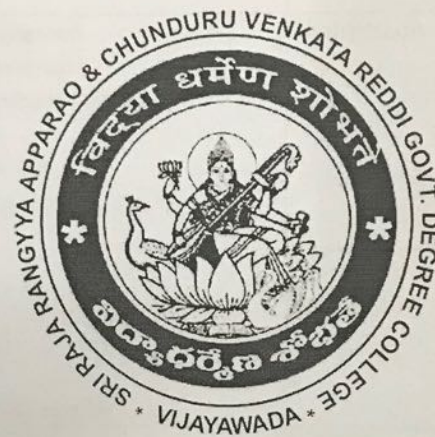


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Board of Studies - AY:2021-22



309: B.Sc. MBF

Department of Food Technology

SRR & CVR Government Degree College

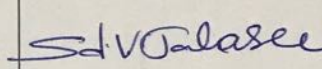
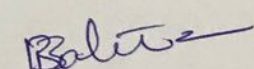
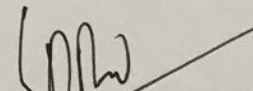
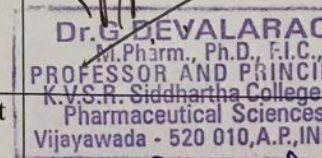
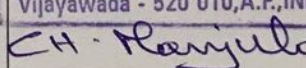
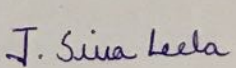
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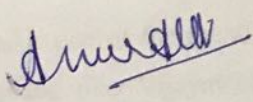
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Machavaram, Vijayawada, Krishna District, AP-520 004 Department of Food Technology

Report on 2nd Board of Studies Meeting for UG Programme of the

Department of Food Technology AY-2021-22
Composition of the BoS of Food Technology as Per UGC Guidelines

S.No	Name of the Faculty	Designation	Signature
1	Smt. Syed Vaziha Tahaseen Department of Biochemistry SRR & CVR Government Degree College, Vijayawada Mobile: 9948740949, Email: vazeehatahaseensuraj@gmail.com	Chairperson	
2	Dr. B. Babitha University Nominee Assistant Professor, Acharya Nagarjuna University	University Nominee	
3	Dr. G. Deval Rao Principal KVSR Siddhartha College of Pharmaceutical Sciences	Subject expert	 
4.	Dr. CH. Manjula Assistant Professor, Acharya Nagarjuna University	Subject expert	
5	Kum. J. Siva Leela Industrial Expert Quality Executive Spectra Foods and Beverages Pvt. Ltd Tadigadapa, Poranki, Vijayawada	Member	

7	Dr. K Anuradha Lecturer in Food Technology SRR & CVR GDC, Vijayawada	Member	
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Allexander

PREFACE

SRR & CVR Govt. Degree College (Autonomous), Vijayawada, is one of the prestigious educational institutions, located in a historically important place like Vijayawada in Krishna District, Andhra Pradesh. Vijayawada is a place of historical and cultural significance and importance. In the same way SRR & CVR Govt. Degree College, has also acquired its significance and prominence in and around Vijayawada by molding the lives of many students to become great personalities. This college is named after late Sri Raja Rangayyappa Rao and late Sri Chundururu Venkata Reddy, who have been great and noble donors of the city Vijayawada, by whose generosity the college has reached and attained such and this elevated status by way of shaping the lives of many generations of students making them worthy citizens of the country. This college has acquired great standards academically by the contributions of great teachers as well because in the history of any educational institution its teachers play a vital role. The college was established in 1937. It offers 27 undergraduate and 10 post graduate academic programmes with 86 regular faculty members. The college has total strength of around 2,800 students, which includes 1550 boys and 650 girl students at present. The institution was accredited with grade B+ with C.G.P.A 2.6 during March, 2017 by NAAC and got ISO 9001: 2015 certificate during 2019. The college was ranked by NIRF in 101-150 band at NIRF-2020 & 151-200 band in NIRF2019.

The Department of Food Technology was established in the year 2021 in SRR & CVR GDC, Vijayawada as a restructure course, with an objective to produce young professionals to cater to the needs of growing food industry. It has well established lab to conduct practical's. The course is offered with a combination of Microbiology and Biochemistry. The department also organizes curriculum enrichment activities like seminars, model making, chart preparation, experts' guest and extensive lectures, workshops, field trips etc. The pedagogy of the department is on par with vision of National Education Policy-2020.

Duration of the Course: 3/4 years

Add on Courses offered:

1. Dietetics
2. Family Nutrition
3. Bakery Technology

&&

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Department of Food Technology

BOARD OF STUDIES MEETING FOR FOOD TECHNOLOGY COURSE AGENDA

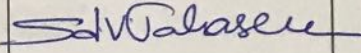
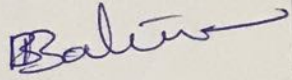
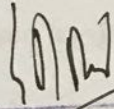
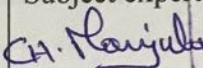
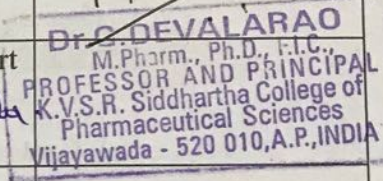
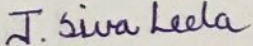
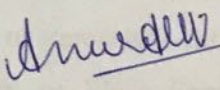
ACADEMIC YEAR: 2021-22

The 2nd meeting of the Board of Studies in Food Technology course was convened on 22nd November, 2021 at 02.00 p.m. in Department of Biochemistry, Science block under Chairmanship of Syed Vaziha Tahaseen the In- Charge of the department with the following agenda:

Agenda

1. To consider and approve Course Structure of Food Technology with course codes FTN 1328 and FTN 2328 for the admitted batch - 2021-22.
2. To consider and approve FTN 3328, FTN 4328 and FTN 5328 Syllabi for Courses in Semester III & IV under CBCS with Learning Outcomes-based Curriculum Framework (LOCF) for the academic year 2021-22 onwards.
3. To consider and approve to include "DIETETICS" as add-on course for second semester
4. To consider and approve the Student Evaluation Policy and Procedure and split- up of CIA & SEE.
5. To consider and approve the list of Question paper setters and examiners.
6. To consider and approve the Departmental Activities Calendar.
7. To consider and approve the Students Centered Pedagogy Policy to enrich the curriculum.
8. Any other with the permission of the chair.

Members Presented

S.No	Name of the Faculty	Designation	Signature
1	Smt. Syed Vaziha Tahaseen Department of Biochemistry SRR & CVR Government Degree College, Vijayawada Mobile: 9948740949, Email: vazeehatahaseensuraj@gmail.com	Chairperson	
2	Dr. B. Babitha University Nominee Assistant Professor, Acharya Nagarjuna University	University Nominee	
3	Dr. G. Deval Rao Principal KVSR Siddhartha College of Pharmaceutical Sciences	Subject expert	
4	Dr. CH. Manjula Assistant Professor, Acharya Nagarjuna University	Subject expert 	 Dr. G. DEVALARAO M.Pharm., Ph.D., F.I.C. PROFESSOR AND PRINCIPAL K.V.S.R. Siddhartha College of Pharmaceutical Sciences Vijayawada - 520 010, A.P., INDIA
5	Kum. J. Siva Leela Industrial Expert Quality Executive Spectra Foods and Beverages Pvt.Ltd Tadigadapa, Poranki, Vijayawada	Member	
7	Dr. K Anuradha Lecturer in Food Technology SRR & CVR GDC, Vijayawada	Member	



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Department of Food Technology

**2nd BOARD OF STUDIES MEETING FOR FOOD
TECHNOLOGY COURSE CONDUCTED ON 22nd NOVEMBER,
2021
MINUTES**

ACADEMIC YEAR: 2021-22

The Minutes of 2nd Board of Studies meeting in Food Technology which was convened on 22nd November 2021 at 02.00 p.m. under Chairmanship of Syed Vaziha Tahaseen, the In- Charge of the department is as follows:

Minutes and Resolutions of Board of Studies Meeting

Agenda 1: *To consider and approve course Structure of Food Technology*

Proposal: The Chairperson, Syed Vaziha Tahaseen, the In- Charge of the department welcomed the members of BoS and initiated discussion on agenda points.

Discussion: The University Representative, Dr. B. Babitha enquired about course titles, changes made in the course titles, credits of courses, and framework of the courses. Then Dr. Anuradha mentioned the course titles of three courses of semesters three and four. They are Food Preservation Technology, Technology of Plant Foods and Technology of Animal Foods.

Resolution 1: It is resolved to approve the titles of the two semesters three and four.
Semester – IV – Paper – 5 – Technology of Animal Foods

Agenda 2: *To consider and revise syllabi for semester – I and semester - II*

Proposal: The proposed syllabi for the courses in Semester I and Semester II is placed before the participants for approval.

Discussion: The University Representative Dr B. Babitha and subject expert Dr. Ch. Manjula proposed some changes in some topics in semester – II paper. There are no changes proposed in semester – I paper.

Resolution 2: It is resolved to revise the syllabus of Semester – II – Paper – 2 –
Fundamentals of Food Technology theory and practical.

Babitha
Ch. Manjula

Dr. G. DEVALARAO
M.Pharm., Ph.D., F.I.C.,
PROFESSOR AND PRINCIPAL
K.V.S.R. Siddhartha College of
Pharmaceutical Sciences
INDIA

Agenda 3: To consider and approve syllabi for newly introduced courses in Semester III & IV under CBCS with Learning Outcomes-based Curriculum Framework (LOCF) for the academic year 2021-22 onwards.

Proposal: The proposed syllabi for the courses in Semester III and Semester IV is placed before the participants for approval.

Discussion: The University Representative Dr B. Babitha and subject expert Dr. Ch. Manjula proposed some changes in some topics after long and fruitful discussion.

Resolution 3: It is resolved to introduce syllabus for semester – III and semester – IV along with practicals
Semester – III – Paper – 3 - Food Preservation Technology
Semester – IV – Paper – 4 - Technology of Plant Foods

Agenda 4: To consider and approve model papers and blue print for semester – I, II, III and IV.

Proposal: The model papers and blue print is placed before the participants for approval.

Discussion: The University Representative Dr B. Babitha and subject expert Dr. Ch. Manjula approved the model papers and blue print.

Resolution 4: Model papers along with blue print for semesters – I, II, III and IV are approved.

Agenda 5: To consider and approve Add on Course Dietetics for newly admitted batch during the academic year 2021 – 2022 and onwards.

Proposal: Add on Course Dietetics is placed before the participants for approval.

Discussion: The University Representative Dr B. Babitha and subject expert Dr. Ch. Manjula approved Add on course Dietetics after proposing some modifications.

Resolution 5: It is resolved to introduce Value Added course titled *Dietetics* for the batch of students admitted during the academic year 2021-2022 and onwards.

Agenda 6: To consider and approve the Student Evaluation Policy and Procedure and split-up of CIA & SEE.

Proposal: The chairman proposed the evaluation system in each course will be 40: 60 for Internal Continuous Internal Evaluation (CIA) and Semester End Evaluation(SEE).

Babu

Ch. Manjula

(M)

Dr. G. DEVALARAO
M.Pharm., Ph.D., F.I.C.
PROFESSOR AND PRINCIPAL
K.V.S.R. Siddhartha College of
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Vijayawada - 520 010, A.P., INDIA

Discussion: The members of BoS discussed about the merits, demerits and feasibility for the implementation of (40% CIA & 60% SEE) proportion and split-up of CIA.

Resolution 6: It is resolved to approve the Student Evaluation Policy and Procedure and split-up of CIA & SEE.

Agenda 7: *To consider and approve the list of Question paper setters and Examiners.*

Proposal: The chairman placed the list of Question paper setters and Examiners before the participants for seeking their approval.

Discussion: Subject experts were identified and a list was prepared which includes Paper setters as well as Examiners for Semester End Examinations.

Resolution 7: It is unanimously resolved to approve the list of Question paper setters and Examiners.

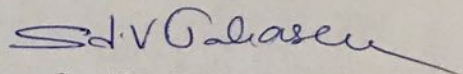
Agenda 8: *To consider and approve the Departmental Activities Calendar.*

Proposal: The chairman placed the list Departmental Activities for the Academic year 2021- 22.

Discussion: The delegates suggested to organize Workshops, Seminars, Field Trips, Guest / Extension Lectures, Observation of Important Days and Internships for the Academic Year 2021-22.

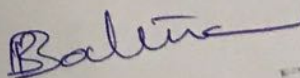
Resolution 8: It is unanimously resolved to approve the Departmental Activities Calendar.

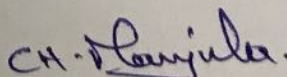
Agenda 9: *Any other with the permission of the chair.*

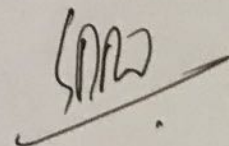


Syed Vaziha Tahaseen

Chairman, Board of Studies







Dr. G. DEVALARAO
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Machavaram, Vijayawada, Krishna District, AP-520 004
Department OF Food Technology

Programme Structure of 309
w.e.f Academic Year - 2021-22

STRUCTURE OF FOODTECHNOLOGY CORE SYLLABUS UNDER CBCS

YEAR	SEMESTER	COURSE	TITLE	MARKS	CREDITS	
I	I	I	Food and Nutrition	100	04	
			Practical – 1	50	01	
	II	II	Fundamentals of Food Technology	100	04	
			Practical – 2	50	01	
II	III	III	Food Preservation Technology	100	04	
			Practical – 3	50	01	
	IV	IV	Technology of Plant Foods	100	04	
			Practical – 4	50	01	
		V	V	Technology of Animal Foods	100	04
				Practical – 5	50	01

Balaji - (M)

A. Hanjula.

Dr.G.DEVALARAO
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Department OF Food Technology

Programme Structure of 309
w.e.f Academic Year - 2021-22

Programme Specific Outcomes (PSOs): By the end of the Programme, students will be able to:

- PSO 1:** Complete an in-depth study of Food Technology by understanding the food composition along with physico chemical properties, nutritional, microbiological and sensory aspects.
- PSO 2:** Student will be able to handle and perform different processing and preservation techniques by following food safety and quality standards in Food Industries.
- PSO 3:** Develop higher cognitive skills to apply critical thinking and analytical evaluation to contemporary food science information and literature.
- PSO 4:** Finally, the student will be competent enough to make a prospective career in Food Industry and will be able to start up a small-scale industry as an entrepreneur.

Baleto *(M)*

CH. Hanjula

Dr.G.DEVALARAO
M.Pharm., Ph.D., F.I.C.,
PROFESSOR AND PRINCIPAL
K.V.S.R. Siddhartha College of
Pharmaceutical Sciences
Vijayawada - 520 010, A.P., INDIA

Members Presented

S.No	Name of the Faculty	Designation	
1	Smt. Syed Vaziha Tahaseen Department of Biochemistry SRR & CVR Government Degree College, Vijayawada Mobile: 9948740949, Email: vazeehatahaseensuraj@gmail.com	Chairperson	<i>Sd. V. Tahaseen</i>
2	Dr. B. Babitha University Nominee Assistant Professor, Acharya Nagarjuna University	University Nominee	<i>Babitha</i>
3	Dr. G. DevaRao Principal KVSR Siddhartha College of Pharmaceutical Sciences	Subject expert	
4.	Dr. CH. Manjula Assistant Professor, Acharya Nagarjuna University	Subjet expert	<i>CH. Manjula</i>
5	Kum. J. Siva Leela Industrial Expert Quality Executive Spectra Foods and Beverages Pvt.Ltd Tadigadapa, Poranki, Vijayawada	Member	<i>J. Siva Leela</i>
7	Dr. K Anuradha Lecturer in Food technology SRR&CVR GDC, Vijayawada	Member	<i>Anuradha</i>

Babitha

AM

CH. Manjula

Dr.G.DEVALARAO
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Anuradha

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Machavaram, Vijayawada, Krishna District, AP-520 004 Department of Food Technology

Syllabi for Courses in Semester I & II under CBCS with Learning Outcomes-based Curriculum Framework (LOCF)

Title of the Course: **Food and Nutrition**

Common for FTN1328: BSc MBF

Course Code :	FTN1328	Continuous Internal Assessment (CIA)	40
No. of Lecture Hours / Week	04	Semester End Evaluation (SEE)	60
Total Number of Lecture Hours	60	Total Marks	100
Practical Component	02 Hour/Week	Exam Hours	03

Course Objectives:

This course will enable the student to:

- Understand the relationship between food, nutrition and health.
- Understand the functions of food.
- Learn about various food groups and balanced diet.
- Understand digestion, absorption and function of various nutrients and their sources.

Course Outcomes (Cos):

At the end of the course the student will be able to

CO 1: Know the Functions of food

CO 2: Acquiring knowledge about macro and micronutrients and their functions.

CO 3: Know the consequences of deficiency of taking nutrients.

CO 4: Understand the importance of non-nutrients in human nutrition

CO 5: Apply the concepts of nutrition and food and its relation to health.

[13]

Ch. Raju

Balu *M*

Dr. G. DEVALARAO
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Pharmaceutical Sciences
Vijayawada - 520 010, A.P., INDIA

CONTENTS

UNIT- I INTRODUCTION TO FOOD AND NUTRIENTS (12 lectures)

Basic terms used in study of food and nutrition, Classification of foods, Functions of food- Physiological, psychological and social, Food Groups, Food Pyramid, Concept of Balanced Diet according to ICMR.

UNIT - II MACRONUTRIENTS (12 lectures)

Classification, digestion, functions, dietary sources, RDA, clinical manifestations of deficiency and excess and factors affecting absorption of the following in the body. Carbohydrates, lipids and proteins

UNIT - III MICRONUTRIENTS (12 lectures)

Classification, functions, dietary sources, RDA, clinical manifestations of deficiency and excess of the following

- Fat soluble vitamins-A, D, E and K
- Water soluble vitamins – thiamin, riboflavin, niacin, pyridoxine, folate, vitamin B12 and vitamin C
- Minerals – calcium, iron, iodine, fluorine, copper and zinc

UNIT-IV ENERGY (12 lectures)

- Energy value of foods – Determination of gross energy value of foods using Bomb calorimeter and Oxy calorimeter. Physiological energy value of foods.
- Basal Metabolism – Factors affecting Basal Metabolic Rate, Measurement of BMR by Direct and Indirect Calorimetry. Formulas for calculating BMR.
- Computing Total Energy Requirement of the body based on Basal metabolic rate, Physical activity and Thermic effect of food. RDA and sources of energy.

UNIT-V WATER AND NON NUTRIENT CONTITUENTS OF FOOD (12 lectures)

- Water – Functions, sources, requirement and regulation of water balance, Effect of deficiency and excess – Dehydration and over hydration; Electrolyte balance.
- Non nutrient constituents of foods and their importance
 - Phytochemicals – Curcumin, Lycopene, Flavonoids
 - Antioxidants – Vitamin C, E and Carotenoids
 - Detoxifying agents – Anthocyanins, Chlorophylls
 - Beneficial effects of non- nutrient constituents of food on Health.

Baltes →

AM

CH. Hanjula

Dr. G. DEVALARAO
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PRACTICALS

1. Identification of Nutrient Rich Sources of foods
2. Learning to calculate Nutritive value of different foods
 - I. Cereals
 - II. Pulses
 - III. Fruits
 - IV. Vegetables
 - V. Fleshy foods (meat, poultry, egg, fish)
 - VI. Nuts and oilseeds
 - VII. Milk and milk products
 - VIII. Sugars
3. Planning, Prepare and Calculation of Macro nutrient recipes
 - Carbohydrates
 - Proteins
 - Fats
 - Fibre
4. Planning, Prepare and Calculation of Micronutrient recipes
 - Vitamins - Vitamin A, Vitamin C
 - Minerals – Calcium, Iron
5. Dietary Assessment through 24hr recall method.

Recommended Readings

1. Bamji MS, Krishnaswamy K, Brahmam, (2016) Textbook of Human Nutrition, 4th edition. Oxford and IBH Publishing Co. Pvt. Ltd.
2. Longvah, T., Ananthan, R., Bhaskarachary, K. and Venkaiah, K. (2017). Indian Food Composition Tables, Published by NIN
3. Raheena Begum, (2013). Textbook of Food, Nutrition and Dietetics, 3rd edition, Sterling Publishers Pvt. Ltd.
4. Ravinder Chada and Pulkit Mathur, (2015). Nutrition – A Life Cycle Approach, 1st edition, Orient Black Swan Private Limited
5. Shubhangini A. Joshi, (2002). Nutrition and Dietetics, 2nd edition, Tata McGraw-Hill Publishing Company Ltd.
6. Srilakshmi, B., (2018). Nutrition Science, 6th edition, New Age International Publishers.
7. Swaminadhan S, (2005). Advanced Text book on foods & nutrition, Vol. I&II (2nd revised and enlarged) Bappeo.
8. Vijaya Khader, (2000). Food, nutrition & health, Kalyani Publishers.

Balaji

Ch. Praveen

FOOD TECHNOLOGY
Semester I
FOOD AND NUTRITION
Model Question Paper

Time: 3 hrs.

Max. Marks: 60

PART – A

Answer any FIVE questions. Each question carries 4 Marks

(5x4 = 20 Marks)

1. Food pyramid
2. Classify carbohydrates.
3. Explain dehydration.
4. Write about Kwashiorkor.
5. What are the dietary sources and functions of zinc?
6. Define Food, Nutrition and Health. What are the visible symptoms of good health?
7. What are the functions of lipids?
8. Discuss the functions of Vitamin B1- Thiamine in the body.
9. Write about flourosis.
10. Explain the functions and sources of water

PART– B

Answer FIVE questions. Each Question carries 8 Marks

(5x8 = 40 Marks)

11. a) Discuss the functions of Proteins.

(OR)

- b) Write about the classification of Lipids.

12. a) Write about functions, deficiency and dietary sources of vitamin-A.

(OR)

- b) Write about the functions, deficiency and dietary sources of vitamin-C.

13. a) Discuss the functions, deficiency, RDA and dietary sources of Iron.

(OR)

- b) What are the functions of calcium? Give dietary sources and RDA of calcium for different age groups.

14. a) What is BMR? Discuss the factors that affect BMR.

(OR)

- b) Explain the determination of energy value of foods by Bomb calorimeter.

15. a) What are Phytochemicals? Explain their beneficial effects on Health.

(OR)

- b) Define water balance. Explain the regulation of water balance in the body.

[17]

Baltes *(M)*

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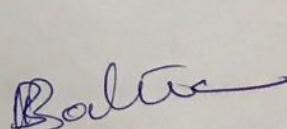
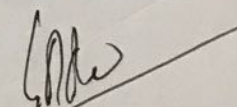
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SRR & CVR GOVERNMENT DEGREE COLLEGE (A) Vijayawada

FOOD TECHNOLOGY SYLLABUS FOR SEMESTER-I

BLUE PRINT FOR QUESTION PAPER

S.NO	TYPE OF QUESTIONS UNITS	SA	SA	SA	LA	LA	LA	Total
		4 marks	4 marks	4 marks	8 marks	8 marks	8 marks	60 marks
		Questions Given	Questions To attempt	Total marks	Questions given	Questions to attempt	Total marks	Total 60 marks
1	UNIT-1 <u>Introduction to Food and Nutrients</u>	2Q	STUDENT CHOICE	4M		STUDENT CHOICE		4M
2	UNIT-I <u>Macronutrients</u>	3Q		8M	2Q		8M	16M
3	UNIT-III <u>Micronutrients</u>	3Q		4M	4Q		16M	20M
4	UNIT-IV <u>Energy</u>				2Q		8M	8M
5	UNIT-V <u>Water and non nutrient constituents of food</u>	2Q		4M	2Q		8M	12M
	Total questions to attempt	5Q			20M	5Q	40M	60M



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SRR & CVR GOVT DEGREE COLLEGE
FOOD TECHNOLOGY
SEMESTER – 1
QUESTION BANK

Short Answer Questions

Unit – 1

1. Malnutrition
2. Balanced Diet
3. Food Pyramid

Unit – 2

1. Functions of Carbohydrates
2. Essential and non essential amino acids
3. Explain the clinical manifestations of deficiency of proteins in the diet
4. Functions of proteins
5. Essential fatty acids
6. Functions of lipids

Unit – 3

1. Write the sources, requirement and deficiency of thiamine
2. Write in brief about fluorine
3. Explain about the role of iodine in the diet

Unit – 4

1. How to you estimate the energy content of a food stuff
2. What is BMR and explain the factors that affect BMR

Unit – 5

1. Explain the functions of water
2. Role of phytochemicals in the body

Essay Questions

Unit - 1

1. Basic five food groups
2. Write the functions of food in detail

Unit – 2

1. Classify carbohydrates and write the sources of carbohydrates
2. Classify proteins
3. Classify lipids

Unit – 3

1. Write the functions, sources and deficiency of Fat soluble vitamins
2. Explain the functions, sources and deficiency of Vitamin C
3. Write the functions, sources, deficiency and RDA for calcium

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4. Explain the functions, sources, deficiency and RDA for iron

Unit - 4

1. Explain the energy requirement of an individual

Unit - 5

1. Explain the water balance in the body and what happens if water balance is not maintained
2. Write the importance of non nutrient components of food in the body

Balaw (M)

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SRR & CVR Government Degree College (Autonomous): VIJAYAWADA

Department of Food Technology

Title of the Course: **Fundamentals of Food Technology- Syllabus for AY 2021-22**

Common for 309: BSc MBF

Course Code :	FTN2328	Continuous Internal Assessment (CIA)	40
No. of Lecture Hours / Week	04	Semester End Evaluation (SEE)	60
Total Number of Lecture Hours	60	Total Marks	100
Practical Component	02 Hour/Week	Exam Hours	03

Course Objectives:

This course will enable the student to:

- understand the history and evolution of food processing.
- study the structure, composition, nutritional quality and post harvest changes of various plant foods.
- study the structure and composition of various animal foods.

Outcomes: At the end of the course the student will be able to

- Understand the evolution and current trends of food processing
- Apply knowledge in describing the structure and composition of various foods
- Understand physical and chemical changes that takes place in foods
- Have knowledge on microbial spoilage of food and safe food handling practices.
- Get an overview of some of the methods of processing of plant and animal foods

Balu *MD*

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CONTENTS

UNIT - 1 Introduction	(4 lectures)
Introduction to food technology, Scope and current trends in food technology.	
UNIT - II Compositional, Nutritional and Technological aspects of Plant foods I.	
Cereals and Millets	(8 lectures)
Structure and nutrient composition of cereals, gelatinization, gluten formation	
Pulses	(6 lectures)
Structure and nutrient composition of pulses, toxic constituents in pulses.	
Nuts and oil seeds	(6 lectures)
Nutritive value, types and functions of fats and oils	
UNIT - III Compositional, Nutritional and Technological aspects of Plant foods II.	
Fruits and Vegetables	(6 lectures)
Classification of fruits and vegetables, nutritive composition, enzymatic browning, names and sources of pigments, Dietary fibre. Post harvest changes in fruits and vegetables.	
Spices and Condiments – Nutritive value and functions	(4 lectures)
UNIT - IV Compositional, Nutritional and Technological aspects of Animal foods	
Flesh Foods - Meat, Poultry, Fish	(12 lectures)
Meat - Composition of meat, marbling, post-mortem changes in meat- rigor mortis, ageing of meat.	
Poultry - Structure of hen's egg, composition and nutritive value, characteristics of fresh egg, deterioration of egg quality.	
Fish - Classification of fish (fresh water and marine), composition and nutritive value of fish, characteristics of fresh fish, spoilage of fish- microbiological, physiological, biochemical.	
Milk and Milk Products	(6 lectures)
Nutritive composition of milk, An overview of types of market milk and milk products.	
Unit - V Food Microbiology	(8 lectures)
<ul style="list-style-type: none"> • Food Spoilage – Microorganisms causing spoilage – Factors responsible for spoilage and changes brought about in food by microorganisms • Microorganisms that bring about useful changes in food. • Microbiology of different foods – Contamination and spoilage of milk, egg, meat, fish, vegetables and fruits • Food Sanitation and Hygiene – Safe food practices during preparation, storage and serving of food. 	

PRACTICALS

1. Study enzymatic browning and its prevention
2. Estimation of Gluten content of wheat flour with other flours
3. Study the Gelatinization behavior of starches
4. Effect of cooking on whole and split pulses and legumes
5. Determination of smoking point of oils

Recommended Readings

1. Bawa. A.S, O.P Chauhan etal. Food Science. New India Publishing agency, 2013
2. Roday,S. Food Science, Oxford publication, 2011.
3. B. Srilakshmi, Food science, New Age Publishers,2002
4. Meyer, Food Chemistry, New Age,2004 5. De Sukumar., Outlines of Dairy Technology, Oxford University Press, 2007

Bates (NA)

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FOOD TECHNOLOGY
Semester II
FUNDAMENTALS OF FOOD TECHNOLOGY

Model Question Paper

Time: 3 hrs.

Max. Marks: 60

PART – A

Answer any FIVE questions. Each question carries 4 Marks (5x4 = 20 Marks)

1. Discuss the advantages and disadvantages of parboiling of rice
2. Explain gelatinization
3. Explain the functions of fats
4. Explain the post harvest changes in fruits and vegetables
5. Write the composition of pulses
6. Dietary fibre
7. What is rigormortis
8. Write the composition of milk
9. Explain the safe food practices while preparing food
10. How to detect the deterioration of egg

PART- B

Answer FIVE questions. Each Question carries 8 Marks (5x8 = 40 Marks)

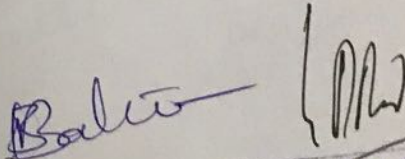
11. a) Write the current trends of food processing technology
(OR)
b) Write the structure and composition of cereal grain.
16. a) Explain toxic contents in pulses and its elimination.
(OR)
b) Explain the nutritive value and types nuts and oilseeds available and their products.
17. a) Explain enzymatic browning in fruits and vegetables.
(OR)
b) Write the composition of meat and explain marbling.
18. a) Explain the structure and composition of egg.
(OR)
b) Explain the nutritive composition of milk.
19. a) Explain the factors responsible for spoilage of food.
(OR)
b) Explain the role of useful microorganisms in food.

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FOOD TECHNOLOGY SYLLABUS FOR SEMESTER- II

BLUE PRINT FOR QUESTION PAPER

S.NO	TYPE OF QUESTIONS	SA 4 marks	SA 4 marks	SA 4 marks	LA 8 Marks	LA 8 Marks	LA 8 marks	Total 60 marks
	UNITS	Questions Given	Questions to attempt	Total marks	Questions Given	Questions to attempt	Total marks	Total 60 marks
1	UNIT-I Introduction				1Q		8M	8M
2	UNIT-I Compositional, Nutritional and Technological Aspects of Plant Foods – I	4Q	STUDENT CHOICE	8M	3Q	STUDENT CHOICE	8M	16M
3	UNIT-III Compositional, Nutritional and Technological Aspects of Plant Foods – II	2Q		4M	1Q		8M	12M
4	UNIT-IV Compositional, Nutritional and Technological Aspects of Animal Foods	3Q		4M	3Q		8M	12M
5	UNIT-V Food microbiology	1Q		4M	2Q		8M	12M
	Total questions to attempt	5Q		20M	5Q		40M	60M


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FOOD TECHNOLOGY
Semester II
FUNDAMENTALS OF FOOD TECHNOLOGY
Question Bank
Short Answer Questions

Unit - 1

1. Write the current trends in brief in food processing industry.

Unit - 2

1. Discuss the advantages and disadvantages of parboiling of rice
2. Explain gelatinization
3. Write the composition of pulses
4. Write the functions of fats

Unit - 3

1. Post harvest changes in fruits and vegetables
2. Dietary fibre

Unit - 4

1. What is rigormortis
2. How to detect the deterioration of egg
3. Write the composition of milk

Unit - 5

1. Explain the safe food practices while preparing food

Essay Questions

Unit - 1

1. Write the current trends in food processing technology

Unit - 2

1. Write the structure and composition of cereal grain.
2. Explain toxic contents in pulses and its elimination.
3. Explain the nutritive composition of nuts and oilseeds and their types

Unit - 3

1. Classify fruits and explain enzymatic browning in fruits and vegetables.

Unit - 4

1. Write the composition of meat and explain marbling.
2. Explain the structure and composition of egg.
3. Explain the nutritive composition of meat

Unit - 5

1. Explain the factors responsible for spoilage of food.
2. Explain the role of useful microorganisms in food

Baltes

(M)

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SRR & CVR Government Degree College (Autonomous): VIJAYAWADA

Department of Food Technology

Title of the Course- **Food Preservation Technology - Syllabus for AY 2021-22**

Common for 309; BSc MBF

Course Code :	FTN 3328	Continuous Internal Assessment (CIA)	40
No. of Lecture Hours / Week	04	Semester End Evaluation (SEE)	60
Total Number of Lecture Hours	60	Total Marks	100
Practical Component	02 Hour/Week	Exam Hours	03

Objectives: This course will enable the student to:

- study the importance of microorganisms in food preservation
- study the role of preservatives in food preservation
- introduce the basics of various food processing and preservation technologies.

Outcomes: At the end of the course the students will be able to

- Know the role of microorganisms in food preservation
- Understand the concept of different processing and preservation technologies
- Use specific preservation techniques for specific food preservation.
- Apply these preservative methods to avoid surplus wastage of seasonal foods.
- Apply various preservation methods in food industries.

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[27]

A. Hanjula

CONTENTS

Unit 1: Food Preservation by Preservatives

(15 lectures)

Definition, Importance of Preservation, Principles of Food Preservation, Food spoilage – types – physical, enzymatic, chemical and biological spoilage. Food Additives – Definition, types, Class I and Class II preservatives. Preservation by Fermentation.

Unit II: Food Preservation by Low temperature

(10 lectures)

Freezing and Refrigeration: Introduction to refrigeration, cold storage and freezing, definition, principle of freezing, freezing curve, changes occurring during freezing, types of freezing i.e. slow freezing, quick freezing, dehydro freezing, introduction to thawing, changes during thawing and its effect on food.

Unit III: Food Preservation by high temperature

(10 lectures)

Thermal Processing- Commercial heat preservation methods: Sterilization, Pasteurization – definition, types, Canning – Steps involved, spoilage encountered in canned foods, types of containers used for canning and Blanching.

Unit IV: Food Preservation by Moisture control

(15 lectures)

Drying and Dehydration - Definition, drying as a means of preservation, methods of drying, merits and demerits, differences between sun drying and dehydration (i.e. mechanical drying), heat and mass transfer, factors affecting rate of drying, normal drying curve, names of types of driers used in the food industry. Concentration – Principles and types of concentrated foods.

Unit V: Food Preservation by Irradiation

(10 lectures)

Introduction, units of radiation, kinds of ionizing radiations used in food irradiation, mechanism of action, uses of radiation processing in food industry, concept of cold sterilization.

[28]

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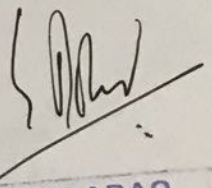
PRACTICALS

1. To perform blanching of different plant foods.
2. Concept of shelf life of different foods
3. To study the concept of Asepsis and sterilization
4. Determination of pH of different foods using pH meter.
5. Study quality characteristics of foods preserved by drying/dehydration/ freezing.
6. To perform pasteurization of fluids using different methods.

Recommended Readings

1. B. Srilakshmi, Food science, New Age Publishers, 2002
2. Meyer, Food Chemistry, New Age, 2004
3. Bawa. A.S, O.P Chauhan etal. Food Science. New India Publishing agency, 2013
4. Frazier WC and Westhoff DC, Food Microbiology, TMH Publication, New Delhi, 2004
5. Manay NS and Shadaksharaswamy M, Food-Facts and Principles, New Age International (P) Ltd. Publishers, New Delhi, 1987

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FOOD TECHNOLOGY
Semester III
FOOD PRESERVATION TECHNOLOGY

Model Question Paper

Time: 3 hrs.

Max. Marks: 60

PART – A

Answer any FIVE questions. Each question carries 4 Marks

(5x4 = 20 Marks)

1. Write about the importance and principles of food preservation
2. Write the changes occurring during freezing
3. Explain blanching
4. What are the types of spoilage seen in canned foods
5. Give a note on fermentation
6. Write the difference between freezing and refrigeration
7. Explain about chemical preservatives
8. Write the merits and demerits of drying
9. Write a note on food spoilage
10. Explain freeze drying

PART– B

Answer FIVE questions. Each Question carries 8 Marks

(5x8 = 40 Marks)

- 11 a) Write the importance of bacteria, yeast, moulds in food preservation.

(OR)

- b) Define food additives and explain various types of additives.

- 12 a) Explain different types of freezing

(OR)

- b) Write the changes during thawing and its effect on food

- 13 a) Explain the steps involved in canning of food.

(OR)

- b) What is pasteurization and explain types of pasteurization

- 14 a) Explain preservation by drying.

(OR)

- b) Explain concentration of foods.

- 15 a) Explain the uses of radiation processing in food industry.

(OR)

- b) Explain kinds of ionizing radiations used in food industry and mechanism of action

[30]

Baleu (M)

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FOOD TECHNOLOGY SYLLABUS FOR SEMESTER- III

BLUE PRINT FOR QUESTION PAPER

S.NO	TYPE OF QUESTIONS	SA 4 marks	SA 4 marks	SA 4 marks	LA 8 Marks	LA 8 Marks	LA 8 marks	Total 60 marks	
	UNITS	Questions Given	Questions to attempt	Total marks	Questions Given	Questions to attempt	Total marks	Total 60 marks	
1	UNIT-I Food Preservation by Preservatives	4Q	STUDENT CHOICE	8M	2Q		8M	16M	
2	UNIT - II Food Preservation by low temperature	2Q		4M	2Q	STUDENT CHOICE	8M	12M	
3	UNIT-III Food Preservation by High Temperature	2Q		4M	2Q		8M	12M	
4	UNIT-IV Food Preservation by Moisture Control	2Q		4M	2Q		8M	12M	
5	UNIT-V Food Preservation by Irradiation					2Q		8M	8M
	Total questions to attempt	5Q			20M	5Q		40M	60M

Baltes (M)

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FOOD TECHNOLOGY
Semester III
FOOD PRESERVATION TECHNOLOGY

Question Bank

Short Answer Questions

Unit - 1

1. Write about the importance and principles of food preservation
2. Give a note on fermentation
3. Explain about chemical preservatives
4. Write a note on food spoilage

Unit - 2

1. Write the changes occurring during freezing
2. Write the difference between freezing and refrigeration

Unit - 3

1. Explain blanching
2. What are the types of spoilage seen in canned foods

Unit - 4

1. Write the merits and demerits of drying
2. Explain freeze drying

Essay Questions

Unit - 1

1. Write the importance of bacteria, yeast, moulds in food preservation.
2. Define food additives and explain various types of additives.

Unit - 2

1. Explain different types of freezing
2. Write the changes during thawing and its effect on food

Unit - 3

1. Explain the steps involved in canning of food.
2. What is pasteurization and explain types of pasteurization.

Unit - 4

1. Explain preservation by drying.
2. Explain concentration of foods.

Unit - 5

1. Explain the uses of radiation processing in food industry.
2. Explain kinds of ionizing radiations used in food industry and mechanism of action

SRR & CVR Government Degree College (Autonomous): VIJAYAWADA
Department of Food Technology

Title of the Course: **Technology of Plant Foods- Syllabus for AY 2021-22**

Common for 309: BSc MBF

Course Code :	FTN 4328	Continuous Internal Assessment (CIA)	40
No. of Lecture Hours / Week	04	Semester End Evaluation (SEE)	60
Total Number of Lecture Hours	60	Total Marks	100
Practical Component	02 Hour/Week	Exam Hours	03

Objectives: This course will enable the student to

- teach technology of milling of various cereals
- impart technical knowledge of pulses and oilseeds refining
- teach processing of fruits and beverages.

Outcomes: At the end of the course the students will be able to

- Learn about machinery involved in processing of various food stuffs.
- Understand processing methods for various plant foods.
- Comprehend various changes that occur during food processing and storage.
- Understands several applications concern with food processing from raw material stage to the end product stage.
- With the help of new and novel technologies the students would be able to develop new and better products.

CONTENTS

(12 lectures)

UNIT 1: Technology of cereals and millets

Rice Processing – Physicochemical properties, milling (mechanical & solvent extraction), parboiling, ageing of rice, by products.

Wheat Processing --Types, milling, flour grade, flour treatments (bleaching, maturing) and By-products.

Corn – Milling (wet & dry).

Processing of Malt.

(12 lectures)

UNIT 2: Technology of pulses

Processing of pulses - soaking, germination, fermentation, decortication and cooking.

Milling of pulses - Dry milling, Wet milling.

(12 lectures)

UNIT 3: Technology of oilseeds

Processing of nuts and oilseeds - Extraction of oils and refining, Rancidity, Defatted flour, protein concentrates and isolates.

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UNIT 4: Fruits processing

(12 lectures)

Principles of preservation of fruits, Processing of fruits - jams, jellies, squashes, cordials and marmalades.
Effect of processing on pigments and nutrients

UNIT 5: BEVERAGES

(12 lectures)

Classification of Beverages, Alcoholic and Non Alcoholic, Composition and processing of Beer, Wine, Tea, Coffee and Cocoa.

PRACTICALS

1. Estimation of starch
2. The peroxide value of oils
3. Determination of pigments
4. Test the pectin strength of different fruits and vegetables
5. To prepare a fruit squash
6. To prepare jam

Recommended Readings:

1. Kent, N.L. 2003. Technology of Cereal, 5th Ed. Pergamon Press.
2. Chakraverty. 1988. Post Harvest Technology of Cereals, Pulses and Oilseeds, revised Ed., Oxford & IBH Publishing Co. Pvt Ltd.
3. Marshall, Rice Science and Technology. 1994. Wadsworth Ed., Marcel Dekker, New York.
4. Manay, S. and Sharaswamy, M. 1987. Food Facts and Principles. Wiley Eastern Limited.

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FOOD TECHNOLOGY
Semester IV
TECHNOLOGY OF PLANT FOODS

Model Question Paper

Time: 3 hrs.

Max. Marks: 60

PART – A

Answer any FIVE questions. Each question carries 4 Marks

(5x4 = 20 Marks)

1. Explain the steps involved in processing of malt
2. Discuss the advantages and disadvantages of parboiling of rice
3. Write any two byproducts of wheat processing
4. List some toxic contents in pulses and the methods employed for eliminating
5. Explain rancidity of fats
6. Explain the effect of processing on pigments
7. Explain the role of pectin in the preparation of jams and jellies
8. Classify beverages
9. Write about the nutritive value of coco.
10. Write the about the composition of coffee.

PART- B

Answer FIVE questions. Each Question carries 8 Marks

(5x8 = 40 Marks)

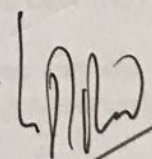
- 16 a) Write the commercial milling process of rice.
(OR)
b) Write in detail wet and dry milling of maize.
- 17 a) Explain the processing of wheat
(OR)
b) Explain the processing of redgram dhal
- 18 a) Explain the extraction of protein concentrates from nuts and oilseeds
(or)
b) Write the extraction of oil and its refining
- 19 a) Write the steps involved in the preparation of jam.
(OR)
b) Write the steps involved in preparation of marmalade
- 20 a) Explain the processing of any one alcoholic beverage.
(OR)
b) Explain the processing of tea.

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FOOD TECHNOLOGY SYLLABUS FOR SEMESTER- IV

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S.N O	TYPE OF QUESTIONS	SA 4 marks	SA 4 marks	SA 4 marks	LA 8 Marks	LA 8 Marks	LA 8 Marks	Total 60 marks
	UNITS	Questions Given	Questions to attempt	Total marks	Questions Given	Questions to attempt	Total Marks	Total 60 marks
1	UNIT-I Technology of Cereals	4Q	STUDENT CHOICE	8M	2Q		8M	16M
2	UNIT - II Technology of Pulses	2Q		4M	2Q	STUDENT CHOICE	8M	12M
3	UNIT-III Technology of Oil seeds	2Q		4M	2Q		8M	12M
4	UNIT-IV Fruit Processing	2Q		4M	2Q		8M	12M
5	UNIT-V Beverages				2Q		8M	8M
	Total questions to attempt	5Q			20M	5Q		40M

Baltes 

SRR & CVR Government Degree College (Autonomous): VIJAYAWADA
Department of Food Technology

Title of the Course: **Technology of Animal Foods - Syllabus for AY 2021-22**

Common for 309: BSc MBF

Course Code :	FTN 5328	Continuous Internal Assessment (CIA)	40
No. of Lecture Hours / Week	04	Semester End Evaluation (SEE)	60
Total Number of Lecture Hours	60	Total Marks	100
Practical Component	02 Hour/Week	Exam Hours	03

Objectives: This course will enable the student to

- understand need and importance of livestock, egg and poultry industry
- study processing and preservation of animal foods.
- understand technology behind preparation of various animal food products and byproduct utilization.

Course Outcomes: At the end of the course the student will be able to

- know the handling of animal foods.
- Understand about the various processing methods of livestock.
- Understand about the various processing methods of egg, milk and fish.
- handle different preservation techniques of animal foods to extent the shelf life.
- identify and develop number of by-products from animal food

CONTENTS

(6 lectures)

UNIT 1: Milk

Physical properties, Processing of milk, sterilization, pasteurization, homogenization and centrifugation.
Preservation of milk.

(6 lectures)

UNIT 2: Processing of milk by products

Processing of cheese, paneer, whey protein and ice creams, butter, ghee, evaporated milk, condensed milk, toned milk, dry milk and role of enzymes in milk products and fermented milk products.

(12 Lectures)

UNIT 3: Meat

Slaughter process - Slaughter, inspection and grading, Antemortem examination of meat animals, slaughter of animals, dressing of carcasses, post-mortem examination of meat, meat curing. Sausages-processing. Methods to increase the tenderness of meat. Processing of meat.

[37]

Balu *MM*

Ch. Ranjita

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UNIT 4: Egg/Poultry

(12 Lectures)

Preservation of eggs. Quality identification of shell eggs. Factors affecting egg quality and measures of egg quality. Egg processing, Processing of egg powders. Processing and preservation of poultry

UNIT 5: Seafood

(12 Lectures)

Fish - Selection, handling and cleaning, Preservation and Processing, extraction of fish protein concentrates.
Prawns – Processing of prawns
Crabs – Processing of crabs
Fish liver oils

PRACTICALS

1. To perform platform tests in milk. (Acidity, COB, MBRT, specific gravity, SNF)
2. To estimate milk fat by Gerber method.
3. Cut out examination of canned fish.(Sardine, Mackerel, Tuna)
4. Estimation of protein content of meat
5. Estimation of quality of egg- half index, egg white drainage calculation.

Recommended Readings

1. De Sukumar, Outlines of Dairy Technology, Oxford University Press, Oxford. 2007.
2. Hall GM, Fish Processing Technology, VCH Publishers Inc., NY, 1992
3. Sen DP, Advances in Fish Processing Technology, Allied Publishers Pvt.Limited 2005
4. Shahidi F and Botta JR, Seafoods: Chemistry, Processing, Technology and Quality, Blackie Academic & Professional, London, 1994
5. Lawrie R A, Lawrie's Meat Science, 5th Ed, Woodhead Publisher, England, 1998
6. Parkhurst & Mountney, Poultry Meat and Egg Production, CBS Publication, New Delhi, 1997
7. Pearson & Gillet Processed Meats, 3 Ed, CBS Publication, New Delhi, 1997
8. Shai Barbut, Poultry Products Processing, CRC Press 2005
9. Stadelman WJ, Owen J Cotterill Egg Science and Technology, 4th Ed. CBS Publication New Delhi, 2002

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A. Hanjula

FOOD TECHNOLOGY
Semester IV
TECHNOLOGY OF ANIMAL FOODS

Model Question Paper

Max. Marks: 60

Time: 3 hrs.

PART - A

Answer any FIVE questions. Each question carries 4 Marks

(5x4 = 20 Marks)

1. Write the processing of cheese
2. Explain the changes during storage of eggs.
3. Explain the post mortem changes and curing of meat.
4. Write about the preservation of poultry
5. Write about the fish protein concentrates.
6. Explain the physical properties of milk
7. How to identify the quality characters of shell egg
8. Methods in brief to obtain oil from fish
9. Role of enzymes in milk products
10. Processing of crabs

PART- B

Answer FIVE questions. Each Question carries 8 Marks

(5x8 = 40 Marks)

1. (a) Explain the processing of milk in detail
(or)
(b) List out the fermented products and explain them in detail
2. (a) Write about the processing of by products of milk.
(or)
(b) Write sterilization of milk
3. (a) Write about the processing of meat.
(or)
(b) Write about the slaughter and tenderization of meat and meat quality
4. (a) Explain the processing steps of egg
(or)
(b) Explain the processing of poultry
5. (a) Explain the processing of fish.
(or)
(b) Write about Fish Preservation techniques

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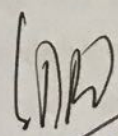
CH. Hanjula .

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FOOD TECHNOLOGY SYLLABUS FOR SEMESTER- IV

BLUE PRINT FOR QUESTION PAPER

S.NO	TYPE OF QUESTIONS UNITS	SA 4 marks	SA 4 marks	SA 4 marks	LA 8 Marks	LA 8 Marks	LA 8 Marks	Total 60 marks
		Questions Given	Questions to attempt	Total Marks	Questions Given	Questions to attempt	Total Marks	Total 60 marks
1	UNIT-1 Milk	4Q	STUDENT CHOICE	8M	2Q		8M	16M
2	UNIT - II Processing of milk byproducts	2Q		4M	2Q	STUDENT CHOICE	8M	12M
3	UNIT-III Meat	2Q		4M	2Q		8M	12M
4	UNIT-IV Egg / Poultry	2Q		4M	2Q		8M	12M
5	UNIT-V Sea food				2Q		8M	8M
	Total questions to attempt	5Q			20M	5Q		40M

Baluru 

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Department of Food Technology

Student Evaluation Policy and Procedure

1. EVALUATION POLICY ANDPROCEDURE:

Students are evaluated for 100 marks in each course. These 100 Marks are spitted into Continuous Internal Assessment (CIA) and Semester End Evaluation (SEE). 40 marks are allocated to CIA and 60 marks for SEE.

CONTINUOUS INTERNAL ASSESSMENT (CIA) FOR 40MARKS:

Out of a maximum of 100 marks in each theory paper, 40 marks shall normally be allotted for continuous internal assessment. The Assessment shall be made by the teacher handling that paper in the manner prescribed here under. Where the same paper is handled by two or more teachers, the Head of the Department shall decide upon the teacher, who shall make the internal assessment or fix the proportion of the marks among the teachers for the internal assessment of the students.

Out of these 40 marks, 10 marks are allotted to Continuous Internal Exams. Two Continuous Internal exams are conducted for 20 marks in each exam and the average of these two exams scale down to 10 marks, shall be deemed as the marks obtained by the student in Continuous Internal Exams.

Out of these 40 marks, 10 marks are allotted to Assignments. Two assignments are given to the students during the course. 5 marks are allotted for each assignment and total of these two assignments are included in Continuous Internal Assessment.

Out of these 40 marks, 10 marks are allotted to Project Work/ Group Discussion. Students will be assigned student study project for 10 Marks under CIA. Then the student has to submit a project report under the supervision of Faculty Member. These 10 marks may also be assigned to group discussion also. Student will be evaluated here based on his/her way of expression, conceptual strength, attitude, listening -understanding skills and level of participation in the discussion.

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Out of these 40 marks, 5 marks are allotted to Student Seminar and 5 marks for Viva-Voce. Each Student may give student seminar to the peer team. This student seminar will carry 5 marks. Here feedback will be collected on 5 points scale from the participants in the student seminar [or] Viva- Voce will be conducted by the concerned subject faculty for 5marks.

The summarized continuous internal assessment is:

1. Average of Two Continuous Internal exams	-	10 Marks
2. Total of Two Assignments	-	10 Marks
3. Project Work/Group Discussion	-	10 Marks
4. Student Seminar	-	5 Marks
5. Feedback/Viva-Voce	-	5 Marks

1.2 CIA IN PROJECT WORK AND COMPREHENSIVE SEMINAR:

Each student has to conduct Industry/Laboratory oriented Research work in his/her interested area and has to prepare Project Report by using either primary data or secondary data. This is different from student study project. It is research oriented Industrial/laboratory project conducted under the supervision of Faculty Member of the department. The students have to submit the project work report to the supervision of Faculty at the end of VI Semester End Evaluation process. After submitting project work report, the students have to give Comprehensive Seminar by explaining their research in the industry/Lab. Project Work carries 40 Marks and Comprehensive Seminar carries 10 Marks.

Every student is required, to take every test for Continuous internal Assessment, unless he/she is permitted by the Principal to write at a later date on valid reasons, before the test is conducted. In case where permission is not obtained, the decision of the Principal to hold or not to hold separate examination for such candidate is final.

Permission to write Internal Assessment test at the end of corresponding Semester – end exams may be given on medical grounds and other valid grounds. For such candidates, test/s is/are conducted by the faculty member concerned in consultation with the Head of the Department with a different question paper.

The Student has to get minimum 40 per cent (16 Marks) marks in the Continuous Internal Assessment to complete the Course Paper.

Suggestive Question Paper Pattern for CIA & SEE (Based on Blooms Taxonomy):

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(M)

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Though the faculty concerned is empowered to adopt their own pattern for question paper, a general and suggestive model for question paper is given below based on Blooms Taxonomy.

S. No	Learning Objective	Percentage of Marks
1	Memory based (Remember)	10
2	Understand (Comprehension)	10
3	Application	15
4	Analysis	15
5	Evaluation	25
6	Creativity	25
Total		100

Active verbs developed based on Bloom's Taxonomy

Knowledge	Understand	Apply	Analyze	Evaluate	Create
define	explain	solve	analyze	reframe	design
identify	describe	apply	compare	criticize	compose
describe	interpret	illustrate	classify	evaluate	create
label	paraphrase	modify	contrast	order	plan
list	summarize	use	distinguish	appraise	combine
name	classify	calculate	infer	judge	formulate
state	compare	change	separate	support	invent
match	differentiate	choose	explain	compare	hypothesize
recognize	discuss	demonstrate	select	decide	substitute
select	distinguish	discover	categorize	discriminate	write
examine	extend	experiment	connect	recommend	compile
locate	predict	relate	differentiate	summarize	construct
memorize	associate	show	discriminate	assess	develop
quote	contrast	sketch	divide	choose	generalize
recall	convert	complete	order	convince	integrate
reproduce	demonstrate	construct	point out	defend	modify
tabulate	estimate	dramatize	prioritize	estimate	organize
tell	express	interpret	subdivide	find errors	prepare
copy	Identify	Manipulate	survey	grade	produce
discover	indicate	Paint	advertise	measure	rearrange
duplicate	Infer	Prepare	appraise	predict	rewrite
enumerate	relate	produce	Break down	rank	role-play

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[Signature]

A. Raju

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2. SEMESTER END EVALUATION (SEE):

The maximum marks for Semester End Examinations shall be normally 60 and the duration of the examination shall be 3 hours.

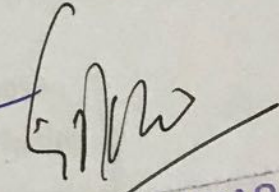
Semester End Examinations shall be conducted in theory and practical paper at the end of every semester, unless otherwise stated, I, II, III, IV, V & VI Semesters.

The date of Semester End Examinations is fixed by the principal in consultation with the Head of the Departments and the Controller of Examinations.

For Semester End Examinations, the question papers of part-A and B shall be set by External Paper-setter and the answer scripts shall be valued by the External Examiner.

Department of Pharmaceutical Sciences

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Department of Food Technology

ADD ON COURSE - DIETITICS

1. Role of Dietician
2. **Fevers:** Metabolic changes, Dietary guidelines for Typhoid, Tuberculosis.
3. **Obesity and under weight:** causes, complications and health effects, dietary treatment and other recommendations.
4. **Gastro Intestinal Diseases:** Gastritis, Peptic ulcer, diarrhoea – Etiology, symptoms, clinical findings, treatment, dietary principles and modifications.
5. **Liver diseases:** Etiology, symptoms, dietary treatment in Hepatitis, cirrhosis
6. **Cardio-Vascular diseases:** Etiology, Causes, symptoms, Dietary Modification
7. **Diabetes Mellitus:** Classification, Causes, Metabolic changes, diabetic complications, Dietary Treatment.
8. **Diet during pregnancy and lactation**

PRACTICALS

Planning diets for various conditions

Balaji
5/10

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Department of Food Technology

Action Plan for A. Y. 2021- 2022 : : Semesters I / III

S No	Month	Week	Activity proposed by the Lecturer	If Conducted or Not	Remarks
1	November 2021	1st Week	Name: Dr. K. Anuradha Activity: Guest lecture		
		2nd Week	Name: : Dr. K. Anuradha Activity: Quiz competition on the occasion of World Diabetic Day		
		4th Week	Name: : Sd V Tahaseen & Dr. K. Anuradha Activity: Food Adulteration certificate course		
2	December 2021	1st Week	Name: : Sd V Tahaseen & Dr. K. Anuradha Activity: Preparation of jams and squashes		
		4 th Week	Name: Sd V Tahaseen & Dr. K. Anuradha Activity: Field trip		

3	January 2022	1st Week	Name: Sd V Tahaseen & Dr. K. Anuradha Activity : Survey on dietary habits		
		2nd Week	Name: Dr. K. Anuradha Activity : Guest lecture		
4	February 2022	1st Week	Name: Sd V Tahaseen & Dr. K. Anuradha Activity: Webinar on food safety		
		3 rd Week	Name: Dr. K. Anuradha Activity: Workshop on Bakery Technology		
		4 th Week	Name: Sd V Tahaseen & Dr. K. Anuradha Activity: World Science Day (February- 28)		
5	March 2022	1st Week	Name: Dr. K. Anuradha Activity: Group discussion		

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3 rd Week	Name: Sd V Tahaseen & Dr. K. Anuradha Activity: Field visit		
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1. As per the Resolutions of the Staff Council, all Lecturers are directed to comply the Action Plan and attend all the procedures through the Department and the Office.

If there is any deviation in any date schedule, please inform before hand to the H O D.

Please prepare a Report of the Activity completed with description, Photos, Signatures of the Staff and Students Attended, both in Soft and Hard Copies, and furnish to the H O D.

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