRC Press,V Edition, 2013
6. Willey J, Sherwood. L, Woolverton J.C, **Prescott's Microbiology,** McGraw-Hill Education, **IX Edition, 2013**
7. Joshua A.K.: Micro-biology - India Printing works, Madras - 1971
8. Carpenter: Micro-biology - W.B. Saunders Co., London, 1968
9. Frazier. W.C.: Food Micro-biology - McGraw Hill Book and Co; New York, 1967

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: II
DSC IV
Paper Code: D0558
Credits: 1

Title of the Paper: MICROBIOLOGY PRACTICAL

Hours of Instruction per week: 2 Maximum Marks: 25
CIA: -
ESE: 25

PRACTICALS **30 HOURS**

Exercise 1: General Laboratory Rules and Regulations

Exercise 2: Demonstration of different parts of microscope and accessories – their Use and care.

Exercise 3: Identification of microorganisms – Slides

Exercise 4: Examination of microorganisms through Hanging Drop

Exercise 5: Examination of microorganisms by Simple Staining Method

Exercise 6: Examination of microorganisms by Differential Staining Method.

Exercise 7: Preparation of culture media – Streak and Pour Plate method, Total Count

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)

PUDUCHERRY – 3

Course: All UG Courses – B Sc/ BA/ BCom

Semester: II
AECC: II
Paper Code: D9701
Credits: 2

Title of the Paper: ENVIRONMENTAL STUDIES

Hours of Instruction per week: 4 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To acquaint students with

- The physical environment, its components and the major issues
- The impact of human activities on environment, environmental problems, hazards and risks

THEORY **HOURS**

UNIT I: Introduction to Environmental Studies and Ecosystem **10**

Multidisciplinary nature of environmental studies - Scope and importance - Concept of sustainability and sustainable development. Ecosystem - Structure and function of ecosystem - food chains, food webs and ecological succession - forest ecosystem - grassland ecosystem -desert ecosystem - aquatic ecosystems.

UNIT II: Natural Resources **15**

Land resources - land degradation - soil erosion and desertification - causes and impacts due to mining, dam building on environment - use and over-exploitation of surface and ground water - floods, droughts - conflicts over water - energy resources - Renewable and non-renewable energy sources -use of alternate energy sources, growing energy needs.

UNIT III: Biodiversity and Conservation **15**

Genetic, species and ecosystem diversity - biodiversity patterns and global biodiversity hot spots - India as a mega-biodiversity nation - endangered and endemic species of India - habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions - conservation of biodiversity- nature reserves, tribal populations and rights.

UNIT IV: Environmental Pollution **10**

Environmental pollution types- causes, effects and control of pollution - air, water, soil and noise pollution - nuclear hazards and human health risks - solid waste management - control measures of urban and industrial waste.

UNIT V: Environmental Policies **10**

Climate change - global warming - ozone layer depletion- acid rain and impacts on human communities and agriculture

Environment Protection Act- Wildlife Protection Act - Forest Conservation Act - Montreal and Kyoto protocols and Convention on Biological Diversity

BOOKS FOR STUDY:

1. Environmental studies, Erach Bharucha,1st Ed., Universities Press, 2005.
2. Environmental and Ecology, Anil K.De and Arnab K. De, 1st Ed., New Age International, 2009.
3. Environmental science and Engineering, Anubha Kaushik, 5th Ed., New Age International, 2016.
4. Essentials of Ecology and Environmental Science, Rana, 5th Ed., PHI, 2013.

BOOKS FOR REFERENCE:

1. Fundamentals of Ecology, Eugene P. Odum and W.B.Saunders,1st Ed., London, 1971.
2. Environmental Science, Tyler Miller, 14th Ed., Cengage, 2014.
3. Environmental Science,Botkin and Keller, 8th ed., Wiley India,2012.
4. Environmental Studies: From Crisis to Cure, Rajagopalan, 3rd Ed., Oxford University Press, 2015.

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions
-

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages
-

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: III
DSC V
Paper Code: D0559
Credits: 4

Title of the Paper: NUTRITIONAL BIOCHEMISTRY

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:
To enable the students to
- develop an understanding of the principles of nutritional biochemistry
- obtain an insight into the biochemistry of metabolism of nutrients

THEORY **HOURS**

UNIT I: Carbohydrate Metabolism **20**

- Carbohydrates - Physical & Chemical Properties
- Cellular Metabolism of Carbohydrates - Aerobic and Anaerobic degradation – Glycolysis, TCA Cycle, Hexose Monophosphate Pathway, Uronic Acid Pathway, Cori Cycle.
- Understanding of Concepts: Glycogenolysis, Glycogenesis, Gluconeogenesis,
- Biological Oxidation - Electron Transport Chain; High Energy Phosphate bonds

UNIT II: Protein Metabolism **10**

- Proteins- Physical & Chemical properties
- Transamination, Oxidative Deamination, Decarboxylation, Urea cycle
- Plasma Proteins-Nature, Properties and Functions

UNIT III: Fat Metabolism **10**

- Lipids- Physical & Chemical properties
- Cellular Metabolism of Lipids- β- oxidation of fatty acids, ketogenesis, Synthesis of triglycerides, Synthesis of phospholipids, Metabolism of cholesterol

UNIT IV: Vitamin & Mineral Metabolism **20**

Vitamins:

- Biochemical functions and Metabolism
  - Fat soluble vitamins – A, D, E & K
  - Water soluble vitamins – B complex Vitamins & C

Minerals:

- Biochemical functions and Metabolism
    - Macro Minerals: Sodium, Potassium, Calcium, Phosphorus.
    - Micro Minerals: Iron, Zinc, Iodine

UNIT V: Enzymes and Nucleic Acids **15**

- **Enzymes:** Classification, properties, mechanism of enzyme action, factors controlling enzyme activity

- **Nucleic Acids:** DNA & RNA, Types, Structure and Functions. DNA Replication; Protein Synthesis – Transcription & Translation. Mutation - Types

REFERENCES

1. Rao A.V.S.S., "Textbook of Biochemistry, " UBS Publishers, 2008
2. Murray. R.V., Granner.P. A. Mayes. V, Rodwell. W, 21st Edition, "Harper's Biochemistry",McGraw – Hill Education, XXX Edition, 2015.
3. Lehninger. A.L., "Human Biochemistry", W. H Freeman & Co., VI Edition, 2012.
4. Satyanarayana.U, and Chakrapani.U, "Biochemistry", Fifth Edition, Elsevier-Saunders, Mosby, Churchill, 2017.
5. Conn, E.E., Stumpf, P.K. Bruening, G. and Doi, R.H., 5th Edition, "Outlines of Biochemistry", John Wiley and Sons, 2001.
6. Vasudevan.DM.,Sreekumari, and Kannan Vaidyanathan.S., " Textbook of Biochemistry for Medical Students", Eighth Edition, Jaypee Brothers Medical Publishers, 2013.

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B Sc CLINICAL NUTRITION AND DIETETICS

Semester: III
DSC V
Paper Code: D0560
Credits: 1

Title of the Paper: NUTRITIONAL BIOCHEMISTRY PRACTICAL

Hours of Instruction per week: 2 Maximum Marks: 25
CIA: -
ESE: 25

PRACTICALS **30 HOURS**

Exercise 1: Components and Working of Colorimetry

Exercise 2: Verification of Beer's Law

Exercise 3: Quantitative Analysis of Reducing Sugar-Benedict's method.

Exercise 4: Estimation of Ascorbic Acid by Dye Method.

Exercise 5: Estimation of Calcium in Milk Powder through EDTA Complexometry.

Exercise 6: Estimation of Iron from processed Ragi flour.

Exercise 7: Determination of Acid content in Fruit Juice and Milk

Exercise 8: Determination of Acid Value

Exercise 9: Estimation of Peroxide Value.

Exercise 10: Preparation of Starch from Potatoes.

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B Sc CLINICAL NUTRITION AND DIETETICS

Semester: III
SEC I
Paper Code: D0561
Credits: 4

Title of the Paper: FUNDAMENTALS OF COMPUTERS

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable students to:

- Know the basics of computer.
- Use computers for Education, Information and Research.

THEORY **HOURS**

UNIT I: INTRODUCTION TO COMPUTERS **10**

- History of Computers
- Computer Generations
- Classification of Computers
- Components of Computer
- Input & Output devices
- Hardware & Software, Hard copy & Soft copy.
- Starting up and shutting down
- Secondary Storage Devices.

UNIT II: MS WORD **15**

- Introduction
- Exploring the desktop
- Running multiple programs
- Accessories
- Control Panel
- Managing documents and folders
- Starting MS-Word
- Creating and formatting a document
- Changing fonts and point size
- Table creation and operation
- Auto correct, auto text, spell check, thesaurus
- Word art, inserting objects
- Page set up, page preview, Printing a document.

UNIT III: MS EXCEL **15**

- Starting excel
- Work sheet, cell, inserting data into rows or columns
- Alignment, text wrapping
- Sorting data, auto sum
- Generating graphs, Integrating charts with WORD
- Page Set up, Print preview, printing worksheets.

UNIT IV: MS – POWERPOINT **10**

- Starting MS – PowerPoint
- Auto Wizard, creating a presentation using auto content wizard
- Blank presentation, creating and saving a presentation
- Adding a slide to a presentation
- Slide sorter, slide show, editing slides
- Use of clip art, word art gallery
- Adding transitions and animation effects, setting timings for slide show
- Printing presentation documents

UNIT V: INTERNET **10**

- Genesis and Use of Internet
- Types of Connection
- Software & Hardware requirements
- Search engines, - Internet Explorer, Google Chrome, Opera, Firefox, Subject Gateways
- Setting up email account & using it.
- Social Media – Facebook, Twitter, Linked In

PRACTICALS: **15**

Exercise 1: MS WORD

- Study of Word-Menu/Toolbars
- Creating a document
- Formatting the document
- Creating Tables in a document
- Use of Clip Art
- Drawing flow chart using drawing toolbar

Exercise 2: MS EXCEL

- Creating a work sheet
- Formatting work sheets
- Creating charts
- Data Entry – Filter, Sort
- Using Mathematical functions – SUM, AVERAGE

Exercise 3: MS POWERPOINT

- Creating a presentation using templates
- Use of Animation in Power point Presentation
- Importing - Exporting files
- Printing Powerpoint Presentations (Demonstration)

REFERENCES:

1. Subramanian, S, Introduction to Computers, S. Chand Publishers, 1999
2. Norton P: Introduction to computer, Tata Mc GrawHillPublishing Co Ltd., New Delhi, 2017
3. Nagpal, D. P, Mastering Microsoft Office 2000, Wheeler Publishing, New Delhi, 2000
4. Saxena. S, MS Office 2000 for Everyone, Vikas Publishing House; First Edition 2000
5. Ahilya. R, Computer, Lucent Publications; VIII Edition, 2016

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions
-

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages
-

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B Sc: CLINICAL NUTRITION AND DIETETICS

Semester: IV
DSC VI
Paper Code: D0562
Credits: 4

Title of the Paper: FAMILY MEAL MANAGEMENT

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:
To enable students to

- Acquire knowledge of the principles of planning diets
- Develop ability to plan balanced diets for various stages of Life cycle/ Activity/Income Level

THEORY **HOURS**

UNIT I: Meal Planning and Food Requirements **10**

- Understanding Terminologies – Balanced Diet, Recommended Dietary Allowances
- Meal Planning – Principles & Factors to be considered in meal planning.
- Steps in Menu Planning
- Food Pyramid, My Plate
- Recommended Dietary Intake for various stages of life cycle, Factors to be considered.

UNIT II: Nutrition during Infancy and Pre- School **20**

Infancy

- Growth and Development
- Nutritional Requirements
- Food Requirement – Breast Feeding, Composition and Advantages of Breast Milk
- Complementary Foods

Pre- School

- Nutritional Requirements
- Food Requirements
- Nutrition related problems – Vitamin A Deficiency, PEM

UNIT III: Nutrition of School Children and Adolescence **15**

School Children

- Nutritional Requirements
- Food Requirements
- Packed Lunch – Points to be considered
- Feeding Problems – Underweight, Obesity, Constipation, Dental Caries

Adolescence

- Nutritional Requirements
- Food Requirements
- Nutrition related problems– Anaemia
- Eating Disorders - Bulimia nervosa, Anorexia nervosa, Binge eating

UNIT IV: Adult Nutrition **20**

Adult

- Classification according to Activity- Sedentary, Moderate, Heavy Work;
- Nutritional Requirements

Pregnancy

- Nutritional Requirements
- Food Requirements
- Dietary Problems in Pregnancy
- Complications in Pregnancy

Lactation

- Role of Hormones in Milk Production
- Factors affecting Volume and Composition of Breast milk
- Nutritional Requirements
- Food Requirements

UNIT V: Geriatric Nutrition **10**

- Nutritional Requirements
- Food Requirements
- Nutrition related problems - Osteoporosis

REFERENCES:

1. Gopalan.C. Ramasastri, B.V. and Balasubramaniam, S.C., Nutritive Value of Indian foods, National Institute of Nutrition , Hyderabad, 2016
2. Sue Rodwell Williams, Nutrition and Diet Therapy, Times Mirror Mosby College Publishing, St. Louis Toronto, Basin, 1989.
3. Guthrie H.A. & Others, "Introductory Nutrition", 1986, 6th ed. Times Mirror/Mosby College Pub. St.Louis.
4. Whitney. E, Rolfes R.S, Understanding Nutrition, Cengage Learning, 2010
5. Bamji.M, Krishnaswamy. N, Textbook on Human Nutrition, Oxford and IBH Publishing ,III Edition, 2009
6. Robinson, C H, Marilyn Lawler M, Normal and Therapeutic Nutrition, Macmillan USA; XVII Revised Edition, 1990
7. F.P. Antia, Clinical Dietetics and Nutrition, Oxford University press, 1998.
8. Srilakshmi.B, Dietetics, New Age International(p) ltd., VII Edition, 2014
9. Worthington Roberts, Bonnie S & others - "Nutrition in Pregnancy & Lactation", III Edition, Times Mirror Mosby College, St. Louis, 1996.
10. Cappellini. B,Marshall.D,Parsons. E, The Practice of the Meal: Food, Families and the Market Place, Routledge, I Edition, 2016

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B Sc CLINICAL NUTRITION AND DIETETICS

Semester: IV
DSC VI
Paper Code: D0563
Credits: 1

Title of the Paper: FAMILY MEAL MANAGEMENT PRACTICAL

Hours of Instruction per week: 2 Maximum Marks: 25
CIA: -
ESE: 25

Objectives:

To enable the students to

- Develop skills to plan balanced diets for various stages of Life cycle/Activity/ Income groups
- Understand the application of Excel and Diet Software in nutrient calculation

PRACTICALS: 30 H0URS

Exercise 1: General Laboratory Rules

Exercise 2: Planning and preparation of one serving meal for adult men and Women based on activities / income levels

Exercise 3: Planning and preparation of one serving meal for a pregnant woman

Exercise 4: Planning and preparation of one serving meal for a lactating woman

Exercise 5: Planning and preparation of weaning foods for infants

Exercise 6: Planning and preparation of one serving meal for toddler and pre-school child.

Exercise 7: Planning and preparation of one serving meal/packed lunch for school going children, Adolescents

Exercise 8: Planning and preparation of one serving meal for senior citizen.

Exercise 9: Demonstration of Diet Software

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: IV
SEC II
Paper Code: D0564
Credits: 4

Title of the Paper: INTERIOR DECORATION

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable the students to

- Understand the important of Interior Decoration in daily life.
- Develop the skills in selection and use of appropriate materials for various decorations.

THEORY **HOURS**

UNIT I: Aesthetics and Design Basics **10**

- Aesthetics and Good Taste
- Interior decoration- Definition and Importance
- Design- Definition and Types

UNIT II: Elements and Principles of Design **10**

- Elements of Art – Line, Direction, Shape, Colour, Texture and Value
- Principles of design - Harmony, Balance, Proportion, Rhythm and Emphasis

UNIT III: Interior Decor **15**

- Colour - Definition, Classification, Prang Colour Chart, Colour Harmonies and Use of Colour in Different Rooms.
- Lighting - Definitions, Types, Lighting Fixtures and Requirements of Lighting in Different Areas.

UNIT IV: Interior Furnishing **15**

Hard Furnishing

- Furniture - Types, Materials and Requirement and arrangement of Furniture in Different Activities of Home

Soft Furnishing

- Window Treatment: Curtains and Draperies – functions, selection and types.
- Floors and Floor coverings : Importance, Features, Functions, Types- Carpets and Rugs

UNIT V: Interior Decoration **15**

- Flower arrangement: Definition, Design rules, Guidelines, Styles - Traditional and Modern, Materials required in Flower Arrangement, Common flowers and Foliage used in formal Flower arrangements.
- Accessories - Types and uses

PRACTICALS **10**

Exercise 1: Elements of arts – Line direction, Shape, Colour, Texture & Value.

Exercise 2: Principles of Design - Harmony, Balance, Proportion, Rhythm, Emphasis

Exercise 3: Colour – Prang Colour Chart, Colour Harmonies

Exercise 4: Window Treatments and Flower Arrangement

Exercise 5: Furniture Arrangement – Bedroom, Living room, Dining room

Exercise 6: Visit to Hotels, Architectural Houses

REFERENCES:

1. Vargese M.A., OgaleN, N.Srinivasan.K Home Management, Wiley Eastern Limited Delhi.1985.
2. Raghu Balan.G and SmriteeRagubalan, Hotel Housekeeping Operation and Management, Oxford University University press New Delhi 2007
3. Joan C. Branson., Margaret Lennox, Hotel, Hostel and Hospital HouseKeeping. ELST 1990
4. Parimalam.A, Andal.A, Premalatha.M.R, Text Book of Interior Decoration, Satish Serial Publishing House, New Delhi,2008.
5. PremavathySeetharaman and ParveenPannu., Interior Design and Decoration, CBS Publisher and Distributor Pvt.Ltd, New Delhi 2005.

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: V
DSC VII
Paper Code: D0565
Credits: 4

Title of the Paper: CLINICAL NUTRITION IN SPECIFIC DISEASES

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable the students to

- To understand causative factors and metabolic changes in various disease/disorders
- To understand the rationale of prevention of various diseases/disorders

THEORY **HOURS**

Unit I: Components of Nutrition Care Process **15**

- Definition and Steps in Nutrition Care Process
- Nutritional Screening and Assessment
- Nutritional Screening Tools – SGA, PGSGA
- Pharmacokinetics, Pharmacodynamics
- Effect of Drugs on Food Intake, Absorption and metabolism
- Effect of Food and Nutrition on Drug Therapy

Unit II: Nutritional Deficiency Disorders **15**

Aetiology, Clinical Symptoms, Diagnosis and Treatment in

- Protein Calorie Malnutrition
- Vitamin A Deficiency
- Iron Deficiency
- Iodine Deficiency Disorders
- Osteoporosis

Unit III: Inborn Errors of Metabolism **15**

Aetiology, Signs and Symptoms, Diagnosis and Treatment in

- Carbohydrate Metabolism – Galactosemia, Fructosuria, Lactose Intolerance, Glycogen Storage Disease (GSD)
- Protein Metabolism – Phenylketonuria, Maple Syrup Disease, Alkaptonuria, Albanism
- Lipid Metabolism- Lipid Storage Disease

Unit IV: Gastro- Intestinal Diseases **15**

Aetiology, Clinical Symptoms, Diagnosis and Treatment in

- Diarrhoea
- Steatorrhoea
- Constipation

- Gastritis
- Peptic Ulcer
- Inflammatory Bowel Diseases - Ulcerative Colitis, Crohn's disease
- Dumping Syndrome, Irritable Bowel Syndrome
- Gastro Esophageal Reflux Disease (GERD)

Unit V: Special Conditions **15**

Aetiology, Clinical Symptoms, Diagnosis and Treatment in

- Febrile Conditions
- Food Allergy
- Cancer
- AIDS
- Burns

REFERENCES

1. Shills, E.M, Olson, A.J. and Shike, M.C. Modern Nutrition in Health and Diseases, Shea and Febiger, Philadelphia, vol. II, 1994
2. Gopalan.C. Ramasastri, B.V. and Balasubramaniam, S.C., Nutritive Value of Indian foods, National Institute of Nutrition , Hyderabed, 1994
3. Sue Rodwell Williams, Nutrition and Diet Therapy, Times Mirror Mosby College Publishing, St. Louis Toronto, Basin, 1989.
4. Garrow James, Human Nutrition and Dietetics, Church Livingston, Edinburgh London Madrid Melbourne, New York and Tokyo, 1993
5. Corinne H. Robinson Marilyn R. Lawler, Normal and Therapeutic Nutrition, Mac Millan Publishing Company, New York, 1986.
6. F.P. Anita, Clinical Dietetics and Nutrition, Oxford University press, 1989.
7. Srilakshmi.B, Dietetics, New Age international(p) ltd., Seventh edition 2014

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: V
DSC VII
Paper Code: D0566
Credits: 1

Title of the Paper: CLINICAL NUTRITION - QUALITATIVE ANALYSIS PRACTICAL

Hours of Instruction per week: 3

Maximum Marks: 25
CIA: -
ESE: 25

PRACTICALS **45 HOURS**

Exercise 1: General Laboratory Instructions

Exercise 2: Urine – Composition, Method of Urine Specimen Collection and Preservation

Exercise 3: Physical Parameter of Urine Analysis

Exercise 4: Qualitative Analysis of Normal Urine – Inorganic Constituents

- Test for Chloride, Sulphate, Calcium, Phosphorous and Ammonia

Exercise 5: Qualitative Analysis of Normal Urine – Organic Constituents

- Test for Urea, Uric Acid and Creatinine

Exercise 6: Qualitative Analysis of Abnormal Urine

- Test for Reducing Sugar, Protein, Haemoglobin, Ketone Bodies and Bile Salts

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B. Sc CLINICAL NUTRITION AND DIETETICS

Semester: V
DSC VIII
Paper Code: D0567
Credits: 4

Title of the Paper: DIET FOR SPECIFIC DISEASES

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable students to understand

- Nutrition Support System in Medical Nutrition Therapy
- Principles of diet therapy, therapeutic modifications of diet for treating various disease conditions.

THEORY **HOURS**

UNIT I: Basic Concepts of Diet Therapy **15**

- Nutrition Support – Need, Interdisciplinary Nutrition Support Team, Functions and Responsibilities of Team Members
- Therapeutic Adaptations of Normal Diet
- Principles and Classification of Therapeutic Diets- Routine Hospital Diet – Fluid, Soft and Regular diet ,Pre-operative and Post-operative diets
- Enteral Nutrition- Access- Nasogastric, Nasoduodenal or Nasojejunal, PEG/Jejunostomy, Formula and Administration, Complications
- Parenteral Feeding – Access, Formula and Administration, Complications

UNIT II: Diet Counselling **10**

- Dietitian – Qualification, Specializations of Dietitian, , Responsibilities, Code of Ethics
- Indian Dietetic Association, Requirements for Registered Dietitian
- Diet Counseling –Definition; Counseling Strategies: Individual and Group Counseling; Evaluation and Follow up.
- Use of Technology in Diet Counseling- Use of Computers for Dietary Computations, Education.

UNIT III: Dietary Management in Deficiency Diseases **15**

- Protein Calorie Malnutrition
- Vitamin A Deficiency
- Iron Deficiency Anemia
- Iodine Deficiency Disorders
- Osteoporosis

UNIT IV: Dietary Management in Gastro-Intestinal Diseases **20**

- Diarrhoea
- Constipation
- Gastritis
- Peptic Ulcer
- Inflammatory Bowel Diseases- Ulcerative Colitis, Crohn's Disease
- Dumping Syndrome
- Irritable Bowel Syndrome

UNIT V: Dietary Management in Special Conditions **15**

- Food Allergy
- Febrile Conditions
- Cancer
- AIDS
- Burns

REFERENCES

1. Gopalan.C. Ramasastri, B.V and Balasubramaniam, S.C., Nutritive value of Indian foods, National Institute, Hyderabed, 1994
2. Sue Rod Williams, Nutrition and Diet Therapy, Times Mirror Mosby College Publishing, St.Louis Toronto, Baosin, 1989.
3. Garrow James, Human Nutrition and Dietetics, Churchill Livingston, Edinburgh London Madrid Melbourne, New York and Tokyo, 1993.
4. Cornne H. Robinson Marilyn R. Lawler, Normal and Therapeutic Nutrition, Mac Millan Publishing Company, New York, 1986.
5. F.P. Antia, Clinical Dietetics and Nutrition, Oxford University press, 1989.
6. Srilakshmi.B, Dietetics, New Age international(p) ltd., Seventh edition 2014

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B SC CLINICAL NUTRITION AND DIETETICS

Semester: V
DSC VIII
Paper Code: D0568
Credits: 1

Title of the Paper: DIET FOR SPECIFIC DISEASES PRACTICAL

Hours of Instruction per week: 3

Maximum Marks: 25
CIA: -
ESE: 25

PRACTICALS **45 HOURS**

Exercise 1: Principles of Planning Diet, Food Exchange List

Exercise 2: Planning and Preparation of Liquid, Soft Diet and Blenderised Feed for Tube Feeding

Exercise 3: Planning and Preparation of 5 Protein rich recipes for PEM

Exercise 4: Planning and Preparation of 5 Vitamin A rich recipes for Vitamin A Deficiency

Exercise 5: Planning and Preparation of 5 Iron rich recipes for Iron Deficiency Anaemia

Exercise 6: Planning and Preparation of diet for Peptic Ulcer

Exercise 7: Planning and Preparation of diet for Burns

Exercise 8: Planning and Preparation of diet for AIDS

Exercise 9: Planning and Preparation of diet for Cancer

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: V **DSC IX**
Paper Code: D0569
Credits: 4

Title of the Paper: HUMAN DEVELOPMENT

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable the students to

- Understand the different stages of life cycle.
- Become acquainted with the dynamics of family life.

THEORY **HOURS**

UNIT I: Pregnancy **5**

- Conception
- Stages of Pregnancy, Birth Process, Types of Delivery,
- Ante-natal and Post- natal care

UNIT II: Infancy **10**

- Development in the First Year of Life.
- Care and Hygiene of the Infant
- Feeding - Schedule, Breast Feeding, Artificial feeding, Complementary Feeding
- Toilet Training
- Sleep Routines
- Parental Role in Training Infants
- Role of other members in the family
- Conditions for an Optimum Growth.

UNIT III: Pre-school Child **20**

- Development – Physical, Motor, Emotional, Social, and Intellectual
- Sex Behaviour and Sex Interest
- Play – Importance, Types and Equipments
- Behaviour Problems – Causes and Treatment.

Nursery School

- Objectives, Types, Curriculum and Programme
- Materials and Methods for Pre-school Education
- Relationship between Home and Nursery School
- Personal and Professional Qualities of a Nursery School Teacher

UNIT IV: School Going Children and Adolescents **15**

School Going Children

- Physical and Motor Development
- Emotional Development
- Social Development
- Intellectual Development

Adolescence

- Physical and Motor Development
- Emotional Development
- Social Development
- Sex Education
- Juvenile Delinquency
- Problems of adolescents
- Coping strategies - Role of parents, siblings, peers and society.

UNIT V: Adult and Old Age **10**

Adult

- Types of Family-Traditional and Modern.
- Functions of Family and Marriage, Motives of Marriage, Marriage and Family as a basic social institution.
- Adjustment in Marriage - Adjustment towards Mate, Sex, Finance, Society and in-laws

Old Age

- Characteristics of Old Age
- Physical Changes
- Psychological Changes
- Place of Aged in Indian Society

PRACTICALS: **15**

Exercise 1: Child's first reaction to Nursery School

Exercise 2: Observations in the following areas of development – Physical, Social, Emotional and Language Development

Exercise 3: Participation in Nursery School: Planning, carrying out and evaluating the programme.

Exercise 4: Study on Play of Children and Types of Play Materials available.

Exercise 5: Study on Behaviour Problems of Children

Exercise 6: Assessment of Nutritional Status of Pre- School – Anthropometric, Clinical and Dietary

Exercise 7: Sociometric Study of Adolescents

Exercise 8: Observational Visit to Old Age Home/Orphanages/Special Schools.

REFERENCES:

1. Hurlock. E.B., Child development, McGraw Hill Koga Kusha Ltd., Tokyo.1972.
2. Jaya Muthu, Child development, Macmillan.
3. Subash C. Arya, Infant and child care for the Indian Mother. DelhiVikas Publications, 1972.
4. Ambron. S.R., The Developing Child, Chaseburelle, Illinois, 1975.
5. Grewall. J.S., Early Childhood Education, National Psychological Cor., Agra, 1984.
6. Smart. R & Smart, M., Readings in Child Development and Relationships, Macmillan, 1972.

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: V **DSE III***
Paper Code: D0570
Credits: 4

Title of the Paper: NUTRITIONAL ASSESSMENT AND SURVEILLANCE

Hours of Instruction per week: 4 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable students to

- Understand the aims of assessing the nutritional status of an individual and community
- Know the methods used for assessment of nutritional status

THEORY **HOURS**

UNIT I: Dimensions of Health and Disease **15**

Health

- Definition of Health, Dimensions of Health
- Quality of Life – Physical Quality of Life Index, Human Development Index, Human Poverty Index
- Health Indicators–
  Mortality Indicators – Crude Death rate, Life Expectancy, Infant Mortality Rate, Child Mortality Rate, Maternal Mortality Rate.
  Morbidity Indicators – Incidence, Prevalence
  Disability Indicators – Sullivan Index, Disability Adjusted Life Year (DALY), Health Adjusted Life Expectancy (HALE)
- MCH Indicators –Apgar score, Bishop's Score.

Disease

- Concept of Disease, Iceberg Phenomenon

UNIT II: Direct Methods of Nutritional Assessment **15**

- Anthropometry
- Biochemical Assessment
- Biophysical or Radiological Examination
- Clinical Examination
- Functional Assessment
- Rapid Assessment Procedure (RAP)

UNIT III: Indirect Methods of Nutritional Assessment **10**

- Dietary Assessment - Need and Importance
- Methods of Dietary Survey

UNIT IV: Nutrition Education **10**

- Definition, Methods
- Computers in Nutrition Education

UNIT V: Nutritional Policies, Programmes and Agencies in Combating Malnutrition **10**

- National Health Policy
- National Nutritional Policy
- National Nutritional Programmes - Nutritional Anaemia Control Programme Vitamin A Prophylaxis Programme, National Iodine Deficiency Disorder Control Programme (NIDDCP), Integrated Child Development Service (ICDS) and School Mid-day Meal Programme, PoshanAbiyan
- National Agencies -ICMR, NIN, CFTRI, NNMB, NNB
- International Agencies – WHO, UNICEF, FAO

REFERENCES

1. Park, Textbook of Preventive and Social Medicine, BanarsidasBhanot Publishers, Jabalpur 2015
2. Srilakshmi, B.Nutrition Science, New Age International Publishers, New Delhi, VI Edition, 2018
3. Jelliffe, D.B. Assessment of the Nutritional Status of the community, World Health Organization, 1966
4. Gopalan, C, Nutrition and Health care- Problems and Policies, Nutrition Foundation of India, Special Publication Series, 1983.
5. Beghin, J, Cap, M., Dujardan, B.A Guide to Nutritional assessment, WHO, 1988
6. Mason, J.B., Habicht, J.P., Tabatabai, H., Valverdre, V: Nutritional Surveillance, WHO, 1984.

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: V **DSE III***
Paper Code: D0571
Credits: 4

Title of the Paper: EXTENSION EDUCATION
Hours of Instruction per week: 4 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:
To enable students to:
- Understand the principles and methods of Extension Education.
- Understand the process of communication in Home Science Education.

THEORY **HOURS**

UNIT I: INTRODUCTION TO EXTENSION EDUCATION **15**
- Extension Education - Meaning, Scope, Objectives
- Principles of Extension
- Difference between Formal, Informal and Non-Formal.
- Extension Education Methods:
    - Individual Methods (Farm and Home Visit, Office Call, Personal Letters, Result Demonstration),
    - Group Methods (Method Demonstration, Lecture Method, Field Trips, Group Discussion),
    - Mass Methods: (TV/Radio Recordings, Circular Letters, News Articles, Campaign).
    - Digital Methods of Extension – E-learning, Smart Board, Intra and Internet
- Extension Education Process.
- Qualities and Role of an Extension Worker

UNIT II: COMMUNICATION IN EXTENSION **10**
- Communication – Definition, Functions, Elements, and Problems/ Barriers in Communication.
- Models of Communication - Berlo's, Leagan's

UNIT III: PROGRAMME PLANNING **10**
- Meaning, Principles and Criteria for Good Programme Planning
- Programme Planning Cycle

UNIT IV: LEADERSHIP AND COMMUNITY DEVELOPMENT **15**

Leadership

- Leader and Leadership - Definition, Types, Functions.
- Methods of Identifying Community Leaders. – Role of Leaders in Community Development.
- Qualities of a Good Leader.

Community Development

- Community Development - Definition, Objectives.
- Community Development set up: at the National, State, District, Block and Village levels. – Role of functionaries in the Block and Village Levels.
- Democratic decentralization – Significance of Panchayati Raj, Three Tier System

UNIT V: RURAL DEVELOPMENT PROGAMMES **10**

- Ongoing Rural Development Programmes and Programmes For Women and Children – SHG, Support to Training & Employment Programme for Women (STEP)
- Programmes sponsored by the Ministry of Child and Women welfare in the current five year plan (Any Five)

REFERENCES:

1. Reddy A [1987] Extension Education, Bapatla ,Andra Pradesh, India, Sreelekshmi Press.
2. Dahama.O.P and Bhatnagar .O.P [1988] Education and Communication for Development, New Delhi, Oxford and IBH Publishing Co.Pvt .Ltd.
3. Dubey V.K. and Bishnoi Indira (2009): Extension Education and communications, New age International Pvt. Ltd. Publishers, New Delhi.
4. Waghmare,S.K[1980] Teaching Extension Education, Prasant Publication Vallabha,Vidhya Nagar.
5. Patnayak,Ram [1990] Rural Development in India, NewDelhi, Vikas Publications
6. S.V. Supe, An Introduction to Extension, Oxford and IBH Publishing, 2005

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B Sc CLINICAL NUTRITION & DIETETICS

Semester: V
SEC III
Paper Code: D0572
Credits: 4

Title of the Paper: HOSPITAL INTERNSHIP

Hours of Instruction per week: -

Maximum Marks: 75
CIA: 25
ESE: 50

Objectives:

To enable students to

- Acquire knowledge about the preparation of diet chart, routine hospital diet.
- Understand the supportive services available in hospital

TRAINING:

- Will be organized in the month of May/June
- Students are expected to undergo the stipulated period of training at Government/Private Institutions and submit a report.

INTERNSHIP:

- **Dietary Department:**
  Students are expected to complete 10 days of training at the dietary department including ward visits for case study.
- **Support Services:**
  Students are expected to complete 5 days of observational visits at Laboratory & Blood Bank.

CASE REPORT includes (should be submitted to the respective institution)

- Brief description of the Hospital & dietary department (10 pages)
- Short report on the training undergone in Laboratory & Blood Bank(5 pages)
- Case study - **ONE** Patient (10 pages)
- Cover to cover – 25 pages
- Inclusive of graph, diagrams, pictures etc
- Times New Roman – font 1.1/2 spacing, 12 – font size
- Soft binding, certified by HOD.

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BA/BSC/ BCOM

Semester: V
GE I
Paper Code: D09601
Credits: 3

Title of the Paper: SURFACE ORNAMENTATION IN TEXTILES

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 50
ESE: 50

Objectives

To enable the students to

- Develop skills in care and maintenance of fabrics.
- Develop aesthetic skill on surface ornamentation

PRACTICALS **HOURS**

EXERCISE 1: BASIC EQUIPMENT **10**

- Materials and Equipment Required for Hand Embroidery- Selection of needle, thread, scissors, trimmer, unpicker and fabric,
- Basic Steps to Start Embroidery Work - methods of transferring the design & care
- Preservation of embroidery articles.

EXERCISE 2: BASICS OF EMBROIDERY **15**

- Flat Stitch – Running, Back, Stem, Cross Stitch, Satin stitch, Long and Short.
- Knotted Stitches - Bullion knots, French Knots
- Linked or chain stitch – Chain, Lazy daisy.
- Looped stitch: Blanket Stitch, Feather.

EXERCISE 3: EMBELLISHING TEXTILES **15**

- Sequin work
- bead work
- mirror work
- Applique
- Punch needle work

EXERCISE 4: FABRIC CONSTRUCTION TECHNIQUES **15**

- Crochet
- Macramé
- Knotting

EXERCISE 5: EMBELLISHMENT USING TRIMMINGS **10**

- Lace
- Buttons
- Ribbons
- Cords & stings
- Piping

EXERCISE 6: EMBELLISHMENT ON **10**

- Decorative Items
- Garment

REFERENCES:

1. Dantyagi S., "Fundamentals of Textile and Their Care", Oriental Longmans Ltd, New Delhi, 1996
2. Denlkar, "Household Textiles and Laundry Work", Atma Ram and Sons, Delhi, 1993
3. Neomi D'Souza, "Fabric Care", New Age International Publisher, 1998
4. Davis, "Laundry and Clothing Care", Drama Book Publishers, 1995

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: VI
DSE X
Paper Code: D0573
Credits: 4

Title of the Paper: CLINICAL NUTRITION IN LIFESTYLE DISEASES

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

OBJECTIVES

To enable students to

- Comprehend the causative factors and metabolic changes in various disease/disorders
- Understand the rationale of prevention of various diseases/disorders

THEORY **HOURS**

Unit I: Weight Management **10**

Aetiology, Clinical Symptoms, Diagnosis and Treatment of

- Underweight
- Obesity

Unit II: Diabetes Mellitus **15**

Aetiology, Types, Clinical Symptoms, Complications and treatment of

- Diabetes Mellitus

Complications – Cataract and Retinopathy, Neuropathy, Nephropathy, Diabetic Coma, Hypoglycemia and Ketoacidosis,

Unit III: Cardiovascular Diseases **15**

Aetiology, Clinical Symptoms, Diagnosis and Treatment of

- Hypertension
- Hyperlipidemia
- Atherosclerosis
- Ischemic Heart Disease
- Congestive Cardiac Failure

Unit IV: Kidney Diseases **20**

Aetiology, Clinical Symptoms, Diagnosis and Treatment of

- Glomerulonephritis
- Nephrosis
- Acute Renal Failure
- Chronic Renal Failure
- Urolithiasis
- Dialysis and Kidney Transplantation

Unit V: Liver, Gall Bladder and Pancreatic Diseases **15**

Aetiology, Clinical Symptoms, Diagnosis and Treatment of

- Jaundice
- Viral Hepatitis
- Cirrhosis
- Cholecystitis
- Cholelithiasis
- Pancreatitis

REFERENCES

1. Raheena Begum. M., A Text book of Foods, Nutrition and Dietetics, Sterling Publishers Pvt., Ltd 1991
2. Srilakshmi. B, Dietetics, New age international (Pvt Ltd.,) 2000
3. Subhangini. A. Joshi, Textbook of Nutrition and Dietetics, Tata Mc Graw hill publishing limited, 1992
4. Antia F.P. Clinical Dietetics and Nutrition 3rd Oxford University press New Delhi/Bombay, 1989.
5. Robinson C.H and Wiley E.S. Basic Nutrition and Diet Therapy, 6th edition McMillan Publications, New York, 1989.

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: VI
DSE X
Paper Code: D0574
Credits: 1

Title of the Paper: CLINICAL NUTRITION –QUANTITATIVE ANALYSIS PRACTICAL

Hours of Instruction per week: 3 Maximum Marks: 25
CIA: -
ESE: 25

PRACTICALS **45 HOURS**

Exercise 1: General Laboratory Instructions

Exercise 2: Centrifuge - Components and Operation

Exercise 3: Colorimeter – Components and Operation

Exercise 4: Haematological Indices of Blood

Exercise 5: Demonstration of Blood Collection and Preservation

Exercise 6: Quantitative Estimation of Glucose in Blood

Exercise 7: Quantitative Estimation of Cholesterol in Blood

Exercise 8: Quantitative Estimation of Blood Urea

Exercise 9: Visit to Clinical Laboratory

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: VI
DSE XI
Paper Code: D0575
Credits: 4

Title of the Paper: DIET FOR LIFE STYLE DISEASES

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

This course is designed to enable students to

- Understand the dietary modification for therapeutic purposes
- Gain knowledge in diet counseling and educating the needy.

THEORY **HOURS**

UNIT I: Diet in Weight Management **10**

- Underweight
- Overweight and Obesity

UNIT II: Dietary Management in Diabetes Mellitus **15**

- Food Exchange, Carbohydrate Counting, Calorie Counting and Distribution
- Diabetes Mellitus
- Complications of Diabetes.

UNIT III: Dietary Management in Cardiovascular Diseases **15**

- Hypertension
- Atherosclerosis
- Dyslipidemia
- Ischaemic Heart Disease
- Congestive Cardiac failure

UNIT IV: Dietary Management in Renal Diseases **20**

- Glomerulonephritis
- Nephrosis
- Acute and Chronic Renal Failure
- Urolthiasis
- Dialysis, Kidney Transplantation.

UNIT V: Dietary Management in Liver, Gall Bladder and Pancreatic Diseases **15**

- Jaundice
- Viral Hepatitis
- Cirrhosis
- Cholecystitis
- Cholelithiasis
- Pancreatitis

REFERENCES

1. Gopalan.C. Ramasastri, B.V. and Balasubramaniam, S.C., Nutritive Value of Indian foods, National Institute of Nutrition , Hyderabed, 1994
2. Sue Rod Williams, Nutrition and Diet Therapy, Times Mirror Mosby College Publishing, st. Louis Toronto, Baosin, 1989.
3. Garrow James, Human Nutrition and Dietetics, Churche Livingston, Edinburgh London Madrid Melbourns, New York and Tokyo, 1993
4. Cornne H. Robinson Marilyn R. Lawler, Normal and Therapeutic Nutrition, Mac Millan Publishing Company, New York, 1986.
5. F.P. Antia, Clinical Dietetics and Nutrition, Oxford University press, 1989.
6. Srilakshmi.B, Dietetics, New Age international(p) ltd., Seventh edition 2014

JOURNALS

1. Journals of American Dietetic Association
2. Indian Journal of Medical Research
3. Indian Journal of Nutrition and Dietetics
4. American Journal of Clinical Nutrition

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSC CLINICAL NUTRITION AND DIETETICS

Semester: VI
DSE XI
Paper Code: D0576
Credits: 1

Title of the Paper: DIET FOR LIFE STYLE DISEASES PRACTICAL

Hours of Instruction per week: 3 Maximum Marks: 25
CIA: -
ESE: 25

PRACTICALS **45 HOURS**

Exercise 1: Planning and Preparation of diet for managing weight – Underweight and Obesity

Exercise 2: Planning and Preparation of diet for Diabetes Mellitus – IDDM/NIDDM

Exercise 3: Planning and Preparation of diet for Hypertension and Atherosclerosis

Exercise 4: Planning and Preparation of diet for Nephritis

Exercise 5: Planning and Preparation of diet for Nephrosis

Exercise 6: Planning and Preparation of diet for Cirrhosis

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester: VI
DSE IV*
Paper Code: D0577
Credits: 4

Title of the Paper: FITNESS AND SPORTS NUTRITION

Hours of Instruction per week: 4 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:

To enable students to

- Comprehend the interaction between fitness and nutrition
- Understand the special nutritional requirements for physical activities related to sports and exercise

THEORY **HOURS**

UNIT I: Body Composition Assessment and Testing **15**

Kinanthropometry

- Somatotyping
- Body Composition Assessment - Height, Weight, BMI, Densitometry, Surface Anthropometry, Absorptionmetry, Hydration Assessment Techniques
- Biochemical Assessment
- Clinical Assessment
- Dietary Assessment

Physiologic testing

- Components of Physiologic Assessment
- Assessment of Aerobic Capacity, Maximal Oxygen Uptake, Anaerobic Power, Muscular Strength, Flexibility, Muscle Endurance

UNIT II: Physical Fitness and Exercise Physiology **15**

Physical Fitness

- Types of Fitness
- Componentsof Physical Fitness – Methods and Benefits

Exercise

- Types and Factors affecting
- Exercises to strengthen different parts of the body

Exercise Physiology

- Biomechanics
- Muscular Adaptations to Exercise– Endurance and Resistance Training
- Cardio-Pulmonary adaptations to Exercise
- Effects of Training on Cardio-Pulmonary System

UNIT III: Nutrition for Sports **15**

- Importance of Nutrition in Sports
- **Energy -** Energy Metabolism and Factors affecting Energy Requirement in Athletes
- **Carbohydrates -** Role of Carbohydrates Before, During and After Exercise, Carbohydrate Loading
- **Proteins -** Requirements for Exercise, Factors affecting Requirement
- **Lipids -** Requirements
- **Vitamins and Minerals -** Role of Vitamins in Athletic Performance – Thiamine, Riboflavin, Niacin, Vitamin A, D & E
- Role of Minerals in Athletic Performance - Ca, Fe, Zn, Mg
- **Role of Water and Electrolytes –** Requirements, Fluid Balance and Thermoregulation in Exercise, Effect of Dehydration in Exercise Performance

UNIT IV: Nutrition Management for Sports **15**

- Pre-Event Meal
- Diet for Different Sports
- Event Recovery Food
- Guidelines For the Travelling Athlete
- Nutrition for Special Population: Child Athlete, Ageing Athlete, Athletic Diabetes, Differently Abled, Vegetarians
- Dealing with Cramps, Stitch, GI Distress
- Eating Disorders – Types, Prevalence, Risk Factors, Effect on Sports Performance, Treatment and Prevention
- Female Athletic Triad

UNIT V: Ergogenic Aids and Supplements **15**

- Sports Foods - Cereal Bar, Sports Drinks, Carbohydrate Gels, Liquid Meal Replacements
- Use of Performance Enhancing Substances among Athletes - Anabolic Steroids, Types of Protein Supplements - Creatine, Beta- Alanine, Glutamine, Branched Chain Amino Acids, Beta Hydroxyl Beta Methyl Butyrate(HMB), Whey Proteins, Caffeine, Glycerol, Bicarbonate, Citrate
- World Anti- doping Agency (WADA)-Anti Doping Rules and Regulations.

REFERENCES:

1. Melvin H.Williams, Nutrition for Health, Fitness and Sports, 7th edition, McGraw Hill International Edition, 2005

2. Micheal J.Gibney, Ian A Macdonald and Helen M.Roche, Nutrition and Metabolism, Blackwell Publishing Company, Bangalore, Reprint 2004.

3. Mc Ardle Katch & Katch, Nutrition, Health & Fitness, Williams & Wilkins, A.Waverly Company

4. Srilakshmi. B, Suganthi. V, Ashok, K.C, Exercise Physiology, Fitness and Sports Nutrition, New Age International, New Delhi, 2017

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: B. Sc CLINICAL NUTRITION AND DIETETICS

Semester: VI
DSE IV*
Paper Code: D0578
Credits: 4

Title of the Paper: PREVENTIVE NUTRITION

Hours of Instruction per week: 4 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:
To enable students to
- understand the importance of preventive nutrition in the current scenario
- understand the role of food and nutritional security in National Development

THEORY **HOURS**

Unit I: Recent Concepts in Preventive Health **15**
- Functional Foods- Free Radicals, Antioxidants, Phytochemicals, Prebiotics, Probiotics and Symbiotic.
- Bionutrition – Nutrigenomics, Nutraceuticals , Biomolecules as Antibiotics, Vitamins, Pigments.

UNIT II: Life Style Modifications **10**
- Meaning and Significance
- Role of Diet, Physical Activity, Smoking and Alcohol

UNIT III: Food and Nutrition Security **20**
- Concepts and Definitions of Food and Nutrition Security at National, Household and Individual Levels.
- Food Security Bill
- Role of PDS
- Dietary Diversification
- Food Revolutions, Agencies for control of food losses- FCI, SGC, SWC, CWC. Public Sector Programmes for improving of food and nutrition security

Unit IV: Mental Health **15**
- Concepts of Mental Health , Mental Illness
- Characteristics of a mentally healthy person
- Warning signals of poor mental health
- Types and causes of mental illness; Preventive aspects
- Mental health services
- Comprehensive mental health programme

Unit V: Perspectives in Preventive Nutrition **15**

- Concepts and Levels
- Social aspects of nutrition
- Modes of Intervention
- Preventive and Social measures
- Role of Governmental and Non-governmental organizations in promoting health and nutrition

REFERENCES:

1. Leathers, H.D. and Fosters, P., The World Food Problem: Tackling the Causes of Undernutrition in the Third World, 3rd Edition. Lynne Rienner Publishers, 2004.
2. Southgate, D., Graham, D.H. and Tweeten, L., The World Food Economy, Blackwell Publishing, 2007.
3. Wildman, R.E.C. (2007) Handbook of Nutraceuticals and Functional Foods, second edition. CRC Press.
4. Goldberg I. *Functional Foods: Designer Foods, Pharma Foods*. 2004.
5. Park. K, (2005), Park's Textbook of Preventive and Social Medicine, 18th edition, BanarsidasBhanot Publishers, Jabalpur.
6. Lalitha. M, (1997), Major Issues in Food and Nutrition Science, Kanishka Publishers, New Delhi.
7. Gibney, M.J, Margetts, B.M, Kearney, J.M and Arab, L. (2005). Public Health Nutrition, Blackwell Publishing, USA.
8. Stuart G. W., Principles and Practice of Psychiatric Nursing (New Edition), Elsevier Health Sciences, 2008

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BSc CLINICAL NUTRITION AND DIETETICS

Semester VI
SEC IV
Paper Code: D0579
Credits: 4

Title of the Paper: TEXTILES AND CLOTHING CARE

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 25
ESE: 75

Objectives:
To enable the students to

- Understand about Fibres and Yarns.
- Develop skills in care and maintenance of fabrics used in an establishment.

THEORY **HOURS**

UNIT I: Fibres **10**

- Classification of Fibers
- Basic properties of Fibers – Physical & Chemical.

UNIT II: Yarn **15**

- Types of Yarns.
- Understanding of Terms - Spun Yarn, Filament Yarns, Textured Yarns and Novelty Yarns**.**

UNIT III: Fabric Construction **15**

- Woven – Plain, Twill, Satin, Pile – Cut and Uncut
- Knitted – Warp & Weft
- Felted & Non-woven – Durables and Disposal uses
- Merits and Demerits with regard to Durability, Utility, Comfort, Absorbency, Appearance, Retention.

UNIT IV: Stain Removal **10**

- Types of Stains and its Removal – Dye Stains, Protein Stains, Combination Stains, Dairy Product Stains, Fruit Stains, Mud Stains, Coffee Stains,

UNIT V: Laundry and Storage **10**

- Principles of Laundering and Storage
- Types of Laundering
- Types of Water on Laundering
- Laundering Agents - Soaps & Detergents, Bleaching Agents, Stiffening Agents, Fabric Softeners

PRACTICALS: **15**

Exercise 1: Basic Equipment

- Materials and Equipment Required for Hand Embroidery- Selection of needle, thread, scissors, trimmer, unpicker and fabric
- Basic Steps to Start Embroidery Work - methods of transferring the design & care

Exercise 2: Basics of Embroidery

- Flat Stitch – Running, Back, Stem, Cross Stitch, Satin stitch, Long and Short.
- Knotted Stitches - Bullion knots, French Knots
- Linked or Chain stitch – Chain, Lazy daisy.
- Looped Stitch: Blanket Stitch, Feather.

Exercise 3: Embellishing Textiles

- Sequin work
- Bead work
- Mirror work
- Applique work

REFERENCE:

1. Bernard P. Corbman, Textiles Fibre to Fabric, 7th edition, Greg division/McGraw-Hill Book Company, 1993.
2. Premalatha Mullick, Text Book of Home Science, Kalyani Publishers, New Delhi, 2000.
3. Vidya Sagar P.V., Hand Book of textiles, Mittal Publications, New Delhi 1998.

QUESTION PAPER PATTERN

Time: 3 hrs **Maximum Marks: 75**

Section A (10 x 2 = 20 marks)

- Answer TEN Questions
- To choose TEN out of TWELVE questions

Section B (5 x 5 = 25 marks)

- Answer any FIVE
- Should answer FIVE out of SEVEN questions
- The answers should not exceed 150 words / One & Half pages

Section C (3 x 10 = 30 marks)

- Answer any THREE
- Should answer THREE out of FIVE questions
- The answers should not exceed 250 words / Two & Half pages

BHARATHIDASAN GOVT. COLLEGE FOR WOMEN (AUTONOMOUS)
PUDUCHERRY – 3

Course: BA / BSC /BCOM

Semester: VI
GE II
Paper Code: D9607
Credits: 3

Title of the Paper: INTRODUCTION TO INTERIOR DECORATION

Hours of Instruction per week: 5 Maximum Marks: 100
CIA: 50
ESE: 50

OBJECTIVES:

To enable the students to

- Understand the important of Interior Decoration in daily life.
- Develop the skills in selection and use of appropriate materials for various decorations.

PRACTICALS **45 HOURS**

Exercise 1: Elements of arts – Line direction, Shape, Colour, Texture & Value.

Exercise 2: Principles of Design - Harmony, Balance, Proportion, Rhythm and Emphasis

Exercise 3: Colour – Prang Colour Chart, Colour Harmonies

Exercise 4: Window Treatments and Flower Arrangement

Exercise 5: Furniture Arrangement – Bedroom, Living room, Dining room

Exercise 6: Preparation of Accessories