

# SCIENCES

## CONTENTS

<b>S.No.</b>	<b>Subject</b>	<b>Page No.</b>
<b>SCIENCES</b>		
1.	<b>Anthropology</b>	
2.	<b>Bio-Chemistry</b>	
3.	<b>Bio-Technology</b>	
4.	<b>Botany</b>	
5.	<b>Catering , Tourism &amp; Hotel Management</b>	
6.	<b>Chemistry</b>	
7.	<b>Clinical Nutrition &amp; Deities</b>	
8.	<b>Computer Science</b>	
9.	<b>Computer Applications</b>	
10.	<b>Dairy Science</b>	
11.	<b>Electronics</b>	
12.	<b>Geology</b>	
13.	<b>Home Science</b>	
14.	<b>Mathematics</b>	
15.	<b>Microbiology</b>	
16.	<b>Physics</b>	
17.	<b>Statistics</b>	
18.	<b>Zoology</b>	
19.	<b>BCA</b>	

**SRI VENKATESWARA UNIVERSITY, TIRUPATI**

**B.Sc. SYLLABUS AND SEMESTER STRUCTURE**

**SEMESTER I**

Semester	Part	Subject	Hrs	Credits	IA	ES	Total
SEMESTER I	PART I	TELUGU	4		25	75	100
		ENGLISH	5		25	75	100
	PART II	DSC - 1	4		25	75	100
		DSC LAB - 1	3		25	75	100
		DSC - 2	4		25	75	100
		DSC LAB - 2	3		25	75	100
		DSC - 3	4		25	75	100
		DSC LAB - 3	3		25	75	100
	PART III	FC	3		25	75	100
		CSS	2		25	75	100
	TOTALS			35		250	750

**DSC- Discipline Specific Course,**

**CSS – Communication & Soft Skills,**

**FC – Foundation Course**

## **SUBJECT: ANTHROPOLOGY**

### **I SEMESTER**

#### **Paper I: INTRODUCTION TO SOCIAL ANTHROPOLOGY**

##### **Unit – I :**

Meaning and scope of Anthropology, Sub-divisions of Anthropology and their inter-relationship. (Physical Anthropology, Social / Cultural Anthropology, Archaeological Anthropology, Linguistic Anthropology ).

##### **Unit-II :**

Meaning of scope of Social Anthropology, sub-divisions of Social Anthropology, (Ethnology, Ethnography, Economic Anthropology, Political Anthropology, Applied Anthropology )

##### **Unit – III :**

Historical-development and Relationship between Social Anthropology and other Social Sciences History, Psychology and Sociology.

##### **Unit-IV :**

Basic concepts: Society, Community, Social Group, Social Institution, Association, Social status, Social Role, Values & Customs.

##### **Unit- V :**

Culture: definition, characteristics, components, elements of culture, cultural changes & cultural growth.

##### **Recommended Readings :**

1. Beal, R and Hoijer, H ( 1979): An Introduction to Anthropology
2. Beattie, J ( 1999); Other cultures
3. Behura, N.K. (1988) Anthropological thought and theories.
4. Herskovits, M.J (1955) Cultural Anthropology
5. Hoebel, E.A and Frost. E.L. (1979) Cultural and Social Anthropology
6. Majumdar, D.N. & Madan, T.N.: An Introduction to Social Anthropology.
7. Suryanarayana, M. Samajika Manavastraam – Parichayalu ( Telugu

## **Subject: BIO-CHEMISTRY**

### **SEMESTER-I**

#### **Paper I :Biomolecules**

##### **Unit – I : Biophysical Concepts**

Water as a biological solvent and its role in biological processes. Biological relevance of pH, measurement of pH, pKa of functional groups in biopolymers such as proteins and nucleic acids. Importance of buffers in biological systems, ion selective electrodes, and oxygen electrode. Donnan membrane equilibrium. Significance of osmotic pressure in biological systems,

##### **Unit – II : Carbohydrates**

Carbohydrates: Classification, monosaccharides, D and L designation, open chain and cyclic structures, epimers and anomers, mutarotation, reactions of carbohydrates (due to functional groups - hydroxyl, aldehyde and ketone). Amino sugars, Glycosides. Structure and biological importance of disaccharides (sucrose, lactose, maltose, isomaltose, trehalose), trisaccharides (raffinose, melezitose), structural polysaccharides (cellulose, chitin, pectin) and storage polysaccharides (starch, inulin, glycogen). Glycosaminoglycans, Bacterial cell wall polysaccharides. Outlines of glycoproteins, glycolipids and blood group substances.

##### **Unit – III Lipids**

Lipids: Classification, saturated and unsaturated fatty acids, structure and properties of fats and oils (acid, saponification and iodine values, rancidity). General properties and structures of phospholipids, sphingolipids and cholesterol. Prostaglandins- structure and biological role of PGD<sub>2</sub>, PGE<sub>2</sub> and PGF<sub>2α</sub>. Lipoproteins: Types and functions  
Biomembranes: Behavior of amphipathic lipids in water- formation of micelles, bilayers, vesicles, liposomes. Membrane composition and organization – Fluid mosaic model.

##### **Unit-IV : Amino Acids, Peptides**

Amino Acids: Classification, structure, stereochemistry, chemical reactions of amino acids due to carbonyl and amino groups. Titration curve of glycine and pK values. Essential and non-essential amino acids, non-protein amino acids. Peptide bond - nature and conformation. Naturally occurring peptides – glutathione, enkephalin.

##### **Unit-V : Proteins**

Proteins: Classification based on solubility, shape and function. Determination of amino acid composition of proteins. General properties of proteins, denaturation and renaturation of proteins. Structural organization of proteins- primary, secondary, tertiary and quaternary structures (Eg. Hemoglobin and Myoglobin), forces stabilizing the structure of protein. Outlines of protein sequencing.

#### **1<sup>st</sup> Semester Practicals : Qualitative Analysis**

1. Preparation of buffers (acidic, neutral and alkaline) and determination of pH.
2. Qualitative identification of carbohydrates- glucose, fructose, ribose/xylose, maltose, sucrose, lactose, starch/glycogen.

3. Qualitative identification of amino acids – histidine, tyrosine, tryptophan, cysteine, arginine.
4. Qualitative identification of lipids- solubility, saponification, acrolein test, Salkowski test, Lieberman-Burchard test.
5. Preparation of Osazones and their identification.
6. Absorption maxima of colored substances- *p*-Nitrophenol, Methyl orange.
7. Absorption spectra of protein-BSA, nucleic acids- Calf thymus DNA.

## **SUBJECT: BIO-TECHNOLOGY**

### **SEMESTER-I**

#### **Paper I: MICROBIOLOGY AND CELL BIOLOGY**

#### **UNIT I**

##### **History, Development and Microscopy**

History and development of microbiology: contributions of Louis Pasteur, Robert Koch and Edward Jenner. Microscopy: Compound microscopy: Numerical aperture and its importance, resolving power, oil immersion objectives and their significance, principles and applications of dark field, phase contrast, fluorescent microscopy. Electron microscopy: Principle, ray diagram and applications, TEM and SEM, comparison between optical and electron microscope, limitations of electron microscopy.

Stains and staining procedures: Acidic, basic and neutral stains, Gram staining, Acid fast staining, Flagella staining, Endospore staining.

#### **UNIT II**

##### **A. Bacteria:**

Bacterial morphology and subcellular structures, general morphology of bacteria, shapes and sizes, generalized diagram of typical bacterial cell.

Slime layer and capsule, difference between the structure, function and the position of the two structures. Cell wall of gram +ve and Gram -ve cells, Prokaryotic classification.

General account of flagella and fimbriae.

Chromatin material, plasmids; definition and kind of plasmids (conjugative and non-conjugative) F, R, and Col plasmids.

Endospores: Detailed study of endospore structure and its formation, germination, basis of resistance.

A brief idea Bergey's manual. Morphology of archaea, archaeal cell membrane (differences between bacterial and archaeal cell membrane), other cell structures, concept of the three distinct archaea groups.

- B. Viruses:** General characteristics of viruses, difference between virus and typical microbial cell, structure, different shapes and symmetries with one example of each type, classification of viruses on the basis of nucleic acids, phage and animal cell viruses, example of each and their importance. Brief idea of lytic cycle and lysogeny.

### **UNIT III**

Microbial Nutrition: Basic nutritional requirements: Basic idea of such nutrients as water, carbon, nitrogen, sulfur and vitamins etc., natural and synthetic media, nutritional classification of bacteria. Selective and Differential media, Enriched media, Enrichment media.

### **UNIT IV: Microbial growth and control:**

Growth: Growth rate and generation time, details of growth curve and its various phases.

Concept of synchronous cultures, continuous and batch cultures (chemostat and turbidostat). Measurement of growth.

Physical conditions required for growth: Temperature (classification of microorganisms on the basis of temperature requirements), pH etc. Pure cultures and cultural characteristics. Maintenance of pure culture.

**Microbial Control:** Terminologies - Sterilization, disinfection, antiseptic, sanitization, germicide, microbistasis, preservative and antimicrobial agents.

Mechanism of cell injury: Damage to cell wall, cell membrane, denaturation of proteins, inhibition of protein synthesis, transcription, replication, other metabolic reactions and change in supercoiling of DNA.

Physical control: Temperature (moist heat, autoclave, dry heat, hot air oven and incinerators), dessication, surface tension, osmotic pressure, radiation, UV light, electricity, ultrasonic sound waves, filtration.

Chemical control: Antiseptics and disinfectants (halogens, alcohol, gaseous sterilization. Concept of biological control.

### **UNITV: CellBiology**

Eukaryotic Cell - Structure and function of the following: nucleus, nuclear membrane, nucleoplasm, nucleolus, golgi complex, Mitochondria, Chloroplast, endoplasmic reticulum, lysosomes, peroxisomes, glyoxisomes and vacuoles.Plant cellwall.

Cytoskeleton (Micro and Macro filaments, microtubules) and cell locomotion. Mitosis and meiosis. Brief idea of cell cycle.

Muscle and nerve cell structure, synaptic transmission and neuromuscular junctions.

### **Practicals: Microbiology & Cell Biology**

1. Demonstration, use and care of microbiological equipments.
2. Preparation of media, sterilization and isolation of bacteria.
3. Isolation of Bacteriophage from sewage / other sources.
4. Demonstration of motility of Bacteria.
5. Simple staining of bacteria
6. Gram staining of Bacteria
7. Acid fast staining of Bacteria
8. Endospore staining.
9. Demonstration of starch hydrolysis by bacterial cultures
10. Growth of fecal coliforms on selective media.
11. Isolation of pure culture by pour plate method

12. Isolation of pure culture by streak plate method.
13. Anaerobic cultivation of microorganisms.
14. Cultivation of yeast and moulds.
15. Antibiotic sensitivity assay.
16. Oligodynamic action of metals.
17. To study germicidal effect of UV light on bacterial growth.
18. Stages of mitosis.
19. Stages of meiosis.

**Note: - Mandatory to perform at least ten practical.**

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## **Subject: BOTANY**

### **SEMESTER- I**

#### **Paper-I :Microbial Diversity, Algae and Fungi**

#### **UNIT- I: Origin and Evolution of Life, Microbial diversity**

1. Origin of life –theories
2. Geological time scale
3. Microbial diversity-Mycoplasma – Chlamydia -Archaeobacteria –Actinomycetes

#### **UNIT- II: VIRUSES AND BACTERIA**

1. Viruses: General account of Viruses, structure, replication and transmission of plant diseases Caused by Viruses.
2. Bacteria: Structure, nutrition, reproduction and economic importance. Outline of plant diseases of important crop plants caused by Bacteria and their control.

#### **UNIT III: CYANOBACTERIA AND LICHENS**

1. Cyanobacteria: General account of cell structure, thallus organization and their uses as Biofertilizers
2. Structure and reproduction and life history of Nostoc and Scytonema
3. Lichens – Morphology –Anatomy –Reproduction –Economic importance

#### **UNIT –IV Algae**

1. General account, Fritsch classification of Algae and economic importance.
2. Structure, reproduction, life history of Oedogonium, Ectocarpus and Polysiphonia

#### **UNIT V: FUNGI**

1. General characters, classification(Alexopolous) and economic importance
2. Structure, reproduction and life history of *Albugo*, *Penicillium*, *Puccinia*
3. General account of plant diseases caused by Fungi and their control

#### **Suggested Readings:**

1. Alexopolous, J. and W.M Charles.1988 introduction to mycology.Wiley Eastern, New Delhi.



2. Ananthanarayan & Panikar ; Microbiology 9<sup>th</sup> edition.
3. Pandey, B.P 2001. College Botany Vol. I: Algae, Fungi, Lichens, Bacteria, Viruses, Plant pathology, Industrial Microbiology and Bryophyta. S. Chand & company Ltd, New Delhi.
4. Pandey, B.P 2007. Botany for Degree students: Diversity of microbes, Cryptogams, Cell biology and Genetics. S. Chand & company Ltd, New Delhi.
5. Sambamurthy, A.V.S.S 2006. A textbook of Algae. I.K. International Pvt. Ltd., New Delhi.
6. Sambamurthy, A.V.S.S 2006. A textbook of Plant Pathology. I.K. International Pvt. Ltd., New Delhi
7. Sharma, O.P 2006. A text book of Thallophyta, McGraw Hill Publishing. Co. New Delhi.
8. Thakur, A.K. and S.K. Bassi. 2008, A text book of Botany: Diversity of Microbes and Cryptogams. S. Chand & company Ltd, New Delhi.
9. Vashishta, B.R., A.K. Sinha and V.P.Singh. 2008. Botany for Degree Students: Algae. S. Chand & company Ltd, New Delhi
10. Vashishta, B.R.1990. Botany for Degree Students: Fungi. S. Chand & company Ltd, New Delhi.

## **PRACTICAL SYLLABUS: SEMESTER -I**

### ***Paper-I: Microbial Diversity, Algae and Fungi***

1. Knowledge of Equipment used in Microbiology: Spirit lamp, Inoculation loop, Hot-air oven, Autoclave/Pressure cooker, Laminar air flow chamber, Incubator, etc.
2. Preparation of solid and liquid media for culturing of microbes (Demonstration)
3. Study of viruses and bacteria using electron micro photographs
4. Gram staining of Bacteria
5. Study of Plant disease symptoms caused by Bacteria (Citrus canker, leaf blight of rice, Angular leaf spot of Cotton) and viruses (TMV, Vein clearing of Bhendi and Leaf curl of Papaya), Fungi (Late blight of potato, Red rot of Sugarcane and Paddy blast)
6. Vegetative and reproductive structures of the following :
  - a. **Algae:** Oedogonium, Ectocarpus, Polysiphonia, Nostoc and Scytonema
  - b. **Fungi:** Albugo, Penicillium and Puccinia .
7. Section cutting of diseased material infected by Fungi and identification of pathogens as per theory syllabus
8. Lichens: Different types of thalli and Anatomy
9. **Field Visit**

**SUBJECT: CT& HM (Catering Tourism & Hotel Management)**  
**SEMESTER- I**  
**PAPER-I:101 PRINCIPLES OF TOURISM**

**Unit-I**

Tourism – Definition – Nature and Scope – History of Tourism and its development – Motivation – for Travel – Types of tourism Domestic and International Tourism.

**Unit – II**

Social and Economic significance of Tourism – Environmental and Social Impact of Tourism - Tourism as an Industry – Ancillary industries in Tourism

**Unit – III**

Tourism – Analyse the Scenario and Five year plans – Impact of Tourism – Contribution of Andhra Pradesh State Tourism – Along with different organization. Eg. WTO, IATA, PATA, ICAO, TAAI and UFTAA.

**Unit - IV**

Natural resources – wildlife – Beaches – Hill Resorts – Impact of Tourism on Physical Environment – Air – Water – Soil – Mountain – Ecology etc. – Social Impact of Tourism – Unity of In diversity in Indian context.

**Unit – V**

Importance of Tourism in India – fairs and festivals – Kumbhamela – Mysore Dasara – Brahmotsavams of Tirumala – Tribal culture – History and Culture for Tourism – Ajantha – Ellora – amaravathi – Nagarjunakonda – Mahabalipuram – BellarandHaldidu – Tirupati – Puri – Delhi – Goa – Mount Abu.

**PRACTICALS:**

1. Visit to A.P. Tourism Department
2. Wild life / Beaches / Record work / AP Regional wise
3. Hill resorts
4. Transport: a) Air, b) Sea, c) Railway, d) Bus
5. Visit to any culture regions – Case Study

**REFERENCES:**

1. An Introduction to Travel and Tourism – Jag Mohan Nagi
2. Air Lines and ticketing for tourism – Jag Mohan Nagi
3. IATA ticketing manual – Ticketing course material

**SUBJECT: CT& HM (Catering Tourism & Hotel Management)**  
**SEMESTER- I**  
**PAPER-I: 102 FOOD PRODUCTION**

**Unit-I**

Introduction to cooking – origin of cooking – Culinary terms.

Basic Commodities – Types of commodities, Explanation of various types and their usage in cooking / Processing of cream, types of Butter and its uses classification of cheese and its uses.

**Unit – II**

Kitchen organization – listing of the classical kitchen Brigade and Kitchen Brigade in various category hotels. Flight kitchen, hospital and institution kitchen, attributes of kitchen staff and Job Description of Staff, Co-ordinating Departments, Layout of kitchen in various organizations, Raw material receiving Areas, storage Areas, Layout of service wash up area of kitchen.

**Unit – III**

Equipments and Fuels used – Different equipment used in food in food production. Mode of operation, care and maintenance, Different types of fuel used.

Aims and objectives of food production.

**Unit – IV**

Quantitative and qualitative aspects, different types of basic stocks and sauces and their preservatives usage in food preparation.

Principles of food production – Classification Selection, Principles of cookery, effect of cooking usage in food preparation, cooking, Accompanied garnishes and presentation of:

- (a) Cereals and pulses (b) Egg Cookery
- (c) Vegetable & Fruits (d) Meat & Meat Products
- (e) Milk Products

**Unit – V**

Methods of cooking – types of cooking methods with proper examples.

Menu & Menu planning – origin and description of menu. Types of menu and difference between menus, planning and competition of Menu, factors and considerations of menu planning - Different courses of French Classical menu with Examples, Different kinds of Breakfast - Explanation of Brunch & lunch, Dinner and supper aftertation tea of high Tea etc.

**PRACTICALS:**

1. Identification of equipments, grocery and provision.
2. Preparation of basic stocks and Soups
3. Preparation of continental menus
4. Preparations of Cereals, Pulses, Milk, Meat product, Egg cookery, Fruit and Vegetables.
5. Garnishing presentation of carving.

**REFERENCES:**

1. Modern cookery – volumes – Thangam E. Phillip – 5<sup>th</sup> Edition, 2003, Orient Longman.
2. Theory of catering – Kinton and Ceserami ELBS with Hodder and Stoughton.
3. Food preparation theory – Eva Medwed Prentice
4. Practical professional cookery – Crockewell and Kanuttmann Macmillan
5. Complete Cookery Manual – Antony O' Reilly (ELBS)

**SUBJECT: CT& HM (Catering Tourism & Hotel Management)**  
**SEMESTER- I**  
**PAPER-I: 103 FOOD BEVERAGE SERVICES**

**Unit-I**

Introduction to Catering Technology – Definition – Need and Scope – Types – Career – Opportunities – Functions of Catering Industry.

**Unit – II**

Food and Beverage Service organization – Food and Beverage Service Organization – Hierarchy, Job specification and Job description of Staff, Attributes of Food and Beverage Service Personnel – Co-ordinating with Other Departments.

**Unit – III**

Types Of Food And Beverage Service Outlets – About Various Types of Service Outlets, Brief Description about the Service Outlets. Difference Between Specialized Restaurant and Multi-Casting Restaurant, Room Services, Banquets, Operations, Pantry, Food Pick-Up Areas, Stores and Linen Room, Kitchen Stewarding.

**Unit – IV**

Food and Beverage Service Area Equipments – Introduction of Various Areas. Describing the Area, Still Rooms Silver Room, Washup, Hot Plate, Dispense Bar & Spare – Linen Store – Lightening, colour etc. Different types of Linen and Furniture. Equipment and their Classification. Different Types of cutlery, Glassware, Crockery etc.

**Unit – V**

Food and Beverage Service – Types of Food Service, Description of Food Science, Cafeteria Service and Counter Service, Room Service and Banquet Hall Buffet Define Mise-en-Scene, Mise-en-Place, Restaurant Reservations, Wine – making.

**PRACTICALS:**

1. Familiarization of restaurant equipment.
2. Maintenance of the equipment and Silver
3. Menu planning
4. Description of Dishes and their accompaniments.
5. Mise-en-scene and Mise-en-place.

## REFERENCES:

1. Test Book of Food and Beverages Service – S.N. Bagchi&Anitha Sharma, Aman Publications, New Delhi, 1<sup>st</sup> Edition.
2. Food & Beverage Service – B.R. Lillicrap&Courius – 2003 ELBS.
3. Modern Restaurant Service – John Fuller – Stanley Thornupub Ltd.
4. Introduction to Modern Food & Beverage Service by William H Krant.

## Subject: CHEMISTRY

### SEMESTER-I

### Paper-I: Inorganic & Organic Chemistry

### INORGANIC CHEMISTRY-I

#### UNIT – I

##### 1. p-block elements:

General characteristics of elements of groups 13, 14, 15

Group—13 Synthesis and structure of diborane and higher boranes ( $B_4H_{10}$  and  $B_5H_9$ ), boron-nitrogen compounds ( $B_3N_3H_6$  and BN)

Group – 14: Preparation and applications of silanes and silicone

Group – 15: Preparation and reactions of hydrazine, hydroxylamine.

#### UNIT-II

##### 1 p-block elements:

General characteristics of elements of groups 16 and 17

Group – 16: Classifications of oxides based on (i) Chemical behaviour and (ii) Oxygen content.

Group---17: Inter halogen compounds and pseudo halogens.

##### 2. Organometallic Chemistry

Definition and classification of organometallic compounds, nomenclature, preparation, properties and applications of alkyls of Li and Mg elements

### ORGANIC CHEMISTRY-I

#### UNIT-III

##### 1. Structural theory in Organic Chemistry

Types of bond fission and organic reagents (Electrophilic, Nucleophilic, and free radical reagents including neutral molecules like  $H_2O$ ,  $NH_3$  &  $AlCl_3$  ).

Bond polarization : Factors influencing the polarization of covalent bonds, electro negativity – inductive effect. Application of inductive effect (a) Basicity of amines (b) Acidity of carboxylic acids (c) Stability of carbonium ions. Resonance or Mesomeric effect, application to (a) acidity of phenol, and (b) acidity of carboxylic acids. Hyper conjugation and its application to stability of carbonium ions, Free radicals and alkenes, carbanions, carbenes and nitrenes.

Types of Organic reactions : Addition – electrophilic, nucleophilic and free radical. Substitution – electrophilic, nucleophilic and free radical. Elimination- Examples (mechanism not required).

## UNIT-IV

### 1. Acyclic Hydrocarbons

Alkenes – Preparation of alkenes . Properties: Addition of hydrogen – heat of hydrogenation and stability of alkenes. Addition of halogen and its mechanism. Addition of HX, Markonikov's rule, addition of H<sub>2</sub>O, HOX, H<sub>2</sub>SO<sub>4</sub> with mechanism and addition of HBr in the presence of peroxide (anti – Markonikov's addition) . Dienes – Types of dienes, reactions of conjugated dienes – 1,2 and 1,4 addition of HBr to 1,3 – butadiene and Diel's – Alder reaction. Alkynes – Preparation by dehydrohalogenation of dihalides, dehalogenation of tetrahalides, Properties; Acidity of acetylenic hydrogen (formation of Metal acetylides). Preparation of higher acetylenes, Metal ammonia reductions Physical properties. Chemical reactivity – electrophilic addition of X<sub>2</sub>, HX, H<sub>2</sub>O (Tautomerism), Oxidation with KMnO<sub>4</sub>, OsO<sub>4</sub>, reduction and Polymerisation reaction of acetylene.

### 2. Alicyclic hydrocarbons (Cycloalkanes)

Nomenclature, Preparation by Freund's methods, heating dicarboxylic metal salts. Properties – reactivity of cyclopropane and cyclobutane by comparing with alkanes, Stability of cycloalkanes – Baeyer's strain theory, Sachse and Mohr predictions and Pitzer's strain theory. Conformational structures of cyclobutane, cyclopentane, cyclohexane.

## UNIT-V

### 1. Benzene and its reactivity

Concept of resonance, resonance energy. Heat of hydrogenation, heat of combustion of Benzene, mention of C-C bond lengths and orbital picture of Benzene.

Concept of aromaticity – aromaticity (definition), Huckel's rule – application to Benzenoid (Benzene, Napthalene) and Non – Benzenoid compounds (cyclopropenyl cation, cyclopentadienyl anion and tropylium cation)

Reactions – General mechanism of electrophilic substitution, mechanism of nitration. Friedel Craft's alkylation and acylation. Orientation of aromatic substitution – Definition of ortho, para and meta directing groups. Ring activating and deactivating groups with examples (Electronic interpretation of various groups like NO<sub>2</sub> and Phenolic). Orientation of (i) Amino, methoxy and methyl groups (ii) Carboxy, nitro, nitrile, carbonyl and sulphonic acid groups (iii) Halogens ( Explanation by taking minimum of one example from each type)

## Practical-I

### Qualitative inorganic analysis

Qualitative Analysis and Inorganic preparations:

Analysis of simple salt containing the following one anion and cation

Analysis of Anions: Carbonate, sulphate, chloride, bromide, iodide, acetate, nitrate, borate, phosphate,

Analysis of cations: Lead, copper, cadmium, iron, aluminum, zinc, manganese, nickel, calcium, strontium, barium, potassium and ammonium.

Inorganic preparations: Any one of the following inorganic preparations:

- 1) Ferrous ammonium sulphate
- 2) Tetrammine copper (II) sulphate

## **Recommended Text Books and Reference Books**

### **Inorganic Chemistry**

1. Advanced Inorganic Chemistry Vol-I by Satyaprakash, Tuli, Basu and Madan
2. Inorganic Chemistry by R R Heslop and P.L. Robinson
3. Text book of Inorganic chemistry by R.Gopalan
4. A textbook of qualitative inorganic analysis by A.I. Vogel
5. Organometallic Chemistry – An introduction by R.C.Mehrotra and A.Singh
6. Advanced Inorganic Chemistry By Gurudeep Raj
7. Selected topics in inorganic chemistry by W.D.Malik, G..D.Tuli, R.D.Madan
8. Concepts and models of Inorganic Chemistry by Bodie Douglas, D.McDaniel and J.Alexander
9. Concise coordination chemistry by Gopalan and Ramalingam
10. Satyaprakash's modern inorganic chemistry by R.D.Madan.

### **Organic Chemistry**

1. Organic Chemistry By R T Morrison and R.N.Boyd
2. Text book of Organic Chemistry by Ferguson
3. Reaction mechanisms in Organic Chemistry by S.M.Mukherji and S.P.Singh
4. A guide book to mechanisms in Organic Chemistry by Peter Sykes
5. Organic spectroscopy by J.R.Dyer
6. Organic Spectroscopy by William Kemp
7. Text book of Organic Chemistry by K.S.Mukherjee
8. Organic Chemistry by L.G.Wade Jr, Maya Shankar Singh
9. Elementary organic spectroscopy by Y.R. Sharma
10. Chemistry & Industry by Gurdeep R. Chatwal
11. Organic Synthesis by V.K.Ahluwalia and R.Agarwal
12. Synthetic Drugs by O.D.Tyagi & M.Yadav

**SUBJECT: CLINICAL NUTRITION & DEITIES**  
**SEMESTER-I**  
**Paper: Basic Nutrition**

**Unit I**

Definition and introduction to nutrition-good nutrition and mal nutrition Macro Nutrients - Classification, digestion, absorption, functions, dietary sources, RDA, clinical manifestations of deficiency and excess and storage in the body of the following in brief:

Energy, Carbohydrates, lipids and proteins

**Unit II**

Classification, digestion, absorption, functions, dietary sources, RDA, clinical manifestations of deficiency and excess of the following in brief:

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

**Unit III**

A) Energy value of foods and energy requirement – the body's for energy BMR activities, utilization of food to energy requirements.

B) Basal metabolism, factors affecting basal metabolic rate, calorogenic effect of food, specific dynamic action of food.

C) Acid base balance.

**Unit IV**

Importance of water and water balance – functions, sources, requirement – effect of deficiency.

**Unit V**

A) Interrelation between nutrients – nutrition and health – visible symptoms of good health.

B) Nutrition and Infection

**PRACTICALS**

1. Identification of nutrient rich sources of foods, their seasonal availability and price.
2. Study of nutrition labelling on selected foods.
3. List out low cost nutrient rich foods.
4. List out nutrient foods for different income groups.

**REFERENCES**

1. Bamji MS, Krishnaswamy K, Brahmam GNV (2009). Textbook of Human Nutrition, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd.
2. Wardlaw MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition Mosby
3. Swaminadhan S, Advanced Text book on foods & nutrition, Vol. I&II (2<sup>nd</sup> revised and enlarge) Rappc. 1985.
4. Vijaya K hader, Food, nutrition & health, Kalyan Publishers, 2000.



## **SUBJECT: COMPUTER SCIENCE**

### **SEMESTER-I**

#### **Paper I: COMPUTER FUNDAMENTALS AND MS OFFICE**

##### **Unit – I**

Introduction to Computers  
Input and Out Put Devices

##### **Unit – II**

Computer Memory and Processors  
Number Systems and Computer Codes

##### **Unit – III**

Computer Software  
Operating Systems

##### **Unit – IV**

Introduction to Algorithms and Programming Languages  
MS Word:  
Getting Started.  
Working with Microsoft Office 2007.  
Understanding Word Basics. Editing and Formatting Text. Formatting Documents  
Working with Graphic Objects.

##### **Unit – V**

Microsoft Excel:  
Understanding Excel Basics. Formatting and Editing the Worksheet. Using Formulas and Functions. Working with Charts.  
Microsoft PowerPoint.:  
Understanding PowerPoint Basics. Formatting and Modifying Presentations. Enhancing the Presentation.

##### **TEXT BOOK:**

1. Fundamentals Of Computers ” by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. Microsoft Office 2007 Fundamentals, 1st Edition By Laura Story, Dawna Walls (UNIT I, UNIT II, UNIT III, UNIT IV)

##### **REFERENCE BOOK:**

1. “Computer Fundamentals and Programming in C” by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. **PC SOFTWARE UNDER WINDOWS** by Puneet Kumar And Sushil Bhardwaj From Kalyani Publishers

**SUBJECT: B.Com. COMPUTER APPLICATIONS**

**SEMESTER –I**

**FUNDAMENTALS OF COMPUTERS**

**UNIT I**

Introduction to Computers  
Input and Output Devices

**UNIT II**

Computer Memory and Processors  
Number Systems and Computer Codes

**UNIT III**

Boolean algebra And Logic Gates  
Computer Software

**UNIT IV**

Operating Systems  
Introduction to Algorithms and Programming Languages  
Database Systems

**UNIT V**

Computer Networks  
Internet  
Emerging Computer Technologies

**TEXT BOOKS :**

1. Fundamentals Of Computers By Reema Thareja from Oxford University Press

**REFERENCE BOOKS :**

1. Peter Norton, Introduction to Computers, 6<sup>th</sup> Edition , Tata McGraw – Hill , 2008 .
2. Jacob Beckerman, How to Build a Computer 2014-15: Learn, Select Parts, Assemble, and Install: A Step by Step Guide to Your First Homebuilt.
3. Leon A and Leon M, Computers for Everyone, Leon Vikas , 2001 .
4. Turban E, Rainer R K , and Potter R E , Introduction to Information Technology , John Wiley & Sons , 2000.

**SUBJECT: DAIRY SCIENCE**  
**SEMESTER-I**  
**Paper I: DAIRY HUSBANDRY-I**

**Unit I:**

Livestock census; Breeds of Dairy cattle, Buffaloes and Goats. Indigenous, Exotic and Crossbred Cattle breeds

**Unit II:**

Anatomy of Udder; Development of udder; Lacto genesis and Galactopoises; Let down of milk.

**Unit III:**

Artificial insemination; Oestrous cycle; Symptoms of heat in cows and buffaloes. Conception, Pregnancy diagnosis in cattle. Multi ovulation and embryo transfer technique. Cloning.

**Unit IV:**

Economic traits of Dairy cattle. Methods of selection of dairy animals.

**Unit V:**

Systems of Dairy cattle breeding. Inbreeding, out breeding, Cross breeding, Grading up. Breeding systems suitable to enhance milk production in India (Cross breeding of cattle and Grading up of buffaloes).

**Practical:**

1. Points dairy cow.
2. Identification of different breeds of dairy cattle and buffaloes.
3. Male and female reproductive systems.
4. Symptoms of heat in cow.
5. Artificial insemination
6. Pregnancy diagnosis in cattle.
7. To study the comparative merits of cows and buffaloes; zebu and crossbred cows

**Reference books**

1. Text book of Animal Husbandry - G C Benarjee
2. Hand book of Animal Husbandry - ICAR Edition
3. Principles and practices of Dairy Farm – Jagdish Prasad

## **SUBJECT: ELECTRONICS**

### **SEMESTER-I**

#### **Paper- I : BASIC CIRCUIT THEORY**

##### **UNIT I**

###### **A.C CIRCUIT FUNDAMENTALS**

The sinusoidal voltage and current-Average and R.M.S values- phasor representation-‘j’ operator, polar and rectangular forms of complex numbers, A.C applied to RC, RL and RLC circuits –phasor diagrams-concept of impedance-power factor in a.c circuits, numerical problems.

###### **PASSIVE NETWORKS**

Concept of ideal as well as practical voltage and current sources, Regulation Kirchhoff’s current law – Kirchhoff’s voltage law - Method of solving A.C and D.C circuits by Kirchhoff’s laws – Loop analysis – Nodal analysis – numerical problems.

##### **UNIT II**

###### **NETWORK THEOREMS**

Maximum power transfer theorem -Super position theorem – Thevenin’s theorem – Norton’s theorem – Thevenising a circuit–Thevenin Norton conversion –Milliman theorem- Reciprocity theorem- problem solving applications for all the theorems.

##### **UNIT III**

###### **RC and RL CIRCUITS**

Transient response of RL and RC circuits with step input, Time constants, Frequency response of RC and RL circuits, their action as low pass and high pass filtersPassive differentiating and integrating circuits ,numerical problems.

##### **UNIT IV**

###### **RESONANCE IN ELECTRIC CIRCUITS**

Resonance in series and parallel R- L- C circuits ,Resonant frequency, Q-factor, bandwidth, selectivity. Comparison of series and parallel resonance .Tank circuit-LC oscillations, numerical problems.

##### **UNIT V**

###### **CATHODE RAY OSCILLOSCOPE**

CRT and its working ,Electron gun, electrostatic and magnetostatic deflections. Deflection sensitivity, Fluoscent screen, CRO block diagram, Measurement of voltage, frequency and phase, Function generator-Block diagram and its description.

###### **TEXT BOOKS:**

- 1.Electric circuits by David A.Bell 7<sup>TH</sup> edition Oxford higher education
2. Robert L Boylestad, “Introductory circuit analysis”,Universal BookStall Fifth edition,2003

3. Circuit analysis by P. Gnanasivam - Pearson education
4. Networks, lines & fields by Ryder - PHI
5. Circuits and Networks - A. Sudhakar and Shyam mohan - TMH

***PRACTICALS - I***  
***(At least Seven experiments should be done)***

1. Measurement of D.C & A.C voltage, frequency using CRO.
2. Thevenin's theorem – Verification.
3. Norton's theorem – Verification.
4. Maximum power transfer theorem - Verification.
5. CR Circuits – Frequency response (Low pass and High pass)
6. LR Circuits – Frequency response (Low pass and High pass)
7. LCR Series resonance circuit – frequency response, Determination of Q and Band width
8. LCR parallel resonance circuit – frequency response, Determination of Q and Band width

***LAB MANUAL***

1. Zbar, Malvino and Miller, Basic Electronics, A Text Lab Manual, Tata McGraw Hill.

**SUBJECT: GEOLOGY**

**SEMESTER-I**

**Paper- I : Physical Geology & Crystallography**

**Unit –I**

General aspects. Definition of geology - Basic assumptions of Geology - Its relationship with other sciences - Branches of geology - Aim and applications of geology. Earth as a planet: its shape, size, and density - movement and then effects. Origin and age of the earth.

Geological process - exogenic and endogenic. Definition of weathering - types of weathering of rocks - Physical and chemical; Definition of erosion and denudation, cycle of erosion; erosion, transportation and deposition; agents of erosion.

**Unit-II**

Rivers: Erosion, transportation and deposition of river (fluvial) cycle in different stages - Development of typical land forms by river erosion and deposition. V or V-Shaped valley. U-shaped valley. Waterfall alluvial form, meander, ox-bow lake-flood plane, natural plane, peneplain and deltas. Types of rivers.

**Groundwater:** Storage of ground water - porosity, permeability, aquifer, water table, zone of saturation, artesian well, spring, geysers - development of typical land form by erosion and deposition by groundwater [Karst topography] sinkhole, cavern, Stalactites and stalagmites.

**Glaciers:** Definition of a glacier - types of glaciers - development of typical land forms by glacial erosion and deposition – cirque, hanging valley, Rocks-monadnocks. Morains, drum-line, kames, eskers and varves. Characteristic features of glaciated regions

### **Unit-III**

**Seas:** offshore profile - land forms of sea - marine deposits and coral reefs. Lacustrine deposits. Atmospheric circulation, weather and climatic changes, land air, sea interaction. Earth's heat budget and global climatic changes.

**Wind:** Development of characteristic features by wind (arid cycle), erosion and deposition - pedestal rock - mushroom topography - Incelberg - Ventifacts -sand dunes.

**Earthquakes:** Cause, kinds of earthquake waves, and mode of propagation, intensity of earthquakes, Richters scale - seismograph and seismogram. Effects of earthquakes, earthquake zones - Interior of the earth based on seismic theory - Volcanoes: origin, products of Volcanoes.

**Continental Drift & Plate tectonics:** Theory of Plate tectonics – nature and origin of ocean floor.

### **Unit-IV**

**Definition of a crystal - amorphous and crystalline states. Morphology of Crystals - face, edge, solid angle, interfacial angle. Forms: Simple, combination, closed and open forms. Symmetry: Plane, axis, center. Crystallographic axes. Parameters, indices; crystallographic notation - parameter system of Weiss, index system of Miller.**

### **Unit-V**

Classification of crystals into systems

Morphological study of the following classes of symmetry

- I. Cubic system – Galena type
- II. Tetragonal system - Zircon type
- III. Hexagonal system - Beryl type
- IV. Trigonal system - Calcite type.
- V. Orthorhombic system - Barites type
- VI. Monoclinic system - Gypsum type -
- VII. Triclinic system - Axinite type

**Twinning:** Definition of twinning, Laws of twinning and Types of twinning

### **Text books:**

1. Holmes Principles of Physical Geology - D.L. Holmes
2. Physical Geology - A.N. Stracher

- |                                       |   |               |
|---------------------------------------|---|---------------|
| 3. A book of Physical Geology         | - | A K Datta     |
| 4. An Introduction to Crystallography | - | R.C. Phillips |
| 5. Essential of Crystallography       | - | E. Flint.     |

**References:**

- |   |   |                             |
|---|---|-----------------------------|
| 1. Basic Physical Geology                         | - | E.S. Robinsion              |
| 2. The evolving Earth: A text in Physical Geology | - | E.S. Sawkins. et al.        |
| 3. Physical Geology                               | - | B.F. Mallory and D.N. Gargo |
| 4. A textbook of mineralogy                       | - | E.S. Dana and W.E. Ford     |

**Practical-I- Physical Geology & Crystallography**

Interpretation of morphometric data/drainage systems, Identification of geomorphological features in topographical maps.

Study of symmetry, and form of the Normal classes of seven crystal systems of the following:

- I. Cubic system – Normal (Galena)
- II. Tetragonal system – Zircon type
- III. Hexagonal system – Beryl type
- IV. Trigonal system – Calcite type
- V. Orthorhombic system – Barites type
- VI. Monoclinic system – Gypsum type
- VII. Triclinic system – Axinite type

## **SUBJECT: HOME SCIENCE**

### **SEMESTER-I**

#### **Paper I: 101 Basic Nutrition**

##### **Unit I**

Definition and introduction to nutrition-good nutrition and mal nutrition Macro Nutrients - Classification, digestion, absorption, functions, dietary sources, RDA, clinical manifestations of deficiency and excess and storage in the body of the following in brief:  Energy  Carbohydrates, lipids and proteins

##### **Unit II:**

Classification, digestion, absorption, functions, dietary sources, RDA, clinical manifestations of deficiency and excess of the following in brief:  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 and zinc

##### **Unit III:**

- A) Energy value of foods and energy requirement – the body's for energy BMR activities, utilization of food to energy requirements.
- B) Basal metabolism, factors affecting basal metabolic rate, calorogenic effect of food, specific dynamic action of food.
- C) Acid base balance.

##### **Unit IV:**

Importance of water and water balance – functions, sources, requirement – effect of deficiency.

##### **Unit V:**

- A) Interrelation between nutrients – nutrition and health – visible symptoms of good health.
- B) Nutrition and Infectio

#### **PRACTICALS**

1. Identification of nutrient rich sources of foods, their seasonal availability and price.
2. Study of nutrition labelling on selected foods.
3. List out low cost nutrient rich foods.
4. List out nutrient foods for different income groups.

#### **REFERENCES**

1. Bamji MS, Krishnaswamy K, Brahman GNV (2009). Textbook of Human Nutrition, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd.
2. Wardlaw MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition Mosby
3. Swaminadhan S, Advanced Text book on foods & nutrition,(1985) Vol. I&II (2<sup>nd</sup> revised and enlarge) Rappc.
4. Vijaya Khader, (2000)Food, nutrition & health, Kalyan Publishers,



## **SUBJECT: HOME SCIENCE**

### **SEMESTER-I**

#### **Paper I: 102 Biochemistry**

##### **Unit-I**

Chemistry of carbohydrates, chemical characteristics, classifications, Isomerism – (Stereo – Geometrical & optical isomerism) structure of glucose, properties and tests of mono, di and polysaccharides, ring structure & tautomeric forms of sugars, colour reactions of carbohydrates.

##### **Unit-II**

Chemistry of lipids – Classifications and properties of fatty acids, and lipids. Colour reactions of lipids.

##### **Unit-III**

Chemistry of proteins: Definition, properties, classification, structures of proteins and amino acids. Colour reactions of proteins.

##### **Unit-IV**

Enzymes – definition, properties, classification, nature mode of action, activation, inhibition and function , Factors effecting enzyme activity.

##### **Unit-V**

Nucleic acids- DNA structure, Types of RNA,Nucleoproteins – Their role in protein synthesis.

#### **PRACTICALS**

1. Qualitative analysis of carbohydrates- Monosaccharides (Glucose, Fructose),Disaccharides (Lactose, Maltose and Sucrose) and Polysaccharides(Starch).
2. Qualitative analysis of amino acids (Tyrosine, Tryptophan and Arginine).
3. Qualitative analysis of Lipids.

#### **REFERENCES**

- 1.A.V.S.S. Rama Rao, A Text book of Biochemistry, 6<sup>th</sup> edition, UBSPD publications.
- 2.J.L.Jain, Sunjay Jain, Nitin Jain, S.C.H and publications.
- 3.S.C.Rastogi, Biochemistry, TATA MC Graw Hill 2<sup>nd</sup> edition.
- 4.U.Satyanarayana, Biochemistry, Uppala Author publishers, 2<sup>nd</sup> edition.
- 5.BIOCHEMISTY – Saras publications

## **SUBJECT: HOME SCIENCE**

### **SEMESTER-I**

#### **Paper I: 103 Microbiology**

##### **UNIT-I**

Introduction to Microbiology history and its value. Relation of Microbiology to other sciences.  
Microscopic world: Protozoa, Algal, Molds, Actinomycetales, Saccharomycetes, Bacteriaceae, Rickettsiae, Viruses, Classification – General characteristics of microorganisms, Morphology, Growth, Nutrition, Reproduction

##### **UNIT –II**

Microbial pathogenesis Important bacterial (Cholera, Typhoid, Leprosy, Tuberculosis, Diphtheria) Rickettsial (typhus, group of spotted fever) Viral (Measles, Encephalitis, Influenza, Poliomyelitis) Protozoa: Diseases (Amoebiasis, Malarial disease of man)

- A) Modes of infection, diagnosis, treatment, and control of infection of the above mentioned diseases

##### **UNIT –III**

- A) Bacterial physiology, Motility, growth and death of Bacteria, growth requirements – Temperature Oxygen, P<sup>H</sup>  
B) Microorganisms in fermentation and decay  
C) Bacterial Genetics – Variations, Mutations & Recombination

##### **UNIT –IV**

Microbiology of foods and dairy products (vegetables, fruits, eggs, meat, milk, fish), Methods of food preservation, Food borne infections, Food poisoning Afla toxins

##### **UNIT –V**

Microbiology of Special Environment

- A) Study of microbes in soil, water, air sewage and plants, and animals  
B) Sanitation of drinking water  
C) Role of Microbes in carbon and nitrogen cycle

##### **PRACTICALS**

1. Precautions to be taken in the Microbiology laboratory
2. Study of Microscope and its parts
3. Sterilization procedures
  - a) Autoclaving
  - b) Hot air oven
4. Media preparation
  - a) Nutrient agar
  - b) Nutrient broth
  - c) Macconkey's agar
  - d) SDA

## **REFERENCES**

1. Text book of Microbiology by P.D. Sharma.
2. General Microbiology by R.P. Singh.
3. General Microbiology by Pelczar.
4. College Microbiology by Sundar Rajan.
5. Microbiology by Saras Publications.

## **Subject: MATHEMATICS**

### **SEMISTER-I**

### **Paper-I: DIFFERENTIAL EQUATIONS**

#### **UNIT-I**

##### **Differential Equations of first order and first degree:**

Linear differential equations; Differential Equations reducible to linear form ; Exact differential equations ; Integrating factors; Change of variables ; Simultaneous differential equations; Orthogonal Trajectories.

#### **UNIT- II**

##### **Differential Equations of first order but not of the first degree:**

Equations solvable for p; Equations solvable for y; Equations solvable for x; Equations that do not contain x (or y); Equations of the first degree in x and y – Clairaut's equations.

#### **UNIT –III**

##### **Higher Order linear Differential Equations-I**

Solution of Homogeneous linear differential equations of order n with constant coefficients.  
Solution of the non - homogeneous linear differential equations with constant coefficients by means of Polynomial operators.

#### **UNIT –IV**

##### **Higher Order linear Differential Equations-II**

Method of Variation of parameters; Linear differential equations with non- constant coefficients; The Cauchy- Euler equation.

#### **UNIT –V**

##### **Partial Differential Equations-I**

Formation of partial differential equations-Equations of first order-Lagrange's Linear Equation-Charpit's method- Standard types of first order non linear partial differential equations.

***Prescribed Text Books:***

1. Scope and treatment as in Differential Equations and Their Applications by Zafar Ahsan, published by Prentice –Hall of India Pvt. Ltd. New Delhi- Second edition.

**Reference Book:**

1. Differential Equations with applications and programs- S. Balachandra Rao&HR anuradha-universities Press

**SUBJECT: MICROBIOLOGY**

**SEMESTER-I**

**Paper I: Introductory Microbiology, Microbial Techniques and Biology of Microorganisms**

**UNIT-I**

History and Mile stones in Microbiology- Meaning, definition and history of Microbiology. Contributions of Antony von Leeuwenhoek, Edward Jenner, Louis Pasteur, Robert Koch, Iwanowsky, Beijerinck, Winogradsky and Alexander Fleming. Importance and applications of Microbiology. Virology- Basics of Virology, history, milestones, taxonomy and significance of virology.

**UNIT-II**

Classification of microorganisms – Hackel’s three -kingdom concept – Whittaker’s five -kingdom concept and three domain concept of Carl Woese and phylogenetic trees. Basis of modern microbial classification and their concepts, nomenclature and taxonomic ranks. General characters of Fungi (Yeasts, Candida) – Algae (Cyanobacteria, Chlorella), Protozoa (Entameoba, Leishmania, Plasmodium). Isolation and identification of Microorganisms- Principles and types of stains (Simple, differential and negative stains), structural stains - spore, capsule, flagella. Hanging-drop method.

**UNIT-III**

Sterilization and disinfection techniques Principles and methods of sterilization. Physical methods - autoclave, hot-air oven, pressure cooker, laminar air flow, filter sterilization. Radiation methods - UV rays, gamma rays, ultrasonic methods. Chemical methods - Use of alcohols, aldehydes, fumigants, phenols, halogens and hypochlorites. Phenol coefficient.

**UNIT-IV**

Isolation of pure culture techniques - Enrichment culturing, dilution-plate, streak-plate, spread-plate and micromanipulator. Preservation of microbial cultures - sub culturing, overlaying cultures with mineral oils, lyophilization, sand cultures, storage at low temperature (ultra low temperature).

**UNIT-V**

Differentiation of prokaryotes and eukaryotes. General characteristics of bacteria, archaeobacteria, rickettsias, mycoplasmas, cyanobacteria and actinomycetes. Outline

classification for bacteria as per the second edition of Bergey's Manual of Systematic Bacteriology (up to order level). Ultra structure of a bacterial cell: Invariant components - cell wall, cell membrane, ribosomes, nucleoid. Variant components - Capsule, flagella, fimbriae, endospore and storage granules. General characteristics and classification of viruses- animal, plant and microbial. Morphology, structure and replication of TMV, HIV and lambda bacteriophage. Eukaryotes - General characteristics and classification (up to the order level) of eukaryotic microorganisms – micro protozoa, microalgae, molds and yeasts.

### **PRACTICAL- Introductory Microbiology, Microbial Techniques and Biology of Microorganisms**

1. Precautions to work in Microbiology laboratory.
2. Preparation of culture media: Solid / Liquid.
3. Isolation of single colonies on solid media.
4. Enumeration of bacterial numbers by serial dilution and plating- spread and streak.
5. Light and compound microscope and its handling.
6. Simple and differential staining (Gram's staining).
7. Spore staining, capsule staining and negative staining.
8. Motility of bacteria by Hanging drop method.
9. Contributors of Microbiology- photographs.
10. Electron micrographic representation of viruses-TMV, HIV, Bacteriophages.
11. Physical methods - autoclave, hot-air oven, pressure cooker, laminar air flow, filter sterilization.
12. Microscopic observation of cyanobacteria (*Nostoc*, *Spirulina*), algae (*Scenedesmus* sp., diatoms) and fungi (*Saccharomyces*, *Rhizopus*, *Aspergillus*, *Penicillium*, *Fusarium*).
13. Calibrations of microscopic measurements (Ocular, stage micrometers)- bacteria, fungal spores.

**Note: S.No. 5,6,7,8,13 practicals are compulsory for major experiments.**

#### **Reference Books for Theory papers:**

1. Black, J.G. (2005). Microbiology: Principles and Explorations, John Wiley, USA.
2. Tortora, G.J., Funke, B.R. and Case, C.L. (2004). Microbiology: An Introduction. Pearson Education, Singapore.
3. Prescott, M.J., Harley, J.P. and Klein, D.A. (2002). Microbiology. 5th Edition, WCB Mc GrawHill, New York.
4. Dimmock, N.J., Easton, A.J. and Leppard, K.N. (2001). Introduction to Modern Virology, Blackwell Science Ltd, U.K.
5. Madigan, M.T., Martinkl, J.M. and Parker, J. (2000). Brock Biology of Microorganisms, 9th Edition, MacMillan Press, England.

#### **Text Books for Theory papers:**

1. Singh, R.P. (2007). General Microbiology. Kalyani Publishers, New Delhi..
2. Ram Reddy, S. and Reddy, S.M. (2007). Essentials of Virology. Scientific Publishers India, Jodhpur.
3. Reddy, S.M. (2003). University Microbiology –I . Galgotia Publications Pvt Ltd., NewDelhi.
4. Dube, R.C. and Maheswari, D.K. (2000) General Microbiology. S Chand ,New Delhi.

### **Lab Manuals for Practicals:**

#### **International lab manuals:**

1. Benson, J.H. (2005). Microbiological Applications: Laboratory Manual in General Microbiology. 7th Edition, McGraw Hill Publications, New York.
2. Cappuccino, J.G. and Sherman, N. (2005). Microbiology – A Laboratory Manual. 7<sup>th</sup> Edition. Pearson Education. Published by Dorling Kindersley (India) Pvt. Ltd.
3. Alcamo, I.E. (2001). Laboratory Fundamentals of Microbiology. Jones and Bartlett Publishers, USA.
4. Mahy, B.W.J. and Kangro, H.O. (1996). Virology – Methods Manual. Academic Press, USA.  
Burleson *et al.* (1992). Virology – A Laboratory Manual. Academic Press, USA

#### **Indian lab manuals:**

1. Gopal Reddy, M., Reddy, M.N., Saigopal, DVR and Mallaiiah, K.V. (2007). Laboratory Experiments in Microbiology, 2nd edition. Himalaya Publishing House, Mumbai.
2. Dubey, R.C. and Maheswari, D.K. (2006). Practical Microbiology, S. Chand & Co., New Delhi.
3. Aneja, K.R. (2001). Experiments in Microbiology, Plant pathology, Tissue culture and Mushroom Production Technology, 3rd Edition, New Age International (P) Ltd, Publishers, New Delhi.
4. Reddy, S.M. and Reddy S.R. (1998). Microbiology – Practical Manual, 3rd Edition, Sri Padmavathi Publications, Hyderabad.

### **Subject: PHYSICS**

#### **SEMESTER- I**

#### **Paper I: Mechanics & Properties of Matter**

#### **(For Maths Combinations)**

#### **UNIT I: Vector Analysis**

Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field with derivations and physical interpretation. Vector integration (line, surface and volume), State and proof of Gauss and Stokes theorem.

#### **UNIT II: Mechanics of particles**

Laws of motion, motion of variable mass system, motion of a rocket. Conservation of energy and momentum. Collisions in two and three dimensions. Concept of impact parameter, scattering cross-section. Rutherford scattering-derivation.

#### **UNIT III:**

##### **1. Mechanics of Rigid bodies**

Definition of rigid body, rotational kinematic relations, equation of motion for a rotating body, angular momentum. Euler equation, precession of a top. Gyroscope, precession of the equinoxes.

## 2. Mechanics of continuous media :

Elastic constants of isotropic solids and their relation, Poisson's ratio and expression for Poisson's ratio in terms of  $\nu$ ,  $n$ ,  $k$ . Classification of beams, types of bending, point load, distributed load, shearing force and bending moment, sign conventions.

### UNIT IV: Central forces

Central forces, definition and examples, conservative nature of central forces, conservative force as a negative gradient of potential energy, equation of motion under a central force. Derivation of Kepler's laws. Motion of satellites.

### UNIT V : Special theory of relativity

Galilean relativity, absolute frames. Michelson-Morley experiment, negative result. Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction, addition of velocities, mass-energy relation. Concept of four-vector formalism.

### Reference Books:

1. BSc Physics -Telugu Akademy, Hyderabad
2. Mechanics - D.S. Mathur, *Sulthan Chand & Co, New Delhi*
3. Mechanics - J.C. Upadhyaya, *Ramprasad & Co., Agra*
4. Properties of Matter - D.S. Mathur, *S.Chand & Co, New Delhi ,11<sup>th</sup> Edn., 2000*
5. Physics Vol. I - Resnick-Halliday-Krane ,*Wiley, 2001*
6. Properties of Matter - Brijlal& Subrmanyam ,*S.Chand &Co. 1982*
7. Dynamics of Particles and Rigid bodies– Anil Rao, *Cambridge Univ Press, 2006*
8. Mechanics-EM Purcell, *Mc Graw Hill*
9. University Physics-FW Sears, MW Zemansky & HD Young, *Narosa Publications, Delhi*
10. College Physics-I. T. Bhimasankaram and G. Prasad. *Himalaya Publishing House.*
11. S.G.Venkatachalapathy, Mechanics, *Margham Publication, 2003.*

### Practical paper 1: Mechanics

#### Minimum of 8 experiments to be done and recorded

1. Volume resonator
2. Viscosity of liquid by the flow method (Poiseuille's method)
3. Young's modulus material a rod by uniform bending
4. Young's modulus material a rod by non- uniform bending
5. Surface tension of a liquid by the method of drops
6. Surface tension of a liquid by capillary rise method
7. Determination of radius of capillary tube by Hg thread method
8. Viscosity of liquid by logarithmic decrement method
9. Bifilar suspension –moment of inertia.
10. Rigidity modulus of material of a wire-dynamic method (torsional pendulum)
11. Fly-wheel
12. Determination of Y of bar –cantilever.

## Subject: PHYSICS

### SEMESTER- I

#### Paper I: Mechanics & Properties of Matter (For Non-Mathematics Combinations)

#### UNIT -I

##### 1. Mathematical Background:

Scalars and vectors –vector addition-scalar and vector products of vector and their physical significance-vector calculus-gradient of a scalar point function-divergence and curl of vector-statements of stokes and Gauss theorems -examples (no derivations).

##### 2.Motion of system:

Collisions- Elastic and inelastic collisions-Collisions in one and two dimension-Rocket propulsion-Center of mass-Motion of the centre of mass-Impact parameter-Scattering cross-section, Rutherford scattering (No derivation-Qualitative ideas only)

#### UNIT II

##### 3. Mechanics of Rigid body:

Rotational kinetic energy and moment of inertia -Calculating the moment of inertia in simple cases (Rod, disc, sphere and cylinder)-parallel & Perpendicular axes theorems-Torque-relation between torque and angular momentum.

Angular momentum of a particle-Torque and angular momentum for a system of particles-conservation of angular momentum-Translation and rotational motion of system-Elementary ideas about gyroscopic motion (No derivation –discussion of results)- precession of the equinoxes

#### UNIT-III

##### 4.Central forces

Central force- Def & examples- General properties of central forces-Conservative nature of central forces, Planetary motion-Kepler's laws (Statements & Explanation), Newton's law of gravitation from Kepler's law, Geostationary Satellite Motion.

#### UNIT-IV

##### 5. Fluid Flow

The flow of ideal fluids-Equation of continuity –Bernoulli's equation-Torricelli's theorem-The venture meter-Pitot's tube-Viscosity and the flow of real fluids- Poiseuille's equation.

#### UNIT V

##### 6. Relativistic effects

Moving reference frames-Inertial reference frames-Galilean relativity (Elementary treatment only, application to be covered)–Special theory of relativity-Statements of the two basic postulates-Lorentz transformation equations-length contraction-time dilation-addition of velocities-Momentum and relativistic mass- Mass –Energy equation, rest mass & momentum of a particle.



## Reference Books :

1. BSc Physics -Telugu Akademy, Hyderabad
2. Properties of Matter - D.S. Mathur, *S.Chand & Co, New Delhi ,11<sup>th</sup> Edn., 2000*
3. Properties of Matter - Brijlal& Subrmanyam ,*S.Chand &Co. 1982*
4. Physics for Biology and Premedical Students –D.N. Burns & SGG Mac Donald
5. Unified Physics Vol.I Mechanics,Waves and Oscillations – *Jai Prakash Nath & Co.Ltd., Meerut.*

## Subject : STATISTICS ( with Mathematics combination)

### SEMESTER – I

#### Paper – I : Descriptive Statistics and Probability

##### UNIT – I

Concepts of Primary and Secondary data. Methods of collection and editing of primary data, Designing a questionnaire and a schedule. Measures of Central Tendency – Mean, Median, Mode, Geometric Mean and Harmonic Mean.

##### UNIT – II

Measures of dispersion : Range, Quartile Deviation, Mean Deviation and Standard Deviation. Central and Non-Central moments and their interrelationship Sheppard's correlation for moments, Skewness and kurtosis.

##### UNIT – III

Basic concepts of Probability, random experiments, trial, outcome, sample space, event, mutually exclusive and exhaustive events, equally likely and favourable outcomes. Mathematical, Statistical, axiomatic definitions of probability. Conditional Probability and independence of events.

##### UNIT – IV

Addition and multiplication theorems of probability for 2 and for a n events. Boole's inequality and Baye's theorems and problems based on Baye's theorem.

##### UNIT – V

Definition of random variable, discrete and continuous random variables, functions of random variable. Probability mass function, Probability density function, Distribution function and its properties.

Bivariate random variable – meaning, joint, marginal and conditional Distribution, independence of random variables.

#### Practicals – Semester – I

1. Diagrammatic representation of data (Bar and Pie)

2. Graphical representation of data (Histogram, Frequency Polygon, Frequency curves, Ogives)
3. Central and non central moments and Sheppard's corrections for moments.
4. Measures of Skewness and Kurtosis.
5. MS – Excel methods for the above serial numbers 1,2,4.

**Reference Books:**

1. Introduction to probability – Charles M. Rinstead, J. Laurie Snell.
2. Fundamentals of Mathematical Statistics by VK Kapoor & S.C. Gupta
3. Fundamentals of Statistics – Goon Gupta, Das Gupta
4. Sambavyatha avadi Sidhantam – Telugu Academy
5. Hoog, Tams Rao: Probability and Statistical Inference 7<sup>th</sup> edition Pearson.
6. B.A / B.Sc., I Year Statistics – descriptive Statistics, probability distribution – Telugu Academy – Dr. M. Jagannathan Rao, Dr. N. Srinivasa Rao, Dr. P. Tirupathi Rao, Smt. D. Vijayalakshmi.

**Subject : STATISTICS ( with Non- Mathematics combination)**

**SEMESTER – I**

**Paper – I : Elementary Mathematics**

**UNIT – I**

Concept of sequences and series, fundamentals of sets and functions, types of functions, solution of simultaneous linear equations, quadratic equations.

**UNIT – II**

Progressions - A.P, G.P, H.P, permutations, combinations, Binomial theorem.

**UNIT – III**

Definition and types of matrices, addition, subtraction, scalar multiplication of matrices

**UNIT – IV**

Determinant of Matrix. Transpose of a matrix, inverse and rank of 3X3 matrices only. Solution - simultaneous linear equations by matrix methods.

**UNIT - V**

Differentiations, derivatives of algebraic and exponential functions. Maxima and Minima of a function. Integration basics, Integration by parts and by substitution.

**Practicals - Semester - I**

1. Solution to simultaneous Linear equations.
2. Progressions - AP,GP.I--IP.

3. Addition, Subtraction, Multiplication of Matrices.
4. Determinant of a Matrix.
5. Simple differentiation, Integrations.

**Reference Books:**

1. Statistical methods - S.P. Gupta
2. Fundamentals of Mathematical statistics - SC Gupta and V.K.Kapoor
3. Differential Calculus-Sanathi Narayana
4. Outlines of Matrices - Schaum

**Subject: ZOOLOGY**

**SEMESTER-I**

**Paper - I :ANIMAL DIVERSITY OF INVERTBRATES**

**UNIT I**

- 1.0 Brief History, Significance Of Diversity Of Invertebrates
- 1.1 Phylum Protozoa:- General Characters And Outline Classification Upto Classes With Examples; Type Study: Elphidium,
- 1.3 Phylum Porifera:- General Characters And Outline Classification Upto Classes With Examples; Type Study: Sycon, Canal System In Sponges.

**UNIT II**

- 2.0 Phylum Coelenterata :- General Characters And Outline Classification Upto Classes With Examples; Type Study: Aurelia ,Polymorphism In Coelenterates: Corals And Coral Reef Formation.
- 2.1 Phylum Platy helminthes :- General Characters And Outline Classification Upto Classes With Examples; Type Study: Fasciola hepatica.
- 2.2 Phylum Nematelminthes :- General Characters And Outline Classification Upto Classes With Examples.

**UNIT III**

- 3.0 Phylum Annelida :- General Characters And Outline Classification Upto Classes With Examples; Type Study: Leech., Metamerism In Annelida.
- 3.1 Vermiculture : Scope, Significance of Vermiculture Earthworms Sps, Processing of Vermiculture,Vermicompost,Economic Importance Of Vermicost.

**UNIT- IV**

- 4.0 Phylum Arthropoda:- General Characters And Outline Classification Upto Classes With Examples; Type Study: Macrobrachium rosenbergii (Scampi).  
Onychophora:- Peripatus-Structure ,Affinities
- 4.1 Phylum Mollusca:- General Characters And Outline Classification Upto Classes With Examples.

Pearl Formation In Pelecypoda.  
Torsion In Gastropoda.

#### **UNIT-V**

- 5.0 Phylum Echinodermata: General Characters And Outline Classification Upto Class With Examples; Water Vascular System Of Star Fish.
- 5.1 Invertebrates Larval Forms: Amphiblastula, Ephyra, Trochophora, Nauplius, Zoea, Mysis, Megalopa, Glochidium , Bipaneria .
- 5.2 Hemichordata: General Characters And Outline Classification Upto Classes With Examples; Balanoglossus:Structure , Affinities & Tornaria Larvae

#### **Reference books:**

- 1. Modern Text Book Of Zoology Invertebrates ---- R.L. kotpal
- 2. Text Book of Invertebrates- Arumugam et.al.,
- 3. Economic Zoology- Saras Publication
- 4. Old telugu academy

### **Subject: BCA SEMESTER - I**

#### **Paper I: ELEMENTARY MATHEMATICS**

##### **Unit-I: Matrix Algebra:**

**Matrix Algebra:** Types of matrices -Matrix addition and subtraction - Matrix multiplication- Transpose of a matrix, row matrix, column matrix, Symmetric and skew symmetric matrices.

##### **Unit-II: Linear Equations:**

Ad joint of a square matrix- Inverse of square matrix by using Adj A 3 order only.

##### **Solution of Linear Equations.**

- (i) Cramer's Rule
- (ii) Matrix Inverse method

##### **Unit-III: Maxima and Minima:**

**Maxima and Minima:** Introduction- Increasing and decreasing functions -Maxima and Minima Values of a Function in one variable only.

##### **Numerical Integration:**

- 1. Trapezoidal rule
- 2. Simpson's 1/3 rule
- 3. Simpson's 3/8 rule

##### **Unit-IV: Numerical Methods:**

###### **Introduction**

**Solution of algebraic and transcendental equations:** Bisection method - Method of false position - Newton - Raphson method.

**Unit-V: Finite Differences and interpolation:**

Finite Differences - Forward Differences - Backward differences.

Newton's forward interpolation formula - Newton's backward interpolation formula

**Note:** 1. Proofs of theorems and derivations of Expressions are omitted.

**Text Books:**

1. Mathematical Methods by Dr.T.K.V. Ivengar, Dr.B.Krishna Gandhi, Dr. S.Ranganatham, and Dr.M.V.S.S.N. Prasad by S.Chand publications 6th revised edition 2011.

2. Quantitative Techniques by C.Satyadevi by S.chand Company

**Reference books:**

1. Numerical Methods by P.Kandaswamy, K.Thilagavathy, K.Gunavathy by S.Chand

2. Higher Engineering Mathematics by Dr.B.S.Grewal by Karna publisher's 34th edition.

**Subject: BCA****SEMESTER - I****Paper I: COMPUTER FUNDAMENTALS****UNIT – I**

Chapter 1. introduction to Computers

Chapter 2. Input and Output Devices

**UNIT – II**

Chapter 3. Computer Memory and Processors

Chapter 4. Number systems and computer codes

**UNIT – III**

Chapter 5. Boolean algebra and logic gates

**UNIT – IV**

Chapter 6. Computer software

**UNIT – V**

Chapter 8. Introduction to algorithms and programming languages

Chapter 11. The internet

**TEXT BOOK:**

1. "Fundamentals of Computers" by REEMA THAREJA from OXFORD UNIVERSITY PRESS

**BCA I year I semester  
C - PROGRAMMING**

**UNIT – I**

Chapter 8. Introduction to C

**UNIT – II**

Chapter 9. Decision Control and Looping Statements

Chapter 10. Functions

**UNIT – III**

Chapter 11. Arrays

Chapter 12. Strings

**UNIT – IV**

Chapter 13. Pointers

Chapter 14. Structure, Union, and Enumerated Data Types

**UNIT – V**

Chapter 15. Files

**REFERENCE BOOK:**

1. E. Balagurusamy: - COMPUTING FUNDAMENTALS & C PROGRAMMING - Tata McGraw-Hill, Second Reprint 2008, ISBN 978-0-07-066909-3.
2. “Computer Fundamentals and Programming in C” by Reema Thareja”

**Reference Books:**

1. C Programming by Denni’s Riche.
2. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002
3. Henry Mullish & Huubert L. Cooper: The Sprit of C, Jaico Pub. House, 1996

<b>S.No.</b>	<b>Subject</b>	<b>Page No.</b>
<b>ARTS</b>		
<b>1.</b>	<b>Accounts</b>	
<b>2.</b>	<b>Dance</b>	
<b>3.</b>	<b>Economics</b>	
<b>4.</b>	<b>Epigraphy</b>	
<b>5.</b>	<b>Geography</b>	
<b>6.</b>	<b>History</b>	
<b>7.</b>	<b>Indian Culture</b>	
<b>8.</b>	<b>Music</b>	
<b>9.</b>	<b>Musicology</b>	
<b>10.</b>	<b>Philosophy</b>	
<b>11.</b>	<b>Political Science</b>	
<b>12.</b>	<b>Population Studies</b>	
<b>13.</b>	<b>Psychology</b>	
<b>14.</b>	<b>Public Administration</b>	
<b>15.</b>	<b>Rural Development</b>	
<b>16.</b>	<b>Social Work</b>	
<b>17.</b>	<b>Sociology</b>	

**SRI VENKATESWARA UNIVERSITY, TIRUPATI**

**ARTS SYLLABUS AND SEMESTER STRUCTURE**

**SEMESTER I**

Semester	Part	Subject	Hrs	Credits	IA	ES	Total
SEMESTER I	PART I	TELUGU	4		25	75	100
		ENGLISH	5		25	75	100
	PART II	DSC - 1	6		25	75	100
		DSC - 2	6		25	75	100
		DSC - 3	6		25	75	100
	PART III	FC	3		25	75	100
		CSS	2		25	75	100
	TOTALS			32		175	525

**DSC- Discipline Specific Course,**

**CSS – Communication & Soft Skills,**

**FC – Foundation Course**

**SUBJECT: ACCOUNTS  
SEMESTER - I  
Paper I : ACCOUNTANCY**

**UNIT I**

Introduction – Need for accounting – Definition of Accounting – Scope of Accounting – Book-Keeping and Accounting - Branches of Accounting Advantages and Limitations – Basic Accounting concepts and conventions – Accounting Process – Journalizing – Classification of Accounts – Interpretation of Balances on Ledger Accounts – Preparation of Trial Balance.

**UNIT II**

Practical system of Book-keeping – Subsidiary books – Cash Book – Types – Banking Transactions – posting from cash books – Petty Cash Book – Imp rest system – Purchases Book – Sales Books Returns Inward Book – returns Outward Book – Bills receivable book – Bills payable book – Journal proper.



### **UNIT III**

#### **Bank Reconciliation Statement**

Need Reasons for difference between cash books and pass book balances – problems with four able balance overdraft – problems with extracts – cash book and pass book – Ascertainment of correct cash book balance.

### **UNIT IV**

#### **Bills of Exchange**

Definition – Promissory note and bill of exchange – bills receivable and bills payable books – recording of bills transactions journal and ledger – books of drawer and acceptor – honor and dishonor of bills – renewal of bills – Retiring a bill under rebate – Accommodation bills.

### **UNIT – V**

Final accounts of a sole trader – trial balance – capital and revenue expenditure and receipts – accounting concepts and conventions relating to final accounts – trading account, manufacturing account, profit and loss account and balance sheet – adjusting and closing entries.

### **Suggested Readings**

1. Grewal, T.S                      Double Entry Book-Keeping
  2. Grewal, T.S                      Introduction to Accountancy
  3. Gupta, R.L & Gupta V.K   Principles & Practice of Accounting
  4. Patil & Korlahalli              Principles & Practice of Accounting
  5. Jain, S.P & Narang, K.L      Advanced Accountancy
  6. Shukla, M.C & Grewal, T.S      Advanced Accountancy.
-

**S.V. UNIVERSITY, TIRUPATI**  
**T.T. DEVASTHANAMS, S.V.COLLEGE OF MUSIC & DANCE, TIRUPATI**  
**THREE YEARS B. DANCE DEGREE THEORY SYLLABUS - SEMESTER SYSTEM**

**3 సంవత్సరముల బి.డాన్స్ డిగ్రీ నూతన సిలబస్ 2015-2016 నుండి**

<b>PART-II భారతనాట్యము</b>	<b>Internal Marks : 25</b>
	<b>External Marks : 75</b>
	<b>Total Marks : 100</b>

**SEMESTER-I**

**Part-II - Theory - I (a)**

- Unit-I:** అభినయ దర్పణమును అనుసరించి నాట్యము పుట్టుక.
- Unit-II:** లక్షణముల వివరణ - సభాపతి, మంత్రి, సభ మరియు దాని అంగములు, పాత్ర, కింకిణీలు (గజ్జెలు).
- Unit-III:** అడవులు అందలి రకముల గురించి వివరణ.
- Unit-IV:** అభినయ దర్పణముననుసరించి అంగ, ప్రత్యంగ, ఉపాంగములు.
- Unit-V:** అభినయ దర్పణము ననుసరించి అసంయుత, సంయుత హస్తముల లక్షణ, వినయోగములు.

**SEMESTER-II**

**Part-II - Theory - II (a)**

- Unit-I:** నాట్యము యొక్క గొప్పతనము, నాట్యము పుట్టుక - వివిధ కథనాలు.
- Unit-II:** అభినయ దర్పణముననుసరించి దేవతా హస్తాలు, దశావతార హస్తాలు, బాంధవ్య తత్పంబంధ హస్తాలు, చతుర్వర్ణ హస్తాలు, నవగ్రహ హస్తాలు.
- Unit-III:** అభినయ దర్పణము ననుసరించి నృత్యహస్తాలు.
- Unit-IV:** అభినయ దర్పణము ననుసరించి పదకర్మలు, మండలాలు, స్థానకాలు, ఉత్పవనాలు, భ్రమరీలు, చారీలు మరియు గతులు.
- Unit-V:** షడంగములు, పంచజాతుల, సప్తతాళముల, లయ, తాళముల నిర్వచనము.

## **SUBJECT: ECONOMICS**

### **SEMESTER- I**

#### **Paper I : MICRO - ECONOMICS – 1**

##### **Unit -I: Introduction**

Nature, Definition and Scope of economics – Micro and Macro, Static and Dynamic, Normative and Positive – Inductive and Deductive approaches – Partial General Equilibrium – Choice as an Economic Problem

##### **Unit -II: Consumer Behaviour**

Utility analysis – Cardinal and Ordinal approaches – Law of Diminishing marginal utility, Law of Equi-marginal utility – Indifference curves – Properties of Indifference curves – Price (Budget) line – Equilibrium of the consumer with the help of Indifference curves. Demand analysis – Law of Demand – Elasticity of Demand – Price, Income, and Cross elasticities,– Demand forecasting – Meaning and factors influencing demand forecasting -Consumer's Surplus

##### **Unit -III: Theory of Production**

Theories of production – Objectives of a firm - Factors of Production – Concept of Cobb-Douglas production function – Law of Variable Proportions, Law of Returns to Scale – Isoquant approach.

##### **Unit -IV: Costs and Revenue Analysis**

Different Concepts of Revenue and costs - Equilibrium of the Firm – Break-Even analysis

##### **Unit -V: Supply**

Theory of Supply – determinants of Supply – Supply function – Elasticity of supply – types of elasticity of supply.

**[Additional Input Underlined]**

##### **Suggested Books:**

1. R.G. Lipsey and K.A. Chrysal – “ECONOMICS” Oxford University press, 10/e 2004
2. P.A. Samuelson & W.D Nordhaus – “ECONOMICS” Tata mc.Graw Hill, 18/e, 2005
3. N.Gregory Mankiw – “Principles of Economics”, Thompson, 4/e 2007
4. H.L. Ahuja – “Advanced Economic Theory”, S Chand, 2004
5. M.L.Sethy – “Micro Economics”, Laxmi Narayana Agarwal, 2007
6. D.M. Mithani & G.K Murthy – “Fundamentals of Business Economics”, Himalaya Publishing, 2007
7. Telugu Academy Publications
8. AUSSDE – Study material
9. Bilas, A.-“Micro economic Theory”, International Student edition, Mc. Graw Hill, 1971
10. Dr. N.Koti Reddy – “Dictionary of Economics, Samatha Publications, 2011.

**SRI VENKATESWARA UNIVERSITY : TIRUPATI**

**EPIGRAPHY**

**I Year**

**Paper – I FUNDAMENTALS OF INDIAN EPIGRAPHY**

**Unit – I**

Definition and Meaning of Epigraphy – Epigraphy As source for the study of Political and Cultural History of India

**Unit – II**

General contents and format of Inscriptions – Types of Inscriptions – Based on contents

**Unit – III**

Languages of Inscriptions – Prakrit – Sanskrit – Regional languages

**Unit – IV**

Methods of Dating Inscriptions – Different Eras used in Inscriptions

**Unit – V**

Writing materials – Important differences between the Stone Inscriptions and Copper Plate Inscriptions

**Suggested Readings**

- |                      |   |
|----------------------|---|
| 1. Bühler, G         | Indian Paleography                        |
| 2. Panily R>B        | Indian Paleography                        |
| 3. Sircar D>C        | Indian Epigraphy                          |
| 4. Sivarama Murthy C | Indian Epigraphy and South Indian Scripts |
| 5. Mahalingam T.V    | Early South Indian paleography            |
| 6. Ramesh K.V        | Indian Epigraphy                          |
| 7. Krishna Reddy N   | Sasana parichayam (Telugu)                |

*Chairman* 11/06/15  
**CHAIRMAN**  
**Board of Studies**  
Dept. of A.I.H.C. & Archaeology  
S. V. University  
TIRUPATI-2

**SUBJECT: GEOGRAPHY**  
**SEMESTER- I**  
**PAPER I: Geography of India**

**Unit-I**

India: Location, relief structure and drainage systems.  
Climate, soils, natural vegetation.

**Unit-II**

Population: distribution, density, growth and composition.  
Migration, human settlement types and urbanization.

**Unit-III**

Land resources, irrigation, regional variations in cropping pattern,  
Green revolution and problems of Indian agriculture.  
Energy and mineral resources: coal, petroleum, hydroelectricity and nuclear energy, iron  
ore, manganese and mica.

**Unit-IV**

Industries- iron and steel, cotton textile, sugar and petrochemical industries; and  
industrial regions of India.

**Unit-V**

Modes of transport and communication, international trade changing pattern of export and  
import.

**Suggested Readings**

1. Deshpande, C D: India – A Regional Interpretation, Northern Book Depot, New Delhi, 1992.
2. Singh, Gopal : Geography of India, Atma Ram and Sons, 2006.
3. Shafi, M : Geography of South Asia, McMillan and Company, Calcutta, 2000.
4. Singh, R L (ed) : India : A Regional Geography, National Geographical Society, India, Varanasi, 1971.
5. Spate, D H K and ATA Learmonth : Indian and Pakistan – Land, People and Economy, Methnen and Company, London, 1967.

## PRACTICALS (SEMESTER- I)

### Maps and Scales

1. Introduction to Cartography.	
2. Maps and their types.	
3. Scales.	Exercises
(i) Methods of Expressing a scale	2
(ii) Conversion of Statement of Scale into R.F. and vice-versa.	1
(iii) Plain Scale (Km and mile)	1
(iv) Comparative Scale	2
(v) Diagonal Scale	2
(vi) Measurements of distances and areas of Maps	2

### Suggested Readings:

1. F.J. Monkhouse and H.R. Wilkinson (1972) Maps and Diagrams, Mothuen and Co. Ltd., London
2. L.R. Singh and Raghuvander Singh (1973), Map Work and Practical Geography, Central Book Depot, Allahabad.
3. R.L. Singh and P.K. Dutt (1968), Elements of Practical Geography, Students Friends, Allahabad.
4. Singh Gopal (2004) 4<sup>th</sup> edition, Map Work and Practical Geography, Viksa Publication House.

## **SUBJECT: HISTORY**

### **SEMESTER – I**

#### **Paper I: INDIAN HISTORY AND CULTURE**

##### **Unit – I**

Survey of the Sources – Literary Sources- Archaeological Sources - Influence of Geography on History – Unity in Diversity - Prehistoric period – Paleolithic, Mesolithic and Neolithic cultures – Harappan Civilization: Origin, Extent, Urban Planning- Nature of Polity and Economic Organization, Society – Religious Conditions – Downfall of the Civilization

##### **Unit – II**

Vedic Civilization: Vedic Literature – Early Vedic and later Vedic Civilizations –Political, Economic and Religious Conditions in the Society - Emergence of Varna and caste system – Rise of New Religious Movements: Conditions of 6<sup>th</sup> Century B.C. – Jainism – Vardhamana Mahavira. Buddhism – Gauthama Buddha.

##### **Unit -III**

A Brief Survey of Political Conditions in Ancient India -Mahajanapadas – Rise and Expansion of Magadha – Persian, Alexander’s Invasions – Causes and its effects on India - The Mauryan Empire: Origin – Chandragupta Maurya - Ashoka’s Dhama, It’s nature and propagation – Mauryan Administration, Society, Economy, Religion, Art and Architecture – Downfall of the Mauryan Empire.

##### **Unit -IV**

Post - Mauryan Period in North India – Sunga. Kanva dynasties – A brief political survey of Foreign invasions – Kushan – Kanishka – The Age of Satavahanas – Brief Political History - Gauthamiputrasatakarni - Socio Economic Religious Cultural Developments

##### **Unit- V**

Age of Guptas: Brief Political History - Development in the Gupta Period – Administrative System, Society, Economy, Art, Architecture. Literature, Science and Technology – Golden Age of Guptas - Post Gupta Period: Achievements of Harshavardhana – Hiuen Tsang.

Syllabus      UG/CBS/2015  
Indian Culture

Paper I - Indian Ethics

UNIT - I

Introduction to Indian Ethics - Relationship between Religion and Ethics - Philosophy and Ethics - Social Sciences and Ethics

UNIT - II

Introduction to Dharmasutra Literature - Manu dharmasutra - Gautama dharmasutra - Introduction to Nitisutra literature - Sukraniti - Vidwaniti

UNIT - III

Varma and Arjuna dhara - Purusharthas - Dharma - Artha - Kama and Moksha - Dharma in the Bhagavadgita

UNIT - IV

Buddhist Ethics - Jaina Ethics - The doctrine of Karma - Free will - Varma and Caste system

UNIT - V

Karma and Bhaktiyogas in Bhagavadgita - Dalakanda of Valmiki Ramayana.

Books of Reference

1. Sivanaray Argyangar - Hindu Morals and Ideals
2. Radha Krishna S - Indian Philosophy 2 vols.
3. Hiriyanna - The path of perfection
4. Chenna Kesava S - Critical Study of Hinduism
5. Prabhu P.H - Hindu Social Organisation.

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**Ist B.A,PROGRAMME - PHILOSOPHY**  
**SEMESTER – I**  
**PAPER-I INDIAN PHILOSOPHY**  
**I<sup>st</sup> CORE – SYLLABUS - 2015-16**

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**Unit-I** (A) Definition of Philosophy – Branches of Philosophy, Importance of Philosophy in Indian Society

(B) The Nature and Characteristics of Indian Philosophy, Categorization of Astik and Nastik.

**Unit II** (A) Philosophical Speculations of Vedas and Upanishads. Polytheism, Henotheism, Monotheism and Monism -

(B) The concept of Rita, Liberation, Brahman Atman, and Rebirth.

**Unit III** The Central Doctrines of Heterodox Systems.

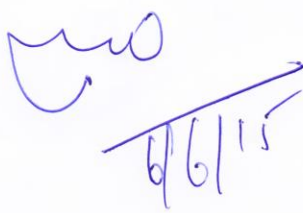
(A) Carvaka School – Epistemology and Metaphysics. Jainism – Nature and Destiny of Jiva (Soul) Syadvada.

**Unit IV** (A) Buddhism : Four Noble Truths, Nairatma – Vada, Pratitya Samutpada.

**Unit V** (B) Arya Astanga Marga Liberation Branches of Buddhism.

**Books for Study:**

1. Hiriyanna M. Outlines of Indian Philosophy.
2. Radhakrishnan. S. Indian Philosophy, Vol I & II.
3. Indian Philosophy, Telugu Academy, Hyderabad.

  
A handwritten signature in blue ink, followed by a horizontal line and the date '6/6/15' written below it.

## **SUBJECT: POLITICAL SCIENCE**

### **SEMESTER - I**

#### **Paper: POLITICAL SCIENCE SEMESTER – I**

##### **UNIT – I**

**Introduction:** Nature, scope and significance of political science

##### **UNIT – II**

**State – Nation and Nationality Theories Of Origin Of The State:** The theory of Divine right. The social contract theory of Hobbes, Locke and Rousseau. The Historical or Evolutionary theory

##### **UNIT – III**

**Sovereignty:** Meaning and definitions Characteristics of sovereignty. Kinds of sovereignty. Austin's theory of sovereignty. The theory of pluralists

##### **UNIT – IV**

**Law- Liberty- Equality:** Definition, meaning, features and kinds of law. Sources of law. Definition, meaning and importance of liberty. Kinds of liberty. Safeguards of liberty. Relation between liberty and equality. Definition, meaning and importance of equality. Kinds of equality

##### **UNIT – V**

**Rights And Duties:** Definition, meaning and features of Rights. Classification of Rights. Women's Rights. Duties of citizen. Relationship between Rights and Duties

## **SUBJECT: POPULATION STUDIES**

### **SEMESTER- I**

#### **Paper I: Population Concepts and Measures**

##### **UNIT-I: Scope and Importance**

Meaning, Scope and importance of Population Studies

##### **UNIT- II: Relationship with other Subjects**

Relationship between Population Studies and other Social Sciences such as Economics, Statistics, Sociology, Psychology

##### **UNIT- III: Sources of Population Data**

- A. Census, Vital Statistics. Sample Registration scheme
- B. National Sample Surveys and Demographic Surveys.

##### **UNIT –IV: Important Concepts**

- A. Fertility: Menarche, Sub-fecundity, Fecundity, Sterility, Abortion, Still birth, Fertility, Live birth

- B. Morbidity, Mortality, Life expectancy
- C. Migration, Population Change, Contraception, Family Size Norm, Amenorrhea

#### **UNIT – V: Population Structure and Characteristics**

- A. Age and Sex structure: Age and sex distribution of population, Factors influencing age and sex structure: Fertility, Mortality and Migration
- B. Marital Status: Distribution of Population by marital status, age at marriage
- C. Religious, educational and occupational composition of Population

#### **References**

1. Agarwala, S.N. India's Population Problems, McGraw -Hill Publishing co., Ltd., New Delhi, 1983.
2. Sharma, R.C.: Population Trends Resources and Environment Handbook on Population Education, Delhi, Dhanpatkar, 1975,
3. Ashah Bhende and Tarakanitkar, Principles of Population Studies, Bombay, Himalaya Publishing House, 1982

#### **POPULATION STUDIES Practicum-I**

##### **A. Fertility :**

1. Crude Birth Rate (CBR)
2. General Fertility Rate (GFR)
3. Age-specific Fertility Rates (ASFRS),
4. Total Fertility Rate (TFR),
5. Gross Reproduction Rate (GRR)
6. Child women ratio (CWR).

##### **B. Mortality :**

1. Crude Death Rate (CDR)
2. Age specific Death Rates (ASDRs)
3. Cause-specific Death Rate(CSDRs)
4. Infant Mortality Rate (IMR).

**Subject: PSYCHOLOGY**  
**SEMESTER - I**  
**Paper-I: General Psychology-I**

**UNIT I: Introduction**

- A) Historical foundations of Psychology: Definition, Nature and Scope of Psychology; Schools and fields of psychology.
- B) Methods of Psychology- Introspection, Observation, Case Study, Interview, Survey and Experimental Method

**UNIT II: Biological Basis of Behavior**

- A) Neuroanatomy - Structure of the neuron; The Autonomic Nervous System-Structure & function; The Central Nervous System: Spinal cord - structure and function; The Brain - hindbrain, midbrain & forebrain.
- B) Hormones and Behavior-Main endocrine glands, their hormone products and principal effects of the hormones -Mechanisms of Heredity and Environment

**UNIT III: Sensory Process:**

- A) Sensory organ; General characteristics of senses, theories of vision and Hearing.
- B) Subliminal perception and signal detection theory.

**UNIT IV: Attention and Perception**

- A) Types and determinants of Attention, Distraction, Division, Fluctuation and Span of attention
- B) Perception- Perceptual constancies, illusions, Organizational factors of perception, Perceptual Constancies

**UNIT V: Motivation and Emotion**

- A) Motivation – Definition and types of motives- Bio and Psycho- Social Motives, Theories of motivation- Maslow’s Theory of Motivation and Freud’s Unconscious Motivation.
- B) Emotions – Definition and Nature of Emotions, Types of emotions, Theories of emotions- James- Lange, Cannon-Bard

**REFERENCE BOOKS:**

1. Morgan, Clifford.T., King, Richard.A., Weisz,John.R., Schopler, John (1993). Introduction to Psychology, TataMcGraw Hill.
2. Marx, Melvin H. (1976). Introduction to Psychology - Problems, Procedures & Principles, MacMillan Publishing Co.
3. Hilgard, E.R., Atkinson, R.L., Atkinson, R.C., (1979): Introduction to Psychology, Harcourt Brace Jovanovich. Inc.

**PSYCHOLOGYPracticum-I Syllabus**

**Conduct any Eight experiments from the following**

1. Visual & Auditory
2. Distraction on attention
3. Span of Attention

4. Division of Attention
5. Fluctuation of attention
6. Illusions - Muller Lyer Illusion
7. Horizontal vertical Illusion
8. Organization in perception
9. Set in Perception
10. Perceptual constancies – size, shape

## **REFERENCE**

Chaube. S.P.(1985): Experimental Psychology, LaxmiNarain Publishers

## **SUBJECT: PUBLIC ADMINISTRATION**

### **SEMESTER - I**

### **PAPER – I : PRINCIPLES OF PUBLIC ADMINISTRATION**

#### **UNIT I: Introduction**

1. Meaning, Nature, Scope and importance of Public Administration
2. State and Evolution of Public Administration

#### **UNIT - II**

3. Relationships with other Social Sciences: With special reference to Political Science, Economics, Sociology, Psychology
4. Politics & Administration Dichotomy – Woodrow Wilson and F.J. Goodknow

#### **UNIT- III: Theories and Approaches**

5. Classical Approach : Henry Fayol, Gulick and Urwick
6. Scientific Management Approach: Taylor

#### **UNIT- IV**

7. Bureaucratic Approach: Max Weber and Karl Marx
8. Human Relations Approach – Elton Mayo
9. Behavioural Approach: Herbert Simon

#### **UNIT – V**

10. Socio – Psychological Approach: Hierarchy of Needs : Abraham Maslow; Theory X and Theory Y : Douglas Mc Gregor
11. Ecological Approach: Riggs

**SUBJECT: RURAL DEVELOPMENT  
SEMESTER- I**

**Paper- I: Elements of Rural Development**

**Unit-I**

Definition of Rural Areas – Meaning of Development – Concept of Rural Development – Causes of Rural Backwardness – Nature and Scope of Rural Development in India

**Unit-II**

Approaches to Rural Development in India: Gandhian Approach – Decentralised Planning Approach – Sectoral Approach – Area Approach – Target Group Approach – Integrated/ Holistic Approach – Participatory Approach – Rights Approach

**Unit-III**

Rural Health – Health Care Services in Rural Areas – Maternal and Child Health – HIV / AIDS – National Health Policy of India – National Rural Health Mission

**Unit-IV**

Education in Rural Areas – Problems in School Education: School Dropouts and Girl Child Education – Sarva Siksha Abhiyan – National Literacy Mission – National Education Policy

**Unit-V**

Rural Housing: Status, Problems and Programmes – Drinking Water Supply: Sources, Problems and Programmes – Rural Sanitation: Problems and Programmes

**Books and References**

1. N.I.R.D. : Facets of Rural Development in India
2. S.C. Jain : Rural Development
3. Misra & Sarma : Problems and prospects of Rural Development in India.
4. K.Venkata Reddy : Rural Development in India: Poverty and Development , Himalaya Publishing House, Mumbai, 2012
5. Rajasekhar D (Ed) : Prof G Parthasarathi's Writings on Indian Rural Economy in Transition
6. Katar Singh : Rural Development: Principles, Policies & Management
7. G. Sreedhar and : Rural Development in India: Strategies and Processes,
8. D. Rajasekhar : Concept Publishing House, New Delhi, 2014
9. Publications of A.P. Telugu Academy
10. Journals : Kurukshetra, Yojana, Jagruti, Khadi Gramodyog, Journal of R.D.

**Subject: SOCIAL WORK**

**SEMESTER- I**

**Paper – I : SOCIAL WORK PROFESSION, PHILOSOPHY AND BASIC SOCIAL SCIENCE CONCEPTS-I**

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**UNIT I**

**Social Work:** Definition, nature and scope, origin of social work profession in US and India.

**UNIT II**

Philosophy and Religious roots of humanity; charity and philanthropy in Hindu, Christian and Islam.

**UNIT III**

**Goals of social work:** Developmental and radical, generic principals of social work, social work values and ethics.

**UNIT IV**

**Concepts of social work:** Social welfare, social service, social development and social change. Fundamental rights and directive principles of state policy in Indian constitution.

**UNIT V**

Social reform movements and social work profession with special reference to Brahma samaj, Aryasamaj and movements for widow remarriage in A.P.

**SUBJECT: SOCIOLOGY**

**SEMESTER- I**

**Paper I: Basic Concepts in Sociology**

**UNIT – I**

**Sociology:** Nature, Scope and Significance; Relationship with History, Economics, Political Science, Anthropology and Psychology, Careers/Jobs for Sociology.

**UNIT – II**

**Basic Concepts:** Society, Community, Association, Social Structure, Status & Role, Norms and Values, Fashion

**UNIT – III**

**Social Groups & Processes:** Definition, Nature and types of Groups- Primary Secondary & Reference Group; Processes- Co-operation, Conflict and Accommodation, Group behavior, Behaviour Modification.

**UNIT – IV**

**Social Institutions:** Marriage, Family, Kinship and Religion; Their Functions and Features, Emerging trends.

**UNIT – V**

Child, Youth, Elderly Problems – Social Psychology – Marital Counseling - Guidance clinics.

**Readings:**

1. Ahuja, Ram (2001): **Indian Social System**, New Delhi: Rawat Publication. Ahuja, Ram (2003): **Society in India**, New Delhi: Rawat Publication.
2. Bottomore, T.B. (1972): **Sociology: A Guide to Problems and Literature**, Bombay: George Allen and Unwin (India).
3. Fulcher & Scott (2003): **Sociology**, New York: Oxford University Press. Giddens, Anthony (2005): **Sociology**, Polity Press.
4. Harlambos, M. (1998): **Sociology: Themes and Perspective**, New Delhi: Oxford University Press.
5. Harlambos & Holborn (2000): **Sociology**, London: Harper-Collins.
6. Inkeles, Alex (1987): **What is Sociology?** New Delhi: Prentice-Hall of India.
7. Johnson, Harry M. (1995): **Sociology: A Systematic Introduction**, New Delhi: Allied Publishers.
8. MacIver and Page (1974): **Society: An Introductory Analysis**, New Delhi: Macmillan & co.
9. P. Gisbert (2010): **Fundamental of Sociology**, New Delhi: Orient Blackswan.



**SRI VENKATESWARA UNIVERSITY : TIRUPATI**

**TOURISM  
I Year**

Paper – I **PRINCIPLES OF TOURISM**

**Unit – I**

Tourism – definition – Nature and Scope – History of Tourism and its development – Motivation for Travel – Types of Tourism Domestic and International Tourism

**Unit – II**

Social and economic significance of Tourism – Tourism as an industry – Ancillary industries in Tourism

**Unit – III**

Natural resources – Wild Life – Beaches – Hill resorts – Impact of Tourism on Physical Environment – Air – Water – Soil – Mountains – Ecology etc – Social impact of Tourism – Unity in diversity in Indian context

**Unit – IV**

Cultural Tourism in India – fairs and festivals – Kumbhamela – Mysore Dasara – Brahmotsavams of Tirumala – Folk and Tribal Cultural

**Unit – V**

Importance of History for Tourism – Ajanta – Ellora – Amaravathi – Nagarjunakonda – Mahabalipuram – Belur and Halebidu – Tirupati – Puri – Delhi – Goa – Mount Abu.

**SUGGESTED READINGS**

- |                              |  |
|------------------------------|--|
| 1. Bhatia A.K                | Tourism development, Principles and Practices        |
| 2. Allchin F.R               | Cultural Tourism in India; Its Scope and development |
| 3. Basham A.L                | The Wonder that was India                            |
| 4. Gupta S.P                 | Tourism Monuments of India                           |
| 5. Kaul S.N                  | Tourism in India                                     |
| 6. Kramrisch Stella          | The Art of India                                     |
| 7. Chris Cooper and Fletcher | Tourism Principles and Practices                     |
| 8. S.Wahab                   | Tourism Marketing                                    |
| 9. James W.Morrison          | Travel Agent and Tourism                             |
| 10. Edward D Mills           | Design for Holidays and Tourism                      |
| 11. Douglas Pierce           | Tourism Today; A Geographical Analysis.              |

*K. Vinayak*  
**CHAIRMAN** 11/06/15  
**Board of Studies**  
**Dept. of A.I.H.C. & Archaeology**  
**S. V. University**  
**TIRUPATI-2**



S.No.	Subject	Page No.
<b>COMMERCE</b>		
1.	<b>B.A/B.Com., Accounts</b>	
2.	<b>Advertising Sales Promotion &amp; Sales Management</b>	
3.	<b>Computer Applications</b>	
4.	<b>B.Com., General</b>	
5.	<b>B.Com., Honours</b>	
6.	<b>B.B.A</b>	

**SRI VENKATESWARA UNIVERSITY, TIRUPATI**

**B.Com., SYLLABUS AND SEMESTER STRUCTURE**

**SEMESTER I**

Semester	Part	Subject	Hrs	Credits	IA	ES	Total
SEMESTER I	PART I	TELUGU	4		25	75	100
		ENGLISH	5		25	75	100
	PART II	DSC - 1	6		25	75	100
		DSC - 2	6		25	75	100
		DSC - 3	6		25	75	100
	PART III	FC	3		25	75	100
		CSS	2		25	75	100
	TOTALS			32		175	525

**DSC- Discipline Specific Course,**

**CSS – Communication & Soft Skills,**

**FC – Foundation Course**



**SUBJECT: B.Com (Computer Applications)**  
**SEMESTER - I**

**Paper I: COMPUTER FUNDAMENTALS AND MS OFFICE**

**Unit – I**

Introduction to Computers  
Input and Out Put Devices

**Unit – II**

Computer Memory and Processors  
Number Systems and Computer Codes

**Unit – III**

Computer Software  
Operating Systems

**Unit – IV**

Introduction to Algorithms and Programming Languages  
MS Word:  
Getting Started.  
Working with Microsoft Office 2007.  
Understanding Word Basics. Editing and Formatting Text. Formatting Documents  
Working with Graphic Objects.

**Unit – V**

Microsoft Excel:  
Understanding Excel Basics. Formatting and Editing the Worksheet. Using Formulas and  
Functions. Working with Charts.  
Microsoft PowerPoint.:  
Understanding PowerPoint Basics. Formatting and Modifying Presentations. Enhancing  
the Presentation.

**TEXT BOOK:**

3. Fundamentals Of Computers ” by REEMA THAREJA from OXFORD UNIVERSITY PRESS
4. Microsoft Office 2007 Fundamentals, 1st Edition By Laura Story, Dawna Walls (UNIT I, UNIT II, UNIT III, UNIT IV)

**REFERENCE BOOK:**

3. “Computer Fundamentals and Programming in C” by REEMA THAREJA from OXFORD UNIVERSITY PRESS
4. **PC SOFTWARE UNDER WINDOWS** by Puneet Kumar And Sushil Bhardwaj From
5. Kalyani Publishers

**SUBJECT: B.Com (General/CA/ASM/TAX)**

Semester	Part	Subject	Hrs	Credits	IA	ES	Total
FIRST YEAR							
<b>Semester-I</b>	THEORY	Fundamentals of Accounting	6	6	25	75	100
	THEORY	Business Organization	6	6	25	75	100
	THEORY	Business Economics	4	4	25	75	100
	PRACTICAL	Computer Lab -1	3	2	25	75	100

**SUBJECT: B.Com (General/CA/ASM/TAX)**

**SEMESTER- I**

**Paper I : Fundamentals of Accounting**

**Unit-I – Introduction to Accounting**

Need for Accounting – Definition – Objectives, Advantages – Book keeping and Accounting–Accounting concepts and conventions - Accounting Cycle - Accounting equation - Classification of Accounts and its rules - Double entry book keeping – Journalizing – Posting to ledgers, Balancing of ledger accounts- problems.

**Unit –II – Subsidiary Books**

Types of Subsidiary Books -Cash Book, Three column Cash Book- Petty cash Book - Problems.

**Unit-III- Bank Reconciliation Statement**

Need for bank reconciliation - Reasons for difference between Cash Book and Pass Book Balances- Preparation of Bank Reconciliation Statement- Problems on both favourable and unfavourable balances.

**Unit-IV -Bills of Exchange**

Meaning of Bill –Features of bill – Parties in the Bill – Discounting of Bill – Renewal of Bill – Entries in the books of Drawer and Drawee – Problems

**Unit -V -Trial Balance& Rectification of Errors**

Preparation of Trial Balance – Types of Errors – Rectification of Errors- Suspense Account Problems.

**Reference Books**

1. T.S.Reddy&A.Murthy , Financial Accounting , Margham Publications
2. Principles and Practice of Accounting - R L Gupta & V. K Gupta, Sulthan Chand & Sons
3. Accountancy –I, S.P. Jain & K.L Narang, Kalayani Publishers
4. Accountancy – I, Tulasian , Tata Mcgraw Hill Co.

5. Financial Accounting , Dr. V.K.Goyal Excel Books
6. K. Arunjothi, Fundamentals of Accounting; Maruthi Publications

**SUBJECT: B.Com (General/CA/ASM/TAX)**

**SEMESTER- I**

**Paper I : Business Organization**

**Unit-I – Introduction**

Concepts of business, Trade , Industry and Commerce –Business- Features of Business - Trade - Classification- aids to Trade – Industry – Classification – Relationship of Trade , Industry and Commerce .

**Unit II- Business Functions & Entrepreneurship**

Functions of Business- Factors influencing the choice of suitable form of organization – Meaning of Entrepreneurship – Types – Functions of Entrepreneurship.

**Unit –III – Forms of Organization**

Sole Proprietorship – meaning – Characteristics – Advantages and Disadvantages – Partnership- Meaning – Characteristics- Kinds of partners – Advantages and Disadvantages – Partnership Deed – Hindu undivided family .

**Unit-IV- Company**

Company – Meaning – Characteristics –Advantages – kinds of companies - Differences between Private Ltd and Public Ltd Companies

**Unit-V- Company Incorporation**

Preparation of important Documents for incorporation of Company – Memorandum of Association – Articles of Association – Differences Between Memorandum of Association and Articles of Association.Contents of Prospectus – Statement in Lieu of Prospectus.

**Reference Books**

1. Dr.C.D.Balaji and G.Prasad, Business Organization - Margham Publications, Chennai-17.
2. R.K.Sharma and Shashi K Gupata, Business Organization - Kalayani Publications.
3. C.B.Guptha, Industrial Organization and Management, Sulthan Chand.
4. Y.K.Bushan, Business organization and Management, Sulthan Chand.
5. Sherlekar, Business Organization and Management , Himalaya Publications.

**SUBJECT: B.Com (General/CA/ASM/TAX)**

**SEMESTER- I**

**Paper I : Business Economics**

**Unit-I- Introduction**

Meaning and definitions of business Economics-Nature and scope of Business Economics- Micro and Macro economics differences – Cardinal Utility& Ordinal Utility.

**Unit-II- Demand Analysis**

Meaning and definition of demand -Determinants to Demand -- Demand function –Law of demand- Demand Curve -Exceptions.

**Unit –III- Elasticity of Demand**

Meaning and definition of Price Elasticity of demand – types of Price Elasticity of demand – Measurements of price elasticity of demand – total outlay method – Point method – Arc Method.

**Unit – IV- Market structure**

Meaning and definition of Market – Classification of Markets - price determination under perfect competition and Monopoly only – Distinguish between perfect competition and Monopoly.

**Unit-V- Cost Analysis**

Cost – Meaning – Fixed Cost – Variable Cost – Cost behaviour. Breakeven Analysis uses and limitations.

**Reference Books**

1. Dr.S.Sankaran, Business Economics - Margham Publications, Chennai-17.
2. Business Economics - Kalayani Publications.
3. Business Economics – Himalaya Publishing House.
4. Aryasri and Murthy Business Economics , Tata Mcgraw Hill.
5. Business Economics, Maruthi Publications



**SUBJECT: B.Com(Hons.)**

Semester	Part	Subject	Hrs	Credits	IA	ES	Total
FIRST YEAR							
<b>Semester-I</b>	THEORY	Business Organization	6	6	25	75	100
	THEORY	Financial Accounting-I	6	6	25	75	100
	THEORY	Managerial Economics	6	6	25	75	100
	THEORY	Quantitative Techniques-I	6	6	25	75	100

**SUBJECT: B.Com(Hons.)**

**SEMESTER- I**

**Paper I : 101 BUSINESS ORGANIZATION**

**Unit – I – Fundamental Concepts**

Concepts of business, profession, employment, trade, industry and commerce – Trade Classification – Aids to trade – Industry – Classification Business – Features, objectives, Scope of Business – Functions of Business – Role of Business in Social Development – Essentials for Modern Business – Qualities of a Successful Business men.

**Unit- II – Forms of Business Organization : Sole Trader, HUF,**

Business Organization – Forms of Business Organizations, Characteristics, Types, Factors influencing the choice of Business Organization. Sole proprietorship – Meaning – Characteristics, Advantages and disadvantages - Joint Hindu Family – Meaning – Characteristics – Advantages and Limitations.

**Unit – III : Partnership**

Partnership – Meaning – Characteristics -Types of partnership - kinds of partners - Rights & Obligation of partners - Registration of partnership and dissolution of firm.

**Unit-IV : Joint Stock Company, Promotion**

Meaning – Characteristics – Advantages & Disadvantages – Types of Companies – Difference between Public and Private Company.

Promotion – Meaning – Stages in promotion – Promoter – Meaning, Functions, Types – Procedural aspects of promotion – legal aspects of Business – Incorporation of company, Capital subscription – Certificate of commencement of Business – Documents – Memorandum of Association, Article of Association, Prospectus, statement in lieu of prospectus.

### **Unit – V : Co-operative Societies**

Meaning, characteristics, Formation of co-operative society- Management of Cooperative society - Types of co-operative societies - Merits & Demerits of Co-operatives - Suitability of Co-operative Societies.

### **Reference Books.**

1. Srivastava: Industrial Management & Business Administration.
2. Sherlekar and Shelekar: Principles of Business Management – Himalaya Publishers.
3. Y.K. Bhushan ; Fundamentals of Business Organizations, S. Chand & Sons, New Delhi.
4. C.B. Gupta – Business Organization & Management; S. Chand & Sons, N. Delhi.
5. A.R. Aryasri and V.V. Ramana Murthy Industrial Organization & Management; Tata Mc. Graw Hill, N. Delhi.
6. C.R. Basu – Business Organization and Management; Tata Mc. Graw Hill.
7. R.K. Sharma & Shashi. K. Gupta- Business Organization & Management. (Kalyani Publications)
8. S.A. Sherlekar – Business Organization and Management – Himalaya Publishing House  
Dr. Kushpat S. Jain N.V. Kavitha P. Sathyavathi.

## **SUBJECT: B.Com(Hons.)**

### **SEMESTER- I**

### **Paper I : 102 FINANCIAL ACCOUNTING-I**

#### **Unit – I – Introduction to Accounting**

Definition of accounting, concepts and conventions, Branches of accounting, advantages and limitations of financial accounting, Journal, ledger and Subsidiary books – Computerized Accounting – Meaning, features, creation of company, groups, ledgers and vouchers – Cash Book – Single Column, Double Column, Triple Column and Petty Cash Book.

#### **Unit- II – Trial Balance, Final Accounts of Sole Trader**

Preparation of Trial Balance – preparation of Manufacturing Account, Trading, Profit & Loss Account – Balance Sheet – Adjusting and closing entries (with all adjustments).

#### **Unit – III – Bank Reconciliation Statement**

Bank Reconciliation Statement – Need – Reasons for difference between cash book and pass book balances – Problems on favourable and over draft balances – Ascertainment of current cash book balance – Preparation of bank reconciliation statement using computers.

#### **Unit-IV : Consignment and Joint Venture**

Consignment – Accounting treatment in the books of Consignor and Consignee, Valuation of closing stock – Abnormal loss and normal loss. Invoice Price.

Joint Venture – Accounting treatment, a) Books maintained by co-ventures; b) Books maintained in the name of the venture (Joint bank method) – Goods on approval or on sale or return –

Accounting treatment, a) Goods sent casually on sale or return; b) Goods sent frequently on sale or return.

### **Unit-V : Errors and Rectification and Depreciation - Provisions and Reserves**

Errors and their rectification – Types of errors, rectification before and preparation of final statement of accounts – Suspense account – Depreciation – Accounting treatment of providing depreciation, Straight line Method, Diminishing balance method – change in method. Reserve Fund – Different Types of Provisions and Reserves.

#### **Suggested readings:**

Jain & Narang	- Advanced accountancy
Shukla, Grewal & Gupta	- Advanced accountancy
TS Grewal	- Introduction to Accountancy
Mukherjee	- Advanced accountancy I
P.C. Tulsian	- Accountancy – I
Haneef & Mukherji	- Financial Accounting
P.C. Tulsian	- Corporate Accounting

## **SUBJECT: B.Com(Hons.)**

### **SEMESTER- I**

#### **Paper I : 103 MANAGERIAL ECONOMICS**

#### **Unit – I – Introduction to Managerial Economics and Demand and Analysis**

Meaning and scope, Relation with other branches, Basic tools in Managerial Economics – Opportunity cost principle, Incremental principle, Principle of time perspective, Discounting principle. Firm and its Objective – optimization and maximization concept.

Demand Theory and Analysis, Demand Function, Curves, Individual and Market Demand, Types of Demand. Elasticity of Demand – Types of Elasticities, its measurement and business uses. Demand Forecasting – Meaning & Significance. Methods of demand forecasting for established and new products.

#### **Unit- II – Production and Cost Functions**

Meaning of Production Function, Production function with one variable input, Law of Variable Proportions, Single Output Isoquants, Optimal combination of Factor inputs, returns to scale, Cobb Douglas Production Function.

Cost concepts, Relevant Costs in decision making, Cost-Output relationship in the short and the long run, Economies and Diseconomies of Scale. Economies of scope. Cost Volume Profit analysis – assumptions, uses and limitations.

#### **Unit-III : Market Structure**

Kinds of competitive situations – Perfect competition, Monopoly, monopolistic Competition and Oligopoly – features. Equilibrium output determination of a firm under perfect competition in the

short run and long run. Equilibrium Price and output determination of a firm under a) Monopoly; b) Monopolistic Competition in the short run and long run. Paul Sweezy's kinked demand curve model of oligopoly. Pricing policy and methods – incremental and full cost pricing, loss leader pricing, skimming and penetration pricing policy.

#### **Unit-IV : Introduction to Macro Economics and ECONOMIC PLANNING**

Macro Economics, Meaning, Nature, Scope, Importance and Limitations, National Income – Concepts, Methods of Measurement, Real Vs Nominal measure, Problems in Estimation, Significance, CPI and PPI.

Meaning – Types of plans – Main objects of planning in India- Planning Commission and National Development Council – Five Year Plans – Achievements of Five year plans; aggregate Demand and Supply Functions, Keynesian approach.

#### **Unit-V: Output, Inflation and Unemployment**

Classical Theory of Interest, Liquidity Preference, Modern theory of Interest – Deriving IS, LM curve, - Equilibrium of IS and Lm – Meaning of Inflation, Types, Effects, Measures – Monetary and Fiscal Policies, Relationship between Inflation and Unemployment – Philips curve, Business Cycles – Phases, Theories of Business cycles, Policy implications, Concepts of Economic Growth and Development (Balance and Unbalanced growth theory, Big-push theory, Rostows stages of Economic Development)

#### **Suggested readings:**

1. Joel Dean : Managerial Economics Prentice Hall of India (Latest edition).
2. Varshney R.L.: Managerial Economics S. Chand & Co. Delhi, Maheshwari K.L.N.
3. Dwivedi D.N. : Managerial Economics, Vikab Pub.
4. Paul Mote & Gupta: Managerial Economics, Tata Mc. Graw Hill, New Delhi.
5. P.L. Mehta : Managerial Economics, Sultan Chand & Co.
6. G.S. Gupta : Managerial Economics, TMH Pub.
7. A.R. Aryasri & V.V. Ramana Murthy: Business Economics for B. Com I year; TMH.
8. Salwator: Managerial Economics
9. Peterson: Managerial Economics

**SUBJECT: B.Com(Hons.)**

**SEMESTER- I**

**Paper I : 104 QUANTITATIVE TECHNIQUES – I**

#### **Unit – I – Algebra and Commercial Arithmetic Algebra**

**Quadratic Equations:** Solution of a quadratic equation – Sum of the roots – Product of the roots – Formation of Quadratic Equation.

**Progressions:** Arithmetic Progression – general term sum and means of arithmetic progression. Geometric progression – general term. Sum of finite and infinite G.P. Geometric mean, Harmonic progression – general term and mean.

**Commercial Arithmentic:** Percentages, Ratio and Proportion, Profit and Loss, Simple Interest – Compound Interest – Time and Work – Time and distance – Discount – Partnerships.

### **Unit- II – Calculus**

Differentiation : (Without proof) – Derivative of standard functions – rules of differentiation, sum, difference, product, quotient and function, differentiation on one function with respect to another function – criteria for maxima and minima and their applications in economics.

### **Unit-III : Classification of Data**

Definition, Functions and Limitations of Statistics – Collection and classification of data : Methods and limitations.

**Presentation of Data:** Tabulation – parts of Table – Types of tables (Simple and Complex) – Graphs and Diagrams – Simple bar diagrams, Multiple and Sub-divided bar diagrams – pie diagrams – Histogram – Frequency polygon, frequency curve, Ogive curves

### **Unit-IV : Central Tendency**

Measures of Central Tendency; Requisites of a good measure of central tendency – Mean, Median, Mode, Geometric mean and Harmonic Mean – Merits and demerits of averages – location of Median and Mode graphically.

### **Unit-V: Dispersion**

Measures of Dispersion: Requisites of a good measures of Dispersion – Range, Quartile deviation, mean deviation, Variance and Standard Deviation – Coefficient of Variation – Merits and Demerits of measures of dispersion – Lorenz Curve.

### **Suggested readings (Mathematics)**

1. Sancheti D.C. & Kapoor V.K.: Business Mathematics, Sultan Chand & Sons, N. Delhi.
2. Saha S. : Business Mathematics; New Central Agency, Calcutta.
3. Qazi Zameruddin Khanna VK & Bambri SK: Business Mathematics Vikas Pub. House, N. Delhi.
4. Chadha & Agarwal : Business Mathematics; S. Chand & Co. Ltd.

### **Suggested readings (Statistics)**

1. Sancheti D.C. & Kapoor V.K.: Statistics; Theory, Methods and Applications, Sultan Chand & Co. N. Delhi.
2. Gupta S.C. : Fundamentals of Statistics, Himalaya Publishing House.
3. Gupta S.P. : Statistical Methods, S. Chand & Co;
4. Gupta B.N. : Statistics; Sahitya Bhavan, Agra.
5. S.K. Aggarwal, S.K. Bharadwaj & K. Raghu Veer: Business Statistics, Kalyani Publishers.

**SUBJECT: B.Com (ADVERTISING, SALES PROMOTION AND MANAGEMENT)**

**SEMESTER- I**

**Paper I : Advertising - I**

**Unit – I**

Advertising – Outstanding attributes of advertising – Advertising Vs. Sales Promotion – The Role of Advertising in modern Business World – Functions and Limitations of Advertising.

**Unit – II**

Kinds of Advertising – Commercial and Non-Commercial – Primary Demand and Selective Demand – Comparative and Cooperative Advertising – Classified and Display Advertising – Objectives of Advertising.

**Unit – III**

Advertising Budget – Procedure – Factors influencing the size of the advertising budget – Methods used in deciding advertising appropriation.

**Unit – IV**

Advertising copy – Attributes of an effective advertising copy – Types of advertising copy – Structural elements of Advertising copy (Head Line, Sub-head line, body of the copy, Illustration, slogan, etc.)

**Unit – V**

Colour in advertising – Functions and limitations of colour – Colour qualities and features – Position of colour processing in India.

**Suggested Readings**

1. Wright, Winters and Advertising Management (Mc. Graw Hill, Zeiglas).
2. Mahendra Mohan – Advertising (Tata Mc. Graw Hill) .
3. Philing Kotler – Marketing Management(Printice Hall of India).
4. C.N. Sontakki – Advertising – Kalyani Publishers.

## **SUBJECT: BBA**

### **SEMESTER- I**

#### **Paper I : MANAGEMENT PROCESS**

##### **UNIT-I :**

Introduction : Meaning and importance of Management; Role and responsibilities of top, middle and lower managers. Functions of management. Challenges of Management in the context of new era.

##### **UNIT-II:**

Planning: Concept- Significance- Process- Techniques- Problems- Planning Principles.

##### **UNIT-III**

Organizing Concept- Significance- Process- Techniques- Problems . Principles of organizing. Formal and informal organizations. Organizational design. Departmentation types: advantages and disadvantages. Span of control. Delegation of authority. Delegation Vs. decentralization. Line and Staff Positions – Committees.

##### **UNIT-IV**

Staffing: Meaning and importance of staffing. Recruitment – Selection – interviewing – induction.

Leading: Meaning – importance of leading .Leadership Styles. Developing leadership skills.

Motivating: Meaning– importance of Motivating. Theories of motivation.

Communicating: Meaning – importance – Process – problems of communication. Barriers of Communication – Measures towards effective communication.

##### **UNIT – V**

Controlling – Importance – Process - Problems of controlling. Control as a feed back System.

Requirements of effective control. Preventive and overall controls.

##### **RECOMMENDED BOOKS:**

1. Pro. D. A. R. Subrahmanyam, & Smt. D. Swapna, A text Book on Principles of Management, Maruthi Book Depot, Gudur.
2. Koontz, H. and Wihrich H, Management, Mc Graw Hill.
3. Stoner, J etc., Management , Pearson Education.
4. Sharma, Principles of Management, Kalyani Publishers, Hyderabad.

**SUBJECT: BBA**

**SEMESTER- I**

**Paper I : MANAGERIAL ECONOMICS**

**UNIT –I: Introduction**

Economic and not-economic activities; Business – Meaning and its importance in the economy; Economics: Definitions – Distinction between micro and macro economics; Concept of Utility; Cardinal and ordinal utility; Law of Diminishing Managerial utility; Law of substitution.

**UNIT – II: Demand , Supply and Market Equilibrium**

Demand: Meaning, Importance, Types of Demand; Law of Demand; Elasticity of Demand: Different types of elasticity of demand – Price elasticity, income elasticity, cross elasticity and promotional elasticity – Determinants of elasticity of demand; Supply: Meaning and importance, law of supply; Market equilibrium; Consumer's surplus.

**UNIT – III : Production and Costs**

Concept of Production; Production function; Distinction between short run and long run; Law of variable proportions; Law of Returns to Scale; Concept of cost of production; Cost function: Costs in short run and costs in long run.

**UNIT – IV : Market Structures and Pricing**

Market structures: Characteristics – Perfect Competition – Monopoly – Monopolistic Competition – Oligopoly; Pricing in various market structures during short run and long run; Different types of pricing and pricing strategies.

**UNIT –V : National Income, Trade Cycles and International Trade**

National Income; Definition – Measurement – Difficulties and problems in measurement of national income – different concepts of national income; Trade Cycles: Definitions – Causes – Control of Trade Cycles; Monetary policy and Fiscal Policy; International Trade: Meaning, Theories of international trade; Concept of Balance of Payments.

**RECOMMENDED BOOKS:**

1. Prof. D.A.R. Subrahmanyam, & Dr. V. Hari Leela, A Text book on Managerial Economics, Maruthi Book Depot, Guntur.
2. Gupta G.S. , Managerial Economics, Tata McGraw Hill.
3. Mithani D.M. , Fundamentals of Business Economics, Himalaya Publishing House.
4. A.V.R. Chary, Business Economics Entrepreneurship & Development, Kalyani Publishers, Hyderabad



## **SUBJECT: BBA**

### **SEMESTER- I**

#### **Paper I : IT FOR MANAGERS**

##### **Unit I:**

IT in the Modern Organization: Basic concepts of Information System – Organizational structure and IT support. IT support at different organizational levels managing information technology in organizations.

Introduction to Computer Systems: Introduction to Computers – Five generations of Modern Computers – Classification of Digital Computer Systems.

##### **Unit II:**

**Computer Hardware:** Computer Hardware: Central Processing Unit (CPU). Control Unit. Arithmetic Logic Unit (ALU).

Memory: Memory Organization – Random Access Memory (RAM), Dynamic RAM (DRAM, Static Ram (SRAM). Read only Memory (ROM), Registers.

Factors affecting Processor Speed – Instruction Set, Mechanic Cycle

**Secondary Storage Devices:** Magnetic Tape, magnetic Disks, Hard Disks, Flexible Disks, Optical Disk.

**Input Devices:** Key Board, Mouse, Trackball, Game Controllers, Scanners, Voice Recognition, Web Cams, Digital Cameras, OCR, OMR, MICR.

**Output Devices Monitor:** CRT Monitors, Flat-Panel Monitors – **Printer:** Daisy –wheel, Dot Matrix, Ink-jet Printer – Plotter, Multimedia Projector.

##### **Unit III :**

**Computer Software:** System Software and Application Software. Operating Systems: Windows Operating Systems, Mobile device operating Systems, and Notebook Operating systems.

##### **Introduction to MS-Office:**

Importance-features – system requirements – advantages

**MS-Word:** basic editing, formatting, paragraph formatting, borders & sharing, tables, lists, page formatting, inserting pictures, cliparts, shapes, mailmerge, proofing tools, templates & macros.

**MS-Excel:** worksheet, workbook, templates, entering data, formatting, headers, footers, data analysis, charts, names, filters, sort, validation lists, function, macros.

##### **Unit IV:**

**MS-Power Point:** Creating basic presentation, master view, slide design, building blocks of presentation, themes and styles, charts, graphs and tables, media clips and animation, transition, slide setup, rehearsal, narrations, macros and customization

**Networks:** Local Rea Networks, LAN Topologies, Wide Area Networks (WAN) – Value Added Networks (VAN)-Virtual Private Networks (VPN)

The internet, intranets and extranets: the evolution of the internet, services provided by the internet, World Wide Web: intranets and extranets.

**Unit V:**

**New Technologies in Information Technology:** introduction to hyper media, artificial intelligence and business intelligence, Knowledge Discovery in Database: (KDD). Data Warehouses and Data Marts. Data Mining and On-line Analytical Processing (OLAP)- Enterprise Resource Planning (ERP) – Supply Chain Management (SCM) – Customer Relationship Management (CRM) – Geographic Information System (GIS).

**RECOMMENDED BOOKS:**

1. Ms. J.J.L.R. Bharathi Devi, A Text Book on Information Technology, Maruthi Book Depot, Guntur.
2. N.V.N.Chary & Lalitha S., Fundamentals of Informational Technology, Kalyani Publishers, Hyderabad.
3. Turban, Rainer, Potter “Introduction to Information Technology”, Wiley India (2<sup>nd</sup> Edition).
4. Microsoft Office Reference Guide – Tom Bunzel
5. Microsoft office Suite of Applications – Orin Thomas
6. Microsoft Office – The Complete Reference – Stephen Nelson



<b>S.No.</b>	<b>Subject</b>	<b>Page No.</b>
<b>LANGUAGES</b>		
<b>1.</b>	<b>Arabic</b>	
<b>2.</b>	<b>English+Soft Skills</b>	
<b>3.</b>	<b>Hindi</b>	
<b>4.</b>	<b>Sanskrit</b>	
<b>5.</b>	<b>Tamil</b>	
<b>6.</b>	<b>Telugu</b>	
<b>7.</b>	<b>Urdu</b>	
<b>8.</b>	<b>Advanced English</b>	
<b>9.</b>	<b>Advanced Telugu</b>	
<b>10.</b>	<b>Advanced Urdu</b>	
<b>11.</b>	<b>Advanced Arabic</b>	

**Subject: HINDI  
SEMESTER- I**

Unit	Ist Semester	II Semester
१. गद्य संदेश (Prose)	साहित्य की महत्ता सच्ची वीरता मित्रता	संस्कृति और साहित्य का परस्पर संबंध भारत एक है हेच.आई.वी. (AIDS)
२. कथा लोक ( Short Stories)	मुक्तिधन गूढ़ साई उसने कहा था	ज़रिया भूख हड़ताल परमात्मा का कुत्ता
३. व्याकरण ( Grammar)	लिंग वचन काल वाच्य वाक्यों की शुद्धि	कार्यालय हिन्दी ( Changing Administrative Terminology Hindi to English and English to Hindi)
४. व्याकरण ( Grammar)	शब्द प्रयोग कार्यालयी हिन्दी ( पारिभाषिक शब्दावली – अंग्रेजी से हिन्दी ) विलोम शब्द	अपने वाक्यों में शब्द प्रयोग कार्यालयी हिन्दी ( हिन्दी से अंग्रेजी ) संधि विच्छेद
५. पत्र लेखन ( Letter Writing)	व्यक्तिगत और सरकारी पत्र	आवेदन पत्र

**Subject : ENGLISH**  
**SEMESTER I :**  
**Paper I: ENGLISH Language Part – I**

**Semester-I**

**Unit- I**

**Prose:**

**Total Marks: 15**

1. Secret of work - Swami Vivekananda
2. The Power of Prayer- Abdul Kalam
3. Man in Black- Oliver Goldsmith

**Unit- II**

**Poetry:**

**Total Marks: 15**

1. Daffodils – William Wordsworth
2. Stopping by the Woods on a Snowy evening - Robert Frost
3. Ecology: - A. K. Ramanujan

**Unit- III**

**Short Story:**

**Total Marks: 15**

1. What is my Name?- P. Satyavathi
2. An Astrologer's Day – R.K. Narayan
3. The Lottery ticket – Anton Chekov

**Unit- IV**

**One Act Play:**

**Total Marks: 10**

1. The Merchant of Venice – William Shakespeare (Court Scene) (Act-IV/Scene-1)

## Unit- V

### Language Activity: (Exercises from the Text)

- |                                       |          |
|---------------------------------------|----------|
| 1. Reported Speech                    | Marks: 2 |
| 2. Degrees of Comparison              | Marks:3  |
| 3. Phonemic Sounds and Symbols        | Marks:3  |
| 4. Phonetic Transcription to Spelling | Marks:3  |
| 5. Spelling to Phonetic Transcription | Marks:3  |
| 6. Syllable Division                  | Marks:3  |
| 7. Word Stress                        | Marks:3  |

**Subject: Communication and Soft Skills Syllabus  
Semester-I  
Paper I: Fundamentals of Communication Skills**

**Unit- I** Communication Skills

Definition, Process, Types, Barriers

**Unit- II** Oral Communication

English Sounds, Letters & Words

**Unit-III** Listening Skills

Types of Listening, Barriers to Effective Listening & Traits of a Good Listener

**Unit- IV** Stress & Intonation

Word Stress, Sentence Stress, Intonation Patterns

**Unit –V** Word Building

English & Latin Affixes and Suffixes, One word Substitutes

**Subject : SANSKRIT**  
**SEMESTER - I**  
**PAPER – I : POETRY, PROSE AND GRAMMAR - I**

<b>Unit – I</b>	<b>Old poetry</b>	1. ABHIJNAANAM Ramayanam – Kishkindhaa Kaanda – 6 <sup>th</sup> Canto 1- 27 Slokas 2. AATITHYAM Bhaagavatam – IX Skandha - 21 <sup>st</sup> Adhyaaya – 1 – 36 Slokas
<b>Unit – II</b>	<b>Modern Poetry</b>	1. UNNATIHI From Bharatee Bhushanam by Dr D.N.Deekshit –Page No. 66 – 68 2. VIVIKTA PUSHPA KARANDAHA By Dr Rani Sadasiva Murthy, Selected Stanzas – 14
<b>UNIT – III</b>	<b>PROSE</b>	MOORKHATAA APAREEKSHITAKAARAKAM OF PANCHARANTRAM – 3 <sup>rd</sup> & 4 <sup>th</sup> Stories Murkha Brahmana Katha & Murkha Pandita Katha – Page 734 –743 , Pub. Krishnadas Academy, Varanasi
<b>UNIT IV</b>	<b>GRAMMAR</b>	1. DECLENSIONS Nouns ending in vowels, Deva, Kavi, Bhanu, Dhatru, Pitru, Go,Ramaa, Mati 2. CONJUGATIONS 1 <sup>st</sup> Conjugation – Bhoo, Gam, Shtha, Drusir, Labh, Mud 2 <sup>nd</sup> Conjugation – AS 10 <sup>th</sup> Conjugation – Bhaash
<b>UNIT – V</b>	<b>GRAMMAR</b>	1. SANDHI Swara Sandhi : Sarvarnadeergha, Ayovayava, Guna, Vruddhi, Yana desa. Halsandhi : Scutva, Stutva, Anunasika 2. SAMASA Dwandwa, Tatpurusha, Karmadharaya, Dwigu.



**SYLLABUS FOR THE ACADEMIC YEAR 2015-16(JUNE-TO- OCTOBER)**

**B.A. I YEAR ARABIC (OL) FIRST SEMESTER**

**Part II OPTIONAL SUBJECT**

**FIQH-USOOL-E FIQH AND AQUAID**

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**PRESCRIBED BOOKS: HIDAYA**

**KITAABUL BAYUTO BAYU-E-FASID**

**CHAPTERS:**

- 1). KITABUL BAYU
- 2). KHIYARUSSHARTH
- 3).KHIYAREY RUYATH
- 4). KHIYAREY AYEEB
- 5). BAYE FASID

**USOOL-E-FIQH**

PRESCRIBED BOOKS: USOOL-E-SAHSHI

FORM-PAGE: NO: 5 TO 39

**AQAID**

PRESCRIBED BOOK: SHARAH-E-AQUAID NASHIFI

FROM- PAGE NO: 1 TO 25

*Molli*  
4-5-2015

*Md. Khaja Molmuddin*  
M.A. (Urdu), M.A., M.Phil. Arabic  
Head Dept. of Arabic  
Jamiah Arabic Degree College  
KURNOOL - 518 001

**Subject : TAMIL**

**SEMESTER- I**

**PAPER - 1**

**History of Tamil, History of Chittoor Dist, General Composition and Translation**

- UNIT 1:** Thamizh Pazhamaiyum Cirappum – Thamizhnadu Thamizh Inam – Vaaniga thodarbu – Thamizh Mozhi.
- UNIT 2:** Sangakalam – Muthal, Idai and Kadai Sangam – Pallavarkalam – Tholkappiyam – Ettuthogai – Pathuppattu.
- UNIT 3:** Chittoor Maavatta Thotram – Varalaru – Talukka – mandalanga – Iyarkai Yezhil, Thozhil, Urtpathi – Thozhirtsalai – kalvi.
- UNIT 4:** General Composition and Translation. [English to Tamil]
1. Pen Kalvi
  2. Kadugalai Valarppom
  3. Mazhai neer segarippu
  4. Udart Kalvi
  5. Tholaikkatchi Nanmaigal Theemaigal

**REFERENCE BOOKS :**

1. Dr. C. Balasubramaniyan – Tamil Ilakkiya Varalaru
2. Prof. J. Manuel – Chittoor Maavatta Varalaru
3. Dr. M. Varadarajan – Tamil Ilakkiya Varalaru

**Subject: Advanced Urdu Paper - 1**

**SEMESTER - I**

**Paper I: URDU PROSE Afsanavi Adab aur Drama**

<b>UNIT – I</b>	Novel - Taaruf aur Irteqa
<b>UNIT – II</b>	Novel ‘Nirmala’ by Premchand
<b>UNIT – III</b>	Afsana - Taaruf aur Irteqa
<b>UNIT – IV</b>	Urdu Afsane edited by Raziya Sajjad Zaheer. The following short stories only:  <ol style="list-style-type: none"><li>1. ‘Woh’ by Balraj Menra</li><li>2. ‘Computer Isq’ by Joginder Pal</li><li>3. ‘Lal aur Peela’ by K.A.Abbas</li><li>4. ‘Mom ki Mariyam’ by Jeelani Banu</li><li>5. ‘Allah de Banda le’ by Raziya Sajjad Zaheer</li></ol>
<b>UNIT – V</b>	Drama ‘Darwaze Khol Do’ by Krishan Chander

**Subject: Urdu**  
**SEMESTER - I**  
**Paper I : POETRY**

- UNIT – I**
1. **GHAZAL**  
MEER – Ulti ho gayeen sab tadbeeren
  2. **NAZM**  
IQBAL – Naya Shivalah
- UNIT – II**
1. **GHAZAL**  
GHALIB – Ye na thi hamari khismat
  2. **NAZM**  
Akbar Ilahabadi – Nasihat-e-Aqlaaqi
- UNIT – III**
1. **GHAZAL**  
HALI – Uske jate hi ye kya ho gayee ghar ki surat
  2. **NAZM**  
FAIZ – Mujhse pehli si muhabbat meri mehboob
- UNIT – IV**
1. **GHAZAL**  
YASEER KURNULI– Rafeeq-o-hamnafas
  2. **NAZM**  
AKHTARUL IMAAN – Khabr
- UNIT – V**
1. **GHAZAL**  
RAHI FIDAYI– Apni tareeq ke raqim ke liye
  2. **NAZM**  
IQBAL QUSRO – Izn-e-Aam

**Prescribed book: MUNTAKHAB ADAB – I**

**Subject: TELUGU**  
**I – Semester**

**ప్రాచీన కవిత్వం :**

- I నన్నయ - గంగాశంతనుల కథ  
అంధ్ర మహాభారతం - ఆదిపర్వం - నాల్గవ అశ్వాసం (120-165)  
“నరవరుడగు శంతనుకు” నుండి “దివ్య భూషణాలంకృత” వరకు
- II తిక్కన - మూషిక మార్జాల వృత్తాంతం  
అంధ్రమహాభారతం - శాంతిపర్వం - మూడవ అశ్వాసం (202-242)  
అడవిలో నొకమట్టి .... నుండి సౌఖ్యమున్ బొందెన్

**ఆధునిక కవిత్వం :**

- III అ) గరిమెళ్ళ సత్యనారాయణ - మాకొద్దీ తెల్లదొరతనము  
ఆ) శ్రీశ్రీ - మహాప్రస్థానం

**IV కథానికలు :**

- అ) పాలగుమ్మి పద్మరాజు - గాలివాన  
ఆ) కొలకలూరి ఇనాక్ - ఆకలి

**V వ్యాకరణం :**

- అ) సంధులు - సవర్ణదీర్ఘ, గుణ, యణాదేశ, వృద్ధి, త్రిక, గ.స.డ.దవాదేశ, రుగాగమ, టుగాగమ, అమ్రేడిత, అత్వ సంధి మొదలగునవి.
- ఆ) సమాసాలు - తత్పురుష, కర్మధారయ, ద్వంద్వ, ద్విగు, బహువ్రీహి, మొదలైనవి.
- ఇ) అక్షర దోషములు - దోషములు సరిదిద్ది సాధు రూపములు వ్రాయవలెను.

బి.ఎ. డిగ్రీ మొదటి సంవత్సరము పాఠ్యప్రణాళిక  
సెమిస్టర్ స్పెషల్ తెలుగు 2015 - 2016

I సెమిస్టర్

Paper - I

- I. శ్రీనాథుడు - కిరాతార్జునీయము - హరవిలాసము - సప్తమాశ్వాసం  
పద్యాలు 68 - 91 వరకు  
గాండీవప్రయుక్త .... దొడిగె జంద్రార్థహాళి
- II. రామరాజభూషణుడు - వసుచరిత్ర - తృతీయశ్వాసం -  
పద్యాలు - 26 నుండి - 50 వరకు  
“గిరిజ తనయ” నుండి “వసుధ సుధాంశు” వరకు
- III. పొట్లూరి నారాయణ దాసు - స్వప్నవాసవదత్త (భాసకృతికి ఆంధ్రీకరణ)  
మొదటి మూడు అంకాలు
- IV. పొట్లూరి నారాయణ దాసు - స్వప్న వాసవ దత్త (భాసకృతికి ఆంధ్రీకరణ)  
మిగిలిన అంకాలు

B.A – FIRST YEAR (OPTIONAL HINDI) – PAPER I  
ADVANCED HINDI IN B.A GROUP

UNIT – I ( GADYA PHULVARI – गद्य फुलवारी)

१. आंसुलो की होली – प्रेमचन्द
२. ममता – जयशंकर प्रसाद

UNIT – II ( GADYA PHULVARI – गद्य फुलवारी)

१. आतिथ्य – यशपाल
२. मवाली – मोहन राकेश

UNIT – III (GADYA PHULVARI – गद्य फुलवारी)

१. चीफ की दावत – भीष्म साहनी

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UNIT – III (GADYA PHULVARI – गद्य फुलवारी)

१. पोस्टमैन - शैलेश मट्यानी

UNIT - IV ( NATAK – नाटक )

१. धृवस्वामिनी- जयशंकर प्रसाद

UNIT - V ( UPANYAS – NOVEL)

१. आश्रितों का विद्रोह - नरेन्द्र कोहली

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II

**FOUNDATION**

**COURSE**



# **HUMAN VALUES AND PROFESSIONAL ETHICS- PAPER- I**

## **Semester-I**

### **Unit –I Introduction to Value Education**

1. Value Education, Definition, Concept and Need for Value Education
2. The Content and Process of Value Education
3. Basic Guidelines for Value Education
4. Self exploration as a means of Value Education
5. Happiness and Prosperity as parts of Value Education

### **Unit-II Harmony in the Human Being**

1. Human Being is more than just the Body
2. Harmony of the Self ('I') with the Body
3. Understanding Myself as Co-existence of the Self and the Body
4. Understanding Needs of the Self and the needs of the Body
5. Understanding the activities in the Self and the activities in the Body

### **Unit-III Harmony in the Family and Society and Harmony in the Nature**

1. Family as a basic unit of Human Interaction and Values in Relationships.
2. The Basics for Respect and today's Crisis: Affection, Care, Guidance, Reverence, Glory, Gratitude and Love.
3. Comprehensive Human Goal : The Five Dimensions of Human Endeavour
4. Harmony in Nature : The Four Orders in Nature
5. The Holistic Perception of Harmony in Existence

### **Unit-IV Social Ethics**

1. The Basics for Ethical Human Conduct
2. Defects in Ethical Human Conduct
3. Holistic Alternative and Universal Order
4. Universal Human Order and Ethical Conduct
5. Human Rights violation and Social Disparities

### **Unit-V Professional Ethics**

1. Value based Life and Profession
2. Professional Ethics and Right Understanding
3. Competence in Professional Ethics
4. Issues in Professional Ethics – The Current Scenario
5. Vision for Holistic Technologies, Production System and Management Models.

**Reference Books:**

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2. Bajpai. B. L , Indian Ethos and Modern Management, New Royal Book Co, Lucknow, Reprinted, 2004
3. Bertrand Russell Human Society in Ethics and Politics
4. Corliss Lamont, Philosophy of Humanism
4. Gaur. R.R. , Sangal. R, Bagaria. G.P, A Foundation Course in Value Education, Excel Books, 2009.
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6. I.C. Sharma Ethical Philosophy of India. Nagin & co Julundhar
7. Mortimer. J. Adler, What Man has Made of Man
8. R. Subramanian, Professional Ethics, Oxford University Press.
9. Text book for Intermediate Ethics and Human Values, Board of Intermediate Education & Telugu Academic Hyderabad.
8. William Lilly: Introduction to Ethic Allied Publisher