

B.Sc. Computer Science		
Program	Sem/Paper	Syllabus not to be considered for examination
B.Sc I	All Semester	All Paper Last Unit
B.Sc II	All Semester	All Paper Last Unit
B.Sc III	All Semester	All Paper Last Unit

B.Sc. Computer Science (Entire)		
Program	Sem/Paper	Syllabus not to be considered for examination
B.Sc I	All Semester	All Paper Last Unit
B.Sc II	All Semester	All Paper Last Unit
B.Sc III	All Semester	All Paper Last Unit

B.Sc. Inoformation Technology (Entire)		
Program	Sem/Paper	Syllabus not to be considered for examination
B.Sc I	All Semester	All Paper Last Unit
B.Sc II	All Semester	All Paper Last Unit
B.Sc III	All Semester	All Paper Last Unit

M.Sc. Computer Science		
Program	Sem/Paper	Syllabus not to be considered for examination
M. Sc. I	All Semester	All Paper Last Unit
M. Sc. II	All Semester	All Paper Last Unit

M. C. A. Computer Science		
Program	Sem/Paper	Syllabus not to be considered for examination
M.C.A. I	All Semester	All Paper Last Unit
M.C.A. II	All Semester	All Paper Last Unit
M.C.A. III	All Semester	All Paper Last Unit

Food Science & Quality Control		
Program	Sem/Paper	Syllabus not to be considered for examination
B.Sc I	Paper No. I Food Chemistry I	Unit 4 Protein <ul style="list-style-type: none"> • Protein classification & structure • Nature of food protein (plants& animal Protein) • Properties of protein(Electrophoresis, Denaturation) • Functional properties (solubility, gelation, emulsification, foaming.
	Paper No.II Food Microbiology I	Unit 4: Microbial food spoilage <ul style="list-style-type: none"> • Source of microorganisms in food • Important food spoilage microorganisms. • Spoilage of specific food groups-milk & dairy products, meat, poultry & sea food, • Cereal & cereal products, fruits, vegetable & canned products.
B.Sc II	Paper No. V Food Preservation	Unit 4. Food Preservation by Irradiation <ul style="list-style-type: none"> • Introduction & units of irradiation • Mechanism of action of radiation • Radiation process • Effect of Radiation on food • Effect of Radiation on microorgaisms
	Paper No. VI Fruits & Vegetable Processing	Unit No.4 Fruit & Vegetable Beverages <ul style="list-style-type: none"> • Types of Beverages • Preparation of squashes, syrups, cordials, RTS Preservation
B.Sc. III	Paper No.IX Fermentation Technology	Unit4 Down Stream processing <p>4.1 Introduction to downstream processes 4.2 Criteria of selection of recovery process 4.3 Removal of Microbial cells – a) Foam Separation b) Precipitation 4.4 Filtration & Centrifugation 4.5 Cell Distrupction – a) Physicomechanicalb) Chemical method 4.6 Extraction & Drying</p>
	Paper No X Dairy Technology	Unit 4 Byproducts Utilization <p>4.1 Introduction 4.2 Classification & Composition of byproduct 4.3 Principles & methods of Utilization – Whey utilization & whey based Beverages like lassi & buttermilk.</p>

	Paper No XI Bakery & Confectionary Technology	Unit 4 Processing Confectionary products 4.1 Chocolate processing – Introduction, Types, methods of manufacture, its use, storage & general defects. 4.2 Hardboiled candy – Raw materials, method, defects & storage 4.3 Chewingum – Raw material, method, packaging 4.4 Indian Confectionary □ Burfi, Pedha preparation
	Paper No XII Food Quality Control & Waste Management	Unit 4 Waste Management and Effluent treatment of Food industry 4.1 Introduction to Waste Management 4.2 Waste disposal – Types of Waste 4.3 Method of Waste disposal – Land filling, anaerobic, recycling digestion Measurement of BOD & COD 4.4 Effluent treatment: Disposal in Sea, river, spray, Irrigation, land filling treatment, Trickling filers, Biological aerated filter, Fluidized bed system, Activated sludge process, aerobic & anaerobic digestion 4.5 Safe disposal of waste

B.Sc FTM –I YEAR			
Sr. No.	Subject	Subject Code	Syllabus not to be considered for examination
SEMESTER I			
1	Food Science I	74030	Oils and Fats <ul style="list-style-type: none"> • Introduction • Nutritional importance • Sources • Functions • Animal fats & plant fats • Role of fats and oils in cookery • Changes in fats during storage • Prevention of fat spoilage
2	Food Science II	74030	Food Adulteration <ul style="list-style-type: none"> • Definition • Types of Adulterants • Methods to detect adulteration
3	Food Microbiology I	74031	Recombinant DNA Technology <ul style="list-style-type: none"> • Introduction • Definition of Recombinant DNA Technology/ Genetic Engineering • Enzymes used in Recombinant Technology • Steps in Gene Cloning • Vectors used in Recombinant Technology • Genetically Modified Foods • Advantages & Disadvantages of GM Foods
4	Food Microbiology II	74031	Food Fermentations <ul style="list-style-type: none"> • Role of micro-organisms in fermentation • Fermented Meat & Fish Products – Sausages, Fermented Fish • Fermented Fruit & Vegetable Products – Sauerkraut, Kimchi, Vinegar, Citric acid • Fermented Cereal Products – Idli, Vada, Dosa, Bhatura, Dhokla, Miso, Tempeh, Soy Sauce • Economically important fermented foods- Beer, Ale, Wine, Distilled <p>Liquor Products</p>

5	Dairy Technology I	74032	Condensed and Evaporated Milks <ul style="list-style-type: none"> • Introduction • Definition & Classification • Chemical composition and Standards • Food and Nutritive Value • Physico-chemical properties • Manufacture, Packaging, Storage and Distribution • Judging and Grading • Defects- their causes and prevention • Uses
6	Dairy Technology II	74032	Ice-cream <ul style="list-style-type: none"> • Introduction • Definition & Standards • Classification • Chemical Composition • Food and Nutritive value • Role of constituents • Manufacturing, packaging and storage • Judging and Grading • Overrun • Defects- causes and prevention • Uses
7	Human Physiology I	74033	Cardiovascular system <ul style="list-style-type: none"> • Structure and functions of Heart • Types of blood circulation • Cardiac cycle • Heart Rate, • Cardiac output • Stroke volume • Blood Pressure-Definition, Types • Methods of determination • Factors affecting Blood pressure
8	Human Physiology II	74033	Lymphatic system <ul style="list-style-type: none"> • Formation of lymph • composition of lymph • Parts of lymphatic system and their functions
SEMESTER II			
1	Food Chemistry I	74039	Vitamins <ul style="list-style-type: none"> • Definition, fat soluble vitamins- Vitamin A, D, E and K, • Water soluble vitamins – B Complex Vitamins and Vitamin C • Sources, deficiency, excess, RDA and effect of food processing on vitamins

2.	Food Chemistry II	74039	Colors and pigments <ul style="list-style-type: none"> • Introduction, Colour systems- CIE System, Munsell system, Hunter system, Lovibond system • Classifications of colours- Natural and artificial • Gloss, Colour pigments- Chlorophyll, Carotenoid. Tetra-pyrol, Anthocyanin, Flavonoids, Tannin, Betalains, Quinones and Xanthones, Caramel
3.	Principles of Food Preservation I	74040	Food Preservation by Low temperature <ul style="list-style-type: none"> • Concept & History • Definition & Principle • Effect of cold temperature on microorganisms • Methods of low temperature Preservation- Cellar storage, Refrigeration or Chilling & Freezing • Theory & Equipment • Treatments Prior to Freezing • Effect on food • Advantages & Disadvantages
4.	Principles of Food Preservation II	74040	Food Additives <ul style="list-style-type: none"> • Introduction • Functions, Need & Safety • Types of Food Additives • Mode of Action and Applications • Class I Preservatives (Natural) • Class II Preservatives (Artificial) • Chelating agents • Curing agents • Colouring agents • Emulsifying agents • Antioxidants • Humectants • Leavening agents • Stabilizers and Thickeners • Flour improvers
5.	Human Nutrition I	74041	Nutritional and Food Requirements for and School Children (6-12 years) <ul style="list-style-type: none"> • Nutritional Requirements • Factors affecting Nutritional Status • Food Requirements • Packed Lunches • School Lunch Programmes

6.	Human Nutrition II	74041	Nutritional and Food Requirements during Old Age <ul style="list-style-type: none"> • Process of Ageing • Nutritional Requirements • Food Requirements • Nutritional Related Problems of old age • Degenerative Diseases • Exercise and Old Age • Drugs and Old Age
7.	Computer Basics and Applications, I	74042	Computer Memory <ul style="list-style-type: none"> • Memory Concept • Memory Cell • Memory Organisation • Semiconductor memories - RAM, ROM, PROM, EPROM • Secondary storage devices-Magnetic tape • Magnetic disk (floppy disk & hard disk) • Compact disk
8.	Computer Basics and Applications, II	74042	MS-Outlook <ul style="list-style-type: none"> • Introduction to Outlook • Making Contacts • E-Mail-Using Inbox, changing inbox, Creating, addressing and sending messages, formatting messages, sending attachments, Opening attachments, Reading messages, recalling messages, Using outbox, Scheduling event or appointment • Deleting Items

DSC FTM-P1- LAB COURSE I

Sr. No	Practicals (Syllabus not to be considered for examination)
1.	Isolation of intestinal microorganisms from different water samples.
2	Preparation of Potato dextrose agar for yeast, mold and fungus
3	Study of skin microflora to determine persons hygiene
4	Determination of quality of water using presumptive tube
5	Confirmation of the presence of coliform bacteria in positive presumptive tube
6	Performing the completed test
7	Preparation of selective and differential media

	DSC FTM- P2 LAB COURSE II
1.	Protein estimation in milk
2	Preparation of Dahi and Mishti Dahi
3	Preparation of chakka
4	Methylene Blue reduction time test and Resazurin test
5	Preparation of Shrikhand
6	Preparation of Lassi
7	Preparation and Quality evaluation of Rabri
DSC FTM-P-3 LAB COURSE III	
1.	Planning of low-cost nutritious recipe for pregnant women
2.	Planning of high-cost nutritious recipe for pregnant women
3.	Planning of low-cost nutritious recipe for lactating mothers
4.	Planning of high-cost nutritious recipe for lactating mothers
5.	Planning of low-cost nutritious recipe for old age
DSC FTM – P-4 LAB COURSE IV	
1.	Study of macrosin word document
2.	Study of mail merging in word document
3.	Study of mails in outlook
4.	Study of task in outlook
5.	Study of internet related tasks and browsing websites

BSc FTM –II YEAR

Sr. No.	Subject	Subject Code	Syllabus not to be considered for examination
SEMESTER III			
1	Grain Science and Technology - I	74048	Processing of legumes and pulses • Soaking, Roasting, steaming and cooking • Germination, Parching • Factors affecting cooking of legumes • Processing of fried pulses • End products of legumes and pulses • Processed soybean products- Soya oil, Meal, Flour, Infant formula • Pulse Protein Concentrates- Extracted soybean proteins- Soybean curd, Soybean milk 15 5 • Fermented Products of Soybean – Soy sauce, Soyabean paste (miso), Tempe, Natto, Hamanatto • Utilization of pulses - Mature seeds - Fresh seeds - Immature pods • Processed soybean products - Extracted soybean Proteins - Fermented products of soybean
2	Grain science & technology -II	74048	Antinutritional factors in Cereal, legume and oilseed • Saponins • Haemagglutinins • Trypsin inhibitors • Goitrogens • Saponins • Other antinutritional factors- phytates, tannins, oxalates, aflatoxins • Methods of their removal
3	Post-harvest technology -I	74049	Post-harvest technology of Fruits & vegetables Value addition • Postharvest loss reduction techniques • Principle and method involved • Post harvest losses • Introduction • Vegetables
4	Post-harvest technology -II	74049	Other Plantation crops
5	Industrial & Agri Business Management-I	74050	Functional area of management and principles of functional • Levels of management • Nature and characteristics of management • Introduction to management and its function Staffing – procedure, recruitment, selection • Organizing – definition. Importance and types • Planning – definition, nature, importance, types and stages • management

6	Industrial & Agri Business Management -II	74050	•Marketing Management and legal aspects health aspects, work plan and environment industrial safety Important provision of Indian Factory act, Employment condition,• Market research, E marketing – B to B, B to C • Importance, types of Advertising • Channels of Distribution •
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SEMESTER IV

1	Processing and preservation of fruits and vegetables I	74055	Freezing of Fruits &vegetables •Vegetables & Changes during Storage• Changes during Freezing • Quick Freezing – Methods • Sharp Freezing, Cryogenic freezing •Vegetables
2	Processing and preservation of fruits and vegetables II	74055	Processing of Papain • Processing of Fruit Toffee • Processing of Fruit Butter • Processing of Fruit Cheese •Processing of Mango Leather
3	Food Biochemistry I	74056	Hormones • Definition and Classification • Mechanism of action • Biochemical functions and disorders of pituitary, thyroid, adrenal, parathyroid and pancreatic hormones
4	Food Biochemistry II	74056	Protein metabolism □ Digestion and absorption of proteins, Transamination, Deamination, Urea cycle
5	Food Packaging, I	74057	Abrasion resistance, Heat seal strength, Environmental stresscracking, Sorptionbehaviour, Sterilization of packaging material, Shelf life of packaged foods.
6	Food Packaging II	74057	New trends in packaging design, Emerging packaging industry trends, Biodegradable packaging in food industry, The vision of future packaging.

PRACTICALS (Syllabus not to be considered for examination)	
DSC FTM –P2- LAB COURSE V(Subject Code: 74059)	
1	Measurement of thickness of paper boards
2	Determination of gas transmission rate of package films
3	Preparation of hummus
4	Preparation of extruded products
5	Determination of WVTR and Gas transmission rate of film
6	Preparation of Baby food mix
7	Preparation of Tahini
8	Preparation of Tofu
9	Preparation of snack bar
DSC FTM –P6 –LAB COURSE VI(Subject Code: 74060)	
1	Extraction of aromatic oils from different spices
2	Preparation of banana wafers
3	Formulation and quality evaluation of sambar masala
4	Determination of physiological loss in weight of fruits and vegetables under ambient and refrigerated index
5	Preparation of carrot dessert
6	Preparation of Mix vegetable pickle
7	Preparation of Tomato chutney
8	Preparation of Instant soup mix
DSC FTM –P7 –LAB COURSE VII(Subject Code: 74061)	
1	To determine the smokepoint of fats and oils
2	To study the microscopic structure of food starches
3	Effect of heat on fruits and vegetables
4	Effect of acid and alkali on fruits and vegetables
5	Effect of method of cooking on coagulation property of egg

BSc FTM –III YEAR			
Sr. No.	Subject	Subject Code	Syllabus not to be considered for examination
SEMESTER V			
1	Therapeutic Nutrition-I	66610	Diet in Gastrointestinal Diseases Unit 4- Diet in Gastrointestinal Diseases <ul style="list-style-type: none"> • Indigestion • Peptic Ulcer • Constipation • Diarrhoea and Steatorrhea • Lactose Intolerance • Celiac Disease • Irritable Bowel Disease • Inflammatory Bowel Disease • Intestinal Gas and Flatulence • Diverticular Disease
2	Bakery & Confectionery-I	66611	Manufacturing & Technology of Confectionery <ul style="list-style-type: none"> • Manufacturing of raw, refined and White sugar • Manufacturing of Indian Confectionery- Khoa based, Channa Based and Flour and Fat based confectionery
3	Animal Product Technology-I	66612	Processing & Preservation of Egg processing – freezing, drying and canning <ul style="list-style-type: none"> • Preservation of shell eggs • Effect of heat on egg protein. • Egg foams and factors influencing. • Preparation of protein concentrate
4	Processing & Preservation of Fruits & Vegetables-I	66613	Canning & Bottling of Fruits & Vegetables Definition, Principle, Process of canning <ul style="list-style-type: none"> • Storage containers used in packaging • Lacquering of cans, • Spoilage in canned foods
5	Food Quality & Safety Management-I	66614	Food safety & Standards Act 2006 Objectives, Salient features, functions of food safety and standards authority of India, General provisions as to article of food, provisions related to import, enforcement of act, Offences and penalties, regulations for labelling and packaging.
6	Community Nutrition -I	66615	Assessment of Nutritional Status Population sampling

			<ul style="list-style-type: none"> • Anthropometry • Clinical assessment • Biochemical assessment
7	Industrial Business Management-I	66616	Management Functions Planning –definition, nature&importance, it's type & stage of planning, organizing- definition, importance& types, staffing –procedure, recruitment selection , direction –principles

Sr. No.	Subject	Subject Code	Syllabus not to be considered for examination
SEMESTER VI			
1	Therapeutic Nutrition-II	66618	Diet in Diseases of Cardiovascular System <ul style="list-style-type: none"> • Introduction • Role of fat in the development of Atherosclerosis • Clinical effects • Risk factors • Dietary management • Hypertension • Hypercholesterolemia
2	Bakery & Confectionery-II	66619	Manufacturing of Amorphous and Crystalline Confectionery <ul style="list-style-type: none"> • Introduction and Composition • Manufacturing of Caramel • Manufacturing of Toffees • Manufacturing of Candy • Manufacturing of Fondant and Fudge
3	Animal Product Technology-II	66620	Processing and preservation of fish <ul style="list-style-type: none"> • Spoilage of fish • Processing of fish meal, fish flour, fish – oil. • Canning and freezing of fish • Fish cookery • Commercial fish handling, preservation & transport • Preparation of various fish products
4	Processing & Preservation of Fruits & Vegetables-II	66621	– Packaging of fruits and vegetables <ul style="list-style-type: none"> • Modified atmosphere packaging • Controlled atmosphere packaging • Cellar storage • Vacuum packaging

			<ul style="list-style-type: none"> • Aseptic packaging • Development of edible coatings for high-moisture foods <ul style="list-style-type: none"> - Specific requirement for edible coatings - Properties of edible coatings - Types of edible coatings • Packaging of dried fruits
5	Food Quality & Safety Management-II	66622	Industrial by-products and waste utilization Potential & prospects of by-product & waste utilization from the food Industries in India by-product & waste with special reference to cereal & cereal product, fruits and vegetable, meat, Poultry and fish products
6	Community Nutrition -II	66623	National Nutrition Programmes: <ul style="list-style-type: none"> • Integrated Child Development Services (ICDS) Programme • Nutrient Deficiency Control Programme • Supplementary Feeding Programme • Food Security Programme
7	Industrial Business Management-II	66624	Important provision of Indian factory act, employment condition, health aspects, Work plan, environment industrial safety.

PRACTICALS (Syllabus not to be considered for examination)

THERAPEUTIC NUTRITION I AND II Subject code: 66618

SR No	Practical excluded
1.	Planning of diet for Cirrhosis of liver
2.	Planning of diet for Acute Renal Failure
3.	Planning of diet for Chronic Renal Failure
4.	Planning of diet for Hypercholesterolemia

BAKERY AND CONFECTIONARY I AND II Subject Code: 66619

1.	Preparation of Drop Cookies
2.	Preparation of Buns
3.	Preparation of Pastry
4.	Preparation of Multigrain bread
5.	Preparation of Ragi biscuits

PROCESSING OF FRUITS AND VEGETABLES Subject Code:66621	
1	Preparation of murramba
2	Preparation of cordial
3	Preparation of Jelly
4	Preparation of Chutney
5	Preparation of sauerkraut