

MARWARI COLLEGE, RANCHI

(AN AUTONOMOUS UNIT OF RANCHI UNIVERSITY FROM 2009)



COURSES OF STUDY FOR B.A. HONOURS IN CLINICAL NUTRITION & DIETETICS

Under

DEPARTMENT OF HOME SCIENCE

Number of Papers: 20

(14 Theory papers & 6 Practical papers)

Total Marks: 1600

Theory: 1200, Practical: 400

Number of Semesters: 6

B.A. Hons. in ND&FSM Part - I: 400 Marks
(Theory: 300, Practical: 100)

B.A. Hons. in ND&FSM Part - II: 400 Marks
(Theory: 300, Practical: 100)

B.A. Hons. in ND&FSM Part - III: 800 Marks
(Theory: 600, Practical: 200)

**SUMMARY OF B.A. HONOURS IN NUTRITION, DIETETICS AND FOOD SERVICE
MANAGEMENT SYLLBUS**

Year	Semester	Paper	Code	Subject	Full Marks	Mid Sem.	End Sem.	Pass Marks
1 st Year	I	1	CND 101	Human Physiology (Theory)	75	25	50	34
		2	CND 102	Food Science (Theory)	75	25	50	34
		3	CND 103	Food Science (Practical)	50		50	23
	II	4	CND 201	Microbiology of Sanitation and Hygiene (Theory)	75	25	50	34
		5	CND 202	Basic Nutrition (Theory)	75	25	50	34
		6	CND 203	Basic Nutrition (Practical)	50		50	23
2 nd Year	III	7	CND 301	Clinical Nutrition (Theory)	75	25	50	34
		8	CND 302	Paper-8 Diet Planning (Theory)	75	25	50	34
		9	CND 303	Diet Planning (Practical)	50		50	23
	IV	10	CND 401	Lifestyle & Nutrition (Theory)	75	25	50	34
		11	CND 402	Basic Dietetics (Theory)	75	25	50	34
		12	CND 403	Basic Dietetics (Practical)	50		50	23
3 rd Year	V	13	CND 501	Advanced Dietetics (Theory)	100	30	70	45
		14	CND 502	Human Development (Theory)	100	30	70	45
		15	CND 503	Food Service Management (Theory)	100	30	70	45
		16	CND 504	Advanced Dietetics (Practical)	100		100	45
	VI	17	CND 601	Entrepreneurship Development (Theory)	100	30	70	45
		18	CND 602	Book Keeping And Cost Accounting (Theory)	100	30	70	45
		19	CND 603	Basic computer Science and Application (Theory)	100	30	70	45
		20	CND 604	Basic Computer Science And Application (Practical)	100		100	45

B.A. Hons. In CND, PART-I
SEMESTER-I
Paper-I CND 101, Human Physiology

Full Marks : 25 (MSE) + 50 (ESE) =75 Time: 3 Hrs. Pass Marks:34
--

COURSE CONTENT

1. The Skeleton- A general account of axial skeleton and appendicular skeleton.
2. Blood composition, functions, clotting, Blood group-Blood Vessels-Artery, Vein capillary, structure of heart, cardiac cycle, ECG and its significance, Blood pressure-pulse, systolic-diastolic, Anaemia .
3. Lymphatic system- lymph glands and their functions, spleen-structure and functions.
4. Respiratory system: organs of respiration-nose, larynx, trachea, Bronchi, Lungs and their capacity-structure and functions.
5. Digestive system: organs, structure, functions-Teeth, Tongue, Salivary glands, compositions and functions. Esophagus, stomach, small intestine, large intestine, Glands- pancreas, liver, gallbladder.
6. Excretory System: organs, structure, functions of kidney.
7. Eye –structure and function. Physiology of vision, defects in vision-myopia and hypermetropia. Common diseases of eye- conjunctivitis, trachoma, cataract.
8. Ear – structure and functions- mechanism of hearing, common ear diseases- deafness, vertigo, motion sickness.
9. Muscular system- general account of the system, types of muscle- striated, non-striated, cardiac similarities and difference, muscular contraction.
10. Nervous system- structure of a nerve cell, classification of the nervous system. Central nervous system- Brain, spinal cord, functions of different parts of brain.
11. Reproductive system- structure and functions of male and female reproductive organs.
12. Endocrine system- Hormones- endocrine glands-their structure and functions- Pituitary, Thyroid, Parathyroid, Adrenal, Pancreas Hormones and reproduction. Endocrine system, Disorders of over and under secretion.

PRACTICALS AND DEMONSTRATIONS

1. Study of human manekin: draw liver, kidney, pancreas, gallbladder, large and small intestines.
2. Blood : microscopic, examination of prepared slides, fresh amount of blood, stained blood smear, testing of blood groups using typed sera, haemoglobin estimation using haemometer- R.B.C. count and W.B.C. count.
3. Digestion: Blood sugar test- random, fasting and after food test.

B.A. Hons. In CND, PART-I

SEMESTER-I

Paper-2 CND 101, Food Science

Full Marks : 25 (MSE) + 50 (ESE) =75 Time: 3 Hrs. Pass Marks:34
--

COURSE CONTENT

1. Functions of food in relation to health- classification of foods based on nutrients. Food groups-basic five, the food pyramid.
2. Cooking method-study of different cooking methods, merits demerits, solar cooking and microwave cooking
3. Cereal and cereal products- cereal and millets, breakfast cereals, cereal products, microscopic structure of starch granules. Nutritive value of rice, wheat and locally available millets. Processing of cereals, milling, parboiling. Dextrinization, Gelatinization and Gluten formation.
4. Pulses, legumes and nuts- production selection and variety composition-Nutritive value of grams, legumes and their use in variety of preparations. Some common nuts. Meat substitutes-Soya products, Textured Vegetable Proteins (TVP).
5. Animal foods:
 - a) Milk and milk products: Composition, classification, properties, nutritive value of milk, curd, butter milk and cheese. Various kinds of milk-processed milk, dried milk, evaporated milk and condensed milk.
 - b) Eggs : structure, composition nutritive value of egg.
 - c) Fish, Poultry and Meat: classification, nutritive value, post mortem changes in meat.
6. Vegetables and Fruits: Classification, composition, and nutritive value. Methods of cooking changes during cooking.
7. Sugar and sugar products: different types of sugar (sugar, jiggery, honey) manufacture selection, storage and use as preservative.
8. Fats and oils: types, saturated, MUFA, PUFA, sources of oil (animal and vegetable) hydrogenation, rancidity. Storage and nutritional aspect.
9. Tea and coffee: growth, cultivation classification, processing preparation nutritive value and cost.
10. Food laws: FPR, PFA, BIS, AGMARK.
11. Salts: Types and uses in diet.

B.A. Hons. In CND, PART-I**SEMESTER-I****Paper-3 CND 101, Food Science Practical****Full Marks : 50****Time: 4 Hrs.****Pass Marks:23**

1. Cereal preparation- egg fried rice, peas fried rice, idli, sandwiches.
2. Pulse preparation- tadaka dal, rajma, kachumbar.
3. Vegetables- palak paneer, vegetable soup, salad designs.
4. Egg, fish, poultry- egg curry, water poach, steamed fish, chicken clear soup.
5. Milk and milk products- fruit custard, raita.
6. Beverages- tea, coffee.
7. Fats and oils- pakora
8. Sugar cookery- chikki, shahi tukada.

B.A. Hons. In CND, PART-I
SEMESTER-II
Paper-4 CND 201, Microbiology

Full Marks : 25 (MSE) + 50 (ESE) =75 Time: 3 Hrs. Pass Marks:34
--

COURSE CONTENT

1. Introduction to microbiology and its relevance to everyday life-general characteristics of micro-organisms-bacteria, viruses, yeasts, moulds, algae, protozoa. Morphology, classification, motility, nutrition, respiration and reproduction.
2. WATER: Micro-organisms in water-Total lateral count in water- Sanitary test done on water, listing of water borne diseases.
3. DESTRUCTION OF BACTERIA: Sterilization-application of dry heat, burning, flaming and over hot air. Application of moist heat, boiling, pasteurization, steam sterilizer. Sterilization using filters. Disinfection Method of sterilization-natural, physical chemical.
4. DOMESTIC METHODS OF PURIFICATION OF WATER: involving simple techniques like straining water through muslin cloth. Use of certain common chemicals like alum, quick lime, and potassium permanganate in filtration.
5. Chemotherapy- use of sulphonamides and sulphones and PAS.
6. Antibiotics – use, spectrum of activity, mode of administration, complication arising due to constant use of antibiotics, sensitivity tests done on antibiotics. Brief knowledge of any four common antibiotics.
7. Principles of food preservation:
 - a) Use of high and low temperature
 - b) Canning of fruits and vegetables
 - c) Preservation by drying, use of chemical in food preservation.
8. Principles of food spoilage by micro-biological, physical and biological factors.
9. Preservation, contamination and spoilage of:
 - a) Cereals and cereal products: spoilage of bread, ropiness in bread, red and chalky bread.
 - b) Fruits and vegetables and their product
 - c) Meat , Fish and Poultry
 - d) Eggs
 - e) Milk and milk products: brief knowledge of butter, cheese, and fermented milk.
 - f) Fats and oils.
10. Microbiology of food poisoning, food infections and food related disease-microbial food poisoning by staphylococci, salmonella of food poisoning and Clostridium Botulinum- measures to prevent microbial food poisoning.
11. Food infections, food home diseases- Dysenteries, Diarrhoea, Typhoid, Cholera

DEMONSTRATIONS AND PRACTICALS:

- 1) Examination of yeast and moulds
- 2) Examination of stained organisms , simple staining, and grain method staining
- 3) Purifying water at home- Micro-organisms present in water.
- 4) Study of sterilizing equipment.

FIELD TRIP TO DAIRY AND FOOD INDUSTRIES.

B.A. Hons. In CND, PART-I
SEMESTER-II
Paper-5 CND 202, Basic Nutrition

Full Marks : 25 (MSE) + 50 (ESE) =75 Time: 3 Hrs. Pass Marks:34
--

COURSE CONTENT

1. The use of food in the body- digestion, absorption, transport, utilization of nutrients in body.
2. Carbohydrates- chemical composition, classification, functions, sources.
3. Fats and oils- chemical composition, types- saturated and unsaturated fatty acids, sponification, functions of TLG. sources.
4. Proteins- chemical composition, sources, essential and non-essential amino-acids, sources of proteins, functions, protein energy malnutrition.
5. Energy- unit of energy, food as a source of energy, determination of energy value food, direct and indirect calorimetric, energy metabolism, BMR, energy requirements, body needs for energy, BMR activities.
6. Minerals- functions, sources, requirements (RDA) and deficiency of the following minerals- calcium, phosphorous, iron, iodine, fluorine, sodium, and potassium.
7. Vitamins- classifications, sources, requirements, functions, deficiency about the following vitamins- A,D,E,K. (fat soluble) Ascorbic Acid, Thiamin, Riboflavin, Niacin,B6 , folic acid and B-12(water soluble).
8. Water- functions, sources, requirement, water balance, effect of deficiency, water and electrolyte losses, and their replenishment- regularity mechanism-ADH Vasopressin.
9. Acid base balance.
10. Types of Nutrition: Adequate, Optimum, Malnutrition.

B.A. Hons. In CND, PART-I**SEMESTER-II****Paper-6 CND 203, Basic Nutrition Practical****Full Marks : 50****Time: 4 Hrs.****Pass Marks:23****COURSE CONTENT**

- 1) Quantitative tests for sugars:-
 - a) Glucose
 - b) Fructose
 - c) Lactose
 - d) Maltose
 - e) Galactose
- 2) Qualitative Estimation of reducing sugars.

**B.A. Hons. In CND, PART-II
SEMESTER-III**

Paper-7 CND 301, Clinical Nutrition

Full Marks : 25 (MSE) + 50 (ESE) =75 Time: 3 Hrs. Pass Marks:34
--

COURSE CONTENT

1. **Carbohydrates-** digestion, absorption and metabolism, storage, utilization of carbohydrate as energy source for physical activity. Aerobic and anaerobic glycolysis.
2. **Lipids-** digestion, absorption, metabolism, energy yield from dietary fats during exercises, production of Ketone bodies, Ketogenic diets.
3. **Protein -** digestion, absorption and metabolism, functions of amino-acids.
4. **Energy metabolism-** BMR, energy requirement for physical activity, relative body weight and influence of physical exercise on changes in body fat and body composition.
5. **Implications of diet therapy**
 - a) Diarrhea, constipation
 - b) Gastritis and ulcers
 - c) Colitis
 - d) Malabsorption syndromes
6. **Liver, Gallbladder & Pancreas**
 - a) Hepatitis, cirrhoses, hepatic coma
 - b) Pancreatic
 - c) Cholecystitis, cholelithiasis
7. **Renal system**
 - a) Nephritis
 - b) Nephritic syndrome
 - c) Renal failure
 - d) Renal calculi
8. **Disorder of metabolism**
 - a) Diabetes mellitus
 - b) Inborn errors of metabolism
 - c) Gout
9. **Cardiovascular System**
 - a) Hypertension
 - b) Atherosclerosis
 - c) Myocardial infarction.

B.A. Hons. In CND, PART-II
SEMESTER-III
Paper-8 CND 302, Basic Diet Planning

Full Marks : 25 (MSE) + 50 (ESE) =75 Time: 3 Hrs. Pass Marks:34
--

COURSE CONTENT

1. Introduction to meal management.
2. Basic principles of diet planning- steps in diet planning, food cost.
3. **Nutrition in pregnancy:** physiological stages, food selection- complications in pregnancy.
4. **Nutrition during lactation:** physiology of lactation, nutrition requirement, special foods given during lactation.
5. **Nutrition during infancy:** growth and development, nutrition requirements-Breast feeding, infant formula, introduction of supplementary foods.
6. **Nutrition during childhood (toddler/pre-school age and school age)** growth and nutrition needs, nutrition related problems, feeding patterns, acceptance. Importance of snacks in school age, school lunch for school age.
7. **Nutrition during Adolescence-**growth development, nutrient needs- food choices, eating habits, factors influencing them.
8. **Geriatric nutrition-** factors affecting food intake and nutrient use, need and related problems.

B.A. Hons. In CND, PART-II**SEMESTER-III****Paper-9 CND 303, Basic Diet Planning Practical****Full Marks : 50****Time: 4 Hrs.****Pass Marks:23****COURSE CONTENT**

1. Planning one day diet for adult man and women- sedentary and heavy worker.
2. Planning one day diet for pregnant women- calculation of calorie and protein.
3. Planning a diet for lactating mother – calculation of calorie and protein.
4. Nutrition during infancy- nutritional requirement, advantages of breast feeding disadvantages of bottle feeding.
5. Supplementary feeding- preparation of weaning foods
6. Planning and preparation of diet for a toddler , preschool child, school going child. Nutritional requirement, food pattern.
7. Preparing meals for adolescence.

B.A. Hons. In CND, PART-II**SEMESTER-IV****Paper-10 CND 201, Lifestyle & Nutrition**

Full Marks : 25 (MSE) + 50 (ESE) =75 Time: 3 Hrs. Pass Marks:34
--

COURSE CONTENT

- 1. Introduction to beauty and nutrition-** definition of beauty, understanding the nutritional value of foods.
- 2. Body type diet-** Endomorph body type, ectomorph body type, mesomorph body type, cellulite.
- 3. Balanced Protein Diet-** sources, preparation, substitution.
- 4.** Adverse effect of carbohydrate.
- 5. Face foods-** essential fruits and vegetables.
- 6.** Balanced natural food supplement.
- 7.** Skin- structure and functions. Disorders of skin- dandruff, dermatitis and burns.

B.A. Hons. In CND, PART-II
SEMESTER-IV
Paper-11 CND 402, Basic Dietetics

Full Marks : 25 (MSE) + 50 (ESE) =75 Time: 3 Hrs. Pass Marks:34
--

COURSE CONTENT

- 1. Role of Dietician in hospital and community.**
- 2. Basic concepts in diet therapy.**
- 3. Routine hospital diets-** regular diets, light diets, soft diet, full liquid diet and tube feeding.
- 4. Modification of diet-** febrile condition, infection and surgical conditions.
- 5. Feeding the patient-** psychology of feeding the patient, assessment of patients needs.
- 6. Nutrition and diet clinics-** patient check-up and dietary counseling, education of the patient and follow up.

B.A. Hons. In CND, PART-II**SEMESTER-IV****Paper-12, CND 403, Basic Dietetics Practical****Full Marks : 50****Time: 4 Hrs.****Pass Marks:23****COURSE CONTENT**

- 1) Planning and preparation of full or normal diet.
- 2) Planning and preparation of liquid diet and soft diet.
- 3) Planning and preparation of high and low calorie diet with modified fat, carbohydrate levels.
- 4) Planning and preparation of bland diet for peptic ulcer.
- 5) Planning a diet for diabetes mellitus.
- 6) Planning and preparation of diet for hyper-tension and atherosclerosis.
- 7) Planning and preparation of diet for nephritis and nephritic syndrome.

B.A. Hons. In CND, PART-III
SEMESTER-V
Paper-13 CND 501, Advanced Dietetics

Full Marks : 30 (MSE) + 70 (ESE) =100 Time: 3 Hrs. Pass Marks:45

COURSE CONTENT

1. Nutrition and diet counseling- nutritional assessment of patients of patients, dietary prescription and counseling follow up. Patient. education and diet
2. Routine hospital diet- pre-operative and post-operative diet, study and review of hospital diet. oral feeding, tube feeding, parental nutrition and intravenous feeding diet in surgical conditions, burns and cancer.
3. Obesity and leanness- causes, complications and health effects.
4. Dietary treatment and other recommendations. Diet in fever and infections- types, metabolism in fever, general dietary considerations, diet in influenza typhoid, recurrent malaria, tuberculosis.
5. Diet in gastritis and peptic ulcer (gastric and duodenal)- etiology, symptoms and clinical findings, treatment dietary notifications, adequate nutrition, amount of food, intervals of feeding, chemically and thermally irritating food. A four stage diet-liquid soft convalescence and liberalized diet.
6. Diseases of gastro-intestinal tract- effect on digestion, absorption and nutritional status.
7. Implications of diet therapy-
 - a) Diarrhea (child and adult) classification modification of diet, fiber residue fluids nutritional adequacy.
 - b) Constipation- flatulence dietary consideration
 - c) Ulcerative colitis (adults) symptoms, dietary treatment.
 - d) Gastritis and ulcer dietary treatment
 - e) Celiac diseases and disaccharide intolerance and dietary treatments.
 - f) Mal absorption syndromes
8. Diet in diseases of the liver and gallbladder and pancreas- etiology symptoms metabolic and nutritional implications. Dietary treatment in jaundice, hepatitis cirrhosis of liver and hepatic coma. Role of alcohol in liver diseases.
9. Dietary treatment in choleystitis and choblithiasis and pancreatitis.
10. Disorders of metabolism:
 - a) Diabetes mellitus- incidence and predisposing factors, symptoms, types and tests for detection, metabolism in diabetes, dietary treatment and meal management, hypoglycemic agent, insulin and its types, complications of diabetes.
 - b) Gout – nature and occurrence of uric acid causes symptoms and diet.
11. Diet in renal diseases- basic renal function – etiology symptoms metabolic and nutritional implications and dietary treatment.
 - a) Acute and chronic glomelous nephritis

- b) Nephritic syndrome
 - c) Renal failure and dialysis
 - d) Urinary calculi-causes, treatment, acid and alkali producing food, neutral foods and dietary treatment.
12. Diet in cardio vascular diseases, role of nutrition in cardiac efficiency, Atherosclerosis-incidence and dietary principles.
 13. Hyperlipidemia, and hyper tension-dietary treatment, dietary management of acute and chronic diseases of the heart.
 14. Sodium restricted diet, level of sodium restriction, source of sodium and danger of sodium restriction.
 15. Diet in allergy and skin disturbances-definition, classification manifestation, common food allergies, tests and dietetics treatment.
 16. Diet and Drug interactions-effect of drug therapy on intake, absorption and utilization of nutrients.

B.A. Hons. In CND, PART-III**SEMESTER-V****Paper-14 CND 502, Human Development**

Full Marks : 30 (MSE) + 70 (ESE) =100 Time: 3 Hrs. Pass Marks:45

COURSE CONTENT

- 1) **Meaning and importance of growth and development**-principles governing growth and development-developmental task of different stages.
- 2) **Methods of study of human development**-interview questionnaire, bio-graphy, case study, psycho-physical methods.
- 3) **Conception and factors affecting pre-natal development.**
- 4) **Infancy and babyhood (0 to 2 years)**-physical, social, emotional, cognitive and language development.
- 5) **Pre-school age (2 to 6 years)**-physical, social, emotional, intellectual, language and moral development.
- 6) **Adolescence (12 to 18 years)**-physical and psychological changes, emotional, moral and social developments, problems of adolescence. Juvenile delinquency causes and prevention.
- 7) **Adulthood (18 to 60 years)**-physical and psychological changes, problems of aged.
- 8) **Nursery school (Aims and objectives of nursery school)**

PRACTICALS

1. **Preparation of interview method of a child.**
2. **Survey on problems on old age (atleast 10 old age)**
3. **Teaching nursery school children. Preparation and use of audio-visual aids for children.**

B.A. Hons. In CND, PART-III
SEMESTER-V
Paper-15 CND 503, Food Service Management

Full Marks : 30 (MSE) + 70 (ESE) =100 Time: 3 Hrs. Pass Marks:45

COURSE CONTENT

1. Food Service Industries
 - a) Types of catering-history of development-commercial-hotel, motel, restaurant, cafeteria and chain hotels.
 - b) Welfare-hospital, school lunch, residential establishment and industrial catering.
 - c) Transport-air, rail, sea and space contract and outdoor.
2. Physical plant
 - a) Planning a food service unit. Lay-out of food plant, planning of work areas, kitchen, space, size, and types of kitchen work surfaces-work area storage in kitchen maintenance.
 - b) Storage space-types of storage, planning basic factors.
 - c) Service area-organization and space, smooth flow of work-space utilization, prompt service.
 - d) Interior design in a hotel/restaurant-size and shape of room, furniture, fittings, color scheme, lighting, table decoration.
3. Quantity food purchase-standards for selection of fresh foods. Substitutes in the form of convenience or ready prepared food purchase and storage.
4. Sanitation and safety-sanitation of plant, kitchen, hygiene, garbage disposal, pest control-health and safety at work, causes and types of accidents, accordance and applications.
5. Principle of resource management
 - a) Definition, management process-planning, controlling, evaluating-goals, values and standards.
 - b) Decision making-concepts, types of decisions, steps in decision making, methods of resolving conflicts.
6. Stress management-fatigue, types and causes of fatigue, principles and techniques. Mundels class of changes, work simplification.
7. Personnel management-recruitment and selection. Induction, training-supervision and dismissal of employees, legal controls labour policies and welfare measures.
8. Money management-types of income-management process applicable to money, planning controlling and revaluating-the use of income element of buymanship. Cost control food cost labour over heads and projects.
9. Time management.

PRACTICAL:

- 1) Visit to well organized food service units-hostel, industrial, hospital, transport.
- 2) Table setting and service, appraising and drawing silver cutlery and crockery. Folding of napkins, laying of table cloth, table mats, arrangement of cover and table-appointment according, serving food at the table, clearing the table.

B.A. Hons. In CND, PART-III**SEMESTER-V****Paper-16 CND 504, Advanced Dietetics Practical****Full Marks : 100****Time: 6 Hrs.****Pass Marks:45****COURSE CONTENT****1. Planning and preparation of diets with modified.**

- Fiber and residue
- consisty
- Diarrhea and constipation
- Peptic ulcer
- Liver diseases

2. Planning and preparation of diet in :

- Fever and infections
- Diabetes mellitus, planning snacks, deserts and beverages for diabetes. Meal exchange list.
- cardio-vasculsr diseases, congestive cardiac failure.
- Kidney failure
- Renal complications
- Kidney stones
- Cancer
- Trauma (burns)
- Surgery

B.A. Hons. In CND, PART-III

SEMESTER-VI

Paper-17 CND 503, Entrepreneurship Development

Full Marks : 30 (MSE) + 70 (ESE) =100 Time: 3 Hrs. Pass Marks:45

Course Content

1. Importance of entrepreneurship and its relevance in career growth – characteristics of Entrepreneur, developing entrepreneurial competencies.
2. Types of enterprise and ownership-manufacturing, service, franchise-large medium, SSI, tiny, cottage industries limited, public limited, private limited, partnership, sole proprietorship. Advantages and disadvantages of types of ownership.
3. Financial Management – importance and techniques, management of working capital, reinforcement of concept of working capital, factors to be controlled in managing working capital –tools and techniques.
4. Books of accounts-importance of internal assessment, different books and its relevance, support stationary and its relevance, operating mechanism.
5. Financial statements – importance and its interpretation, profit and loss account, balance sheet, cash flow / fund flow.
6. Marketing management –marketing for small business, strategies for sales promotion tools and techniques for sales promotion, pricing policy and its implication on sales.
7. Export marketing –understanding the international business environment, procedures and formalities.
8. Inventory control and Quality Management- defining quality and its concepts, aspects of quality management, ISO 9000Certification, Total Quality Management(TQM).
9. Enterprise Establishment and Credit- disbursement facilities, financial support from financial institutions, procedures for applications, disbursement procedure.
10. Legal complications- income tax, sales tax, excise labour laws, factory act, pollution control act.

B.A. Hons. In CND, PART-III**SEMESTER-VI****Paper-18 CND 602, Book Keeping And Cost Accounting**

Full Marks : 30 (MSE) + 70 (ESE) =100 Time: 3 Hrs. Pass Marks:45

Course Content

1. Introduction objectives, principle and advantages of double entry, book keeping, elements of transactions, identifying debit credit account.
2. Journal- source of journal entry like bills, cash memos, receipts, vouchers etc. journalizing a transaction, narration to a journal entry.
3. Ledger , indexing accounts, opening accounts, classification of ledger, transferring journal entries into ledger, ledgering, balancing of ledger accounts.
4. Introduction to cash book, recording of transaction on cash book, bank and discount column.
5. Introduction to petty cash book, balancing and posting of ledger of petty cash book, preparing a trial balance.
6. Preparation manufacturing profit loss account, balance sheet, method of preparing gross profit, net profit concept, assets and liabilities.
7. Cost accounting – introduction , definition, objectives, scope.
8. Cost sheet and cost statement.
9. Economic recorder level minimum maximum level, longer level, stock inventory, valuation of inventory.

B.A. Hons. In CND, PART-III**SEMESTER-VI****Paper-19 CND 603, Basic computer Science and Application**

Full Marks : 30 (MSE) + 70 (ESE) =100 Time: 3 Hrs. Pass Marks:45

Course Content

1. Introduction to computers, computer generation.
2. Data Representation & Number system (Binary to Decimal, Decimal to Binary, Decimal to Octal, Decimal to Hexadecimal).
3. Computer peripherals- Input and Output devices.
4. Central Processor Unit-(AU, LU, CU, Main Memory Unit, Cache Memory, Registers). The BUS, Instruction Set.
5. Memory Unit- RAM, ROM, storage system (magnetic storage system, optical storage system) solid-state storage devices.
6. Introduction to programming, characteristic of a good programming languages.
7. Microsoft Software- Introduction, MS WORD, MS EXCEL, MS POWER POINT.

B.A. Hons. In CND, PART-III**SEMESTER-VI****Paper-20 CND 604, Basic computer Science and Application Practical**

Full Marks : 30 (MSE) + 70 (ESE) =100 Time: 3 Hrs. Pass Marks:45

Course Content

MS Office Lab.

1. MS-Word
2. MS-Excel
3. MS-Power Point
4. MS- Access
 - a) Slide Making and Presentation using MS- Power Point (MS-Office 2000)
 - b) Editing, Copying, Pasting, word art using MS-Word (MS-Office 2000)
 - c) Spreadsheet, worksheet application using MS-Excel. (MS-Office 2000)