

**PAPER DISTRIBUTION & ANNUAL PLAN OF HOME SCIENCE DEPARTMENT
ACADEMIC YEAR 2018 - 2019
PAPER DISTRIBUTION**

Sr No	Class	Semester	Paper No	Title of Paper
1	B.A.F.Y	Ist Sem	II	Theory - Food and Nutrition
			III	Practical - Food and Nutrition
2	B.A.S.Y	IIIrd Sem	IV	Theory - Extension Education
3	B.A.T.Y	Vth Sem	XIII	Sub Paper - Theory – Marriage & Family Dynamics
			XVII	Main Paper-Nutritional Management In Health
				and Disease and Quantity Cookery
			XVIII	Practical - Nutritional Management In Health
				and Disease and Quantity Cookery
4	B.A.F.Y	IInd Sem	IV	Theory - Human Development Infancy and
				Childhood
5	B.A.S.Y	IVth Sem	XI	Theory - Food and Nutrition
			XII	Practical - Food and Nutrition
6	B.a.T.Y	VIth Sem	XX	Subsidiary Paper - Fundamentals of Art and
				Design
			XXI	Practical - Fundamentals of Art and Design

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Class	Subject Unit & Title of Paper	Month	Topic/Sub-topic to be taught Theory/Practical	Periods Required	
B.A.F.Y Ist Sem	Theory-Paper Ist Unit Ist Food and Nutrition	July	<ul style="list-style-type: none"> a) Concept and definition of food b) Balance diet, Deficient diet and Optional diet c) Functions of food d) Classification of food by different methods 		
	Unit IInd Nutritional Significance of	August	a) Nutritional significance of various foods Cereals, Pulses, Oil-Seeds, Vegetables, Fruits, Milk-Milk Products, Meat, Egg & Fish, Sugar & Jaggery Spices & Condiments		
	Unit IIIrd Nutrition	September	a) Definition of nutrition, nutrients, recommended dietary allowances (RDA), Health & Malnutrition		
	Unit Ivth Nutrients Classification	October	<ul style="list-style-type: none"> 1) Macro Nutrients - Protein, Carbohydrates, Fats & Water. 2) Micro Nutrients - Water Soluble - B1, B2, B3 Folic Acid. Fat Soluble - A, D, E, K. Calcium, Prosperous, Iron & Iodine. 		
	Practical Paper-III Unit Ist Introduction to laboratory	July	<ul style="list-style-type: none"> a) Use and care of kitchen equipments b) Weights and Measurements of raw and cooked d) Market survey of raw & processed food 		
	Unit IInd Planning & Preparation	August	a) Planning and Preparation of recipes from food groups (Cereals, Pulses, Oil-Seeds, Vegetables, Fruits, Milk-		
	Unit IIIrd Planning & Preparation	September	b) Planning & Preparation of Nutrient rich recipes for Higher, Middle & Lower Income Group Protein, Carbohydrates, Fats & B1, B2, B3, A, Calcium, Iron		

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Class	Subject Unit & Title of Paper	Month	Topic/Sub-topic to be taught Theory/Practical	Periods Required
B.A.S.Y IIIrd sem	Theory- Paper VIIth Unit Ist Extension Education	July	<p>a)Extension Education- Definition of education, types of education, definition of extension education, difference between formal & extension education, origin, scope, objectives, fields, principles & essential links in the chain of rural development in extension education</p>	
		August	<p>b)Home science extension fields, scope, objectives, philosophy, role of home science extension in rural areas.</p> <p>c) Extension worker-meaning & role of extension worker in the field of development, essential qualities needed by extension worker.</p>	
		September	<p>a)Individual contact method , group contact method and mass contact method</p> <p>b)Models-Technology innovation, transfer model, social education model, indignation model, social action, empowerment, participation model, combination model</p>	
	Unit IInd Extension Models and Methods	October	<p>a)Community development- b)Role of Government, NGO, Universities and Rural development authorities</p> <p>c)Social problems, meaning, importance of social problems, over population, Poverty, Caste discrimination, Unemployment, Poor health & sanitation</p> <p>d)Community organization, objectives, Principle and methods</p>	
		October	<p>a)Community development- b)Role of Government, NGO, Universities and Rural development authorities</p> <p>c)Social problems, meaning, importance of social problems, over population, Poverty, Caste discrimination, Unemployment, Poor health & sanitation</p> <p>d)Community organization, objectives, Principle and methods</p>	
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	Unit IIIrd	October	<p>a)Community development- b)Role of Government, NGO, Universities and Rural development authorities</p> <p>c)Social problems, meaning, importance of social problems, over population, Poverty, Caste discrimination, Unemployment, Poor health & sanitation</p> <p>d)Community organization, objectives, Principle and methods</p>	
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Class	Subject Unit & Title of Paper	Month	Topic/Sub-topic to be taught Theory/Practical	Periods Required
	Sessional Activities		<p style="text-align: center;">a) Preparation of Teaching/Learning materials- Charts/Posters/Pamphlets /Flash cards/Folders.</p> <p style="text-align: center;">b) Visit to different areas (any one) Slum/Rural/ ICDS/PHC</p> <p style="text-align: center;">c) Report writing on (any one) 1- Visit to NGO/Aganwadi 2- Case study of Reputed Self Help Group working in the field of self employment. 3- Rural Schemes for Rural Development</p>	
B.A.T.Y Vth Sem	Subsidiary Paper- IX Theory- Unit Ist The Marriage	July	<p style="text-align: center;">a) Definition and functions of marriage</p> <p style="text-align: center;">b) Types of Marriage</p> <p style="text-align: center;">c) Readiness of Marriage – Physiological, Psychological, Economical & Social</p> <p style="text-align: center;">d) Factors to be considered for Mate Selection. (Focus on Scientific Approach)</p>	
	Unit IInd The Family	August	<p style="text-align: center;">a) Definition and functions of Family</p> <p style="text-align: center;">b) Types of the family-joint and nuclear</p> <p style="text-align: center;">c) Families with: special child, Single Child, Adopted Child, Girl Child, No Child & Single Parent</p> <p style="text-align: center;">d) Changing forms of Family – Surrogacy, Live-in-Relationship.</p> <p style="text-align: center;">e) Role of husband and wife – Traditional & Modern.</p> <p style="text-align: center;">f) Stages of family cycle.</p>	

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	Unit IIIrd Adjustments, Parenthood & Family Crisis	September	<p>a) Adjustment in Marriage and Family, Financial, Sexual, In-laws, Career, Religious & Social</p> <p>b) Parenthood – Joys and Challenges.</p> <p>c) Family Crisis- Concept, Causes and wages of camping, Divorce, Severe and Prolonged Illness, Unemployment & Death.</p>	
	Unit IVth Laws Related to Women	October	<p>a) Hindu Marriage Act, Special Marriage Act.</p> <p>b) PCPNDT Act, Family Violence Act</p> <p>c) Laws of Prevention of Sexual Harassment at Work Place (Vishakha), Dowry Act & Child Marriage Act.</p>	
	Unit Vth Counseling Sessional Activities	October	<p>a) Scope, definition and importance</p> <p>b) Pre-marriage and post marriage counseling</p> <p>c) Professional counseling</p> <p>a) Visit to family court and report writing</p> <p>b) Visit to remand home and report writing</p> <p>c) Visit to counseling center and report writing at school level/primary health center</p> <p>d) Preparation on scrap book on laws related to women and children</p> <p>e) Visit to marriage bureau and report writing</p>	
B.A.T.Y Vth Sem	Main-Paper- XVII Theory-Unit Ist Nutritional management in health and disease and quantity cookery	July	<p>a) Definition of health and nutrition</p> <p>b) Dimensions of health and nutrition</p> <p>c) Food habits and dietary pattern in different regions and communities</p>	

<p>Unit II Food Habits</p>	<p>July</p>	<p>a) Concept & Meaning of Food Habits b) Factors affecting food Habits – Regional, Economical, Environmental, Socio – Cultural, Psychological & Religious c) Effect of Urbanization, Industrialization, Work Pattern, and Mass Media & Food Habits on health.</p>	
<p>Unit III Diet Therapy</p>	<p>August</p>	<p>a) Objectives and principles of diet therapy b) Modification of normal diet c) Modification in consistency d) Modification in nutrients e) modification in texture</p>	
<p>Unit IV Diet Management</p>	<p>September</p>	<p>Diet Management and Nutritional requirements in common elements : a) Diarrhea b) Constipation c) Jaundice d) Under weight and overweight e) Typhoid f) Viral fever</p>	
<p>Unit V Quantity cookery- Large scale</p> <p>Practical – XVIII Unit I</p>	<p>October</p>	<p>Preparation, delivery and service of food , cost control and accounting</p> <p>Planning and preparation of therapeutic and modified diet a) Clear fluid diet b) Fluid diet c) Soft diet d) Bland diet e) High protein diet f) High fiber diet g) Low fiber diet h) Low calorie and low fat diet</p>	
<p>Unit II</p>		<p>Planning and preparation of diets in common elements a) Diarrhea b) Constipation c) Jaundice d) Overweight e) Underweight f) Fever</p>	

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Class	Subject Unit & Title of Paper	Month	Topic/Sub-topic to be taught Theory/Practical	Periods Required
B.A.F.Y IInd Sem	Theory-Paper IVth Human Development			
	Unit Ist Prenatal Development and early childhood development	December	<p>a) Meaning, Definition, importance and scope of human development .</p> <p>b) Stages of human development</p> <p>c) orientation to growth and development, -definition of growth and development, -Principle of growth and development, -influence of heredity and environment on growth and development</p>	
	Unit IInd The beginning of new life	January	<p>a) The reproductive system of male and female conception, sex determination</p> <p>b) Preparation of parenthood</p> <p>c) Prenatal development signs and symptoms, stages of prenatal development, prenatal care d) Factors affecting prenatal development, e) stages of birth process</p> <p>f) Postnatal care of mother and baby</p>	
	Unit IIIrd Period of Infancy to Early Childhood (6 Years)	February	<p>a) Definition, Characteristics, reflexes</p> <p>b) Adjustment during infancy, milestones, factors affecting development during infancy</p> <p>c) Development during infancy: Physical growth and development, motor development, cognitive development, language development, social development,</p> <p>d) Development of different senses, sensory and perceptual development</p> <p>e) developmental tasks of infancy and childhood,</p> <p>f) Importance of early stimulation</p>	

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Class	Subject Unit & Title of Paper	Month	Topic/Sub-topic to be taught Theory/Practical	Periods Required
	<p>Unit Ivth Childhood problems</p> <p>Sectional Activities</p>	March	<p>Child rearing practices: a)Effects on Personality development b)Behavioral problems in early childhood-thumb sucking, bed wetting, temper tantrum</p> <p>a)Visit to private children hospital having modern medical facilities Or Visit to maternity hospital to know about possibility of complications during delivery b) Case study of pregnant women Or Case study of lactating mother</p>	
B.A.S.Y IVth sem	<p>Theory- Paper VIIth Unit Ist Digestive system</p> <p>Unit IInd Energy</p> <p>Unit IIIrd Meal Planning</p> <p>Unit IVth Food preservation</p>	<p>December</p> <p>December</p> <p>January</p> <p>February</p>	<p>a)Digestion of food- Carbohydrates, proteins & Fats b) Functions of endocrine glands.</p> <p>a)Definition, Energy requirement. b)Factors affecting energy requirement BMR c)Methods of measuring energy value of food,</p> <p>a)Importance of meal planning. b) Factors affecting on meal planning. c) Principles of planning a balanced diet. d) Menu planning as per economic level and different age groups; weaning food, baby food, early & late childhood, adolescent, adulthood & old age</p> <p>a) Concept & Principals of food preservation b) Methods of food preservation</p>	

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Class	Subject Unit & Title of Paper	Month	Topic/Sub-topic to be taught Theory/Practical	Periods Required
	<p style="text-align: center;">Unit Vth Food Poisoning</p>	<p style="text-align: center;">February</p>	<p>a) Effect of food poisoning & their precautions b) Food Toxins c) Food adulteration; Methods to b) Food Toxins c) Food adulteration; Methods to Identify, Adulterants used. Food consumer low</p>	
	<p style="text-align: center;">Practical-XIIth Unit-Ist Planning & preparation of diets for different age groups</p>	<p style="text-align: center;">March</p>	<p>Planning & preparation of diets for different age groups at different socioeconomic levels in relation to specific nutritional requirement.</p> <p style="text-align: center;">a) Pregnancy b) Lactation c) Weaning Food d) Preschool e) School going f) Adolescence g) Old age</p> <p>Salad Decoration - Demonstration & Practice</p> <p>Food Preservation - Jam, Jellies, Sauce & Ketchup</p> <p>Food Adulteration - Demonstration to identify the adulterants used in food.</p> <p>a) Case study of Four Adolescents about their hobbies b) Case study of children about their Behavioral Problems</p>	
	<p style="text-align: center;">Unit II nd</p>			
	<p style="text-align: center;">Unit III rd</p>			
	<p style="text-align: center;">Unit IV th</p>			
	<p style="text-align: center;">Sessional Activities</p>			

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Class	Subject Unit & Title of Paper	Month	Topic/Sub-topic to be taught Theory/Practical	Periods Required
B.A.T.Y Vith Sem	Subsidiary Paper-XX Theory-Unit Ist Fundamentals of Art & Design	December	Introduction to foundation of art. a) Design - Definition, types - structural and decorative. b) Element of Art/Design - Line, form, light, space and pattern c) Principles of art and design - Harmony, Balance, Proportion, Rhythm and Emphasis	
	Unit II nd	January	1) Study of prang color system a) Dimensions of color - Hue, Value, Intensity b) Classification of color - Primary, Secondary tertiary etc 2) Color Scheme a) Types of color scheme b) Color scheme for different rooms, Drawing room, Bed room, Kitchen and Children room 3) Computer aided color scheme	
	Unit III rd Flower Decoration	February	a) Material Required b) Types of flower arrangement traditional, modern, Japanese, dry arrangement c) Use of art principles in flower arrangement d) Accessories	
	Unit IV th Floor Decoration	March	a) Cultural importance of rangoli. b) Types of rangoli - dotted, using five finger, grains, flowers and leaves, alpana	
B.A.T.Y Vith Sem	Practical Paper XV th Unit I st Color schemes		a) Classification of color and color wheel b) Different types of color schemes c) Use of color schemes in different rooms, i.e Drawing room, kitchen, Bed room	

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	<p style="text-align: center;">Unit II nd Flower Decoration</p> <p style="text-align: center;">Unit III rd Floor Decoration</p> <p style="text-align: center;">Unit IV th</p>		<p style="text-align: center;">a)Material Required</p> <p style="text-align: center;">b)Types of flower arrangement traditional, modern, Japanese, dry arrangement</p> <p style="text-align: center;">c)Demonstration of different types of garland and bouquets and floral decoration</p> <p style="text-align: center;">a)Types of rangoli - dotted, using five finger, grains, flowers and leaves, alpana</p> <p style="text-align: center;">Modern Rangoli : Using Wooden Bhoosa, Marble chips, Kardi Bhoosa, Salt Crystals</p> <p style="text-align: center;">Preparation of Accessories for interior decoration</p>	


J/C Principal
 Kalikadevi Arts, Commerce & Sci.
 College, Shirur (Ka), Dist. Beed.

Annual Teaching Plan 2018-19

Mr. Sampal S.N. Chemistry

Class	Subject Unit & Title Of the Paper	Month	Topic/ Sub-Topics to be taught, Theory or Practical	No. of Period Required (in hr)
B.Sc S.Y	Physical Chemistry Paper VIII	June	Thermodynamics: I Definition: <i>of Thermodynamic Terms:</i> System, Surrounding types of system, intensive and extensive properties. Thermodynamic Process, Concept of heat and work. Work done in reversible and irreversible process.	15
B.Sc T.Y	Physical Chemistry	June	Photochemistry: Introduction of radiation with matter, difference between thermal and photochemical processes. Laws of photochemistry, Grothus - Drapper law, Stark- Einstein law.	08
B.Sc S.Y	Physical Chemistry	July	Concept of maximum work (W_{max}), Numerical Problems. First law of Thermodynamics: Statement, Definition of Internal energy and Enthalpy. Heat capacity, heat capacities at constant volume pressure and their relationship. Calculation of W, q, du and dH for the expansion of ideal gases under isothermal and adiabatic conditions for reversible process, Numerical problems, Hess's law of heat Summation and its application.	
B.Sc T.Y	Physical Chemistry	July	Jablonsiki diagram qualitative description of fluorescence, phosphorescence, non-radiative processes (Internal conversion, Intersystem crossing), quantum yield, photosensitized reactions.	
		July	Nano Material: Introduction to nano-materials Methods of Synthesis - i) High energy ball milling, ii) Physical vapour deposition (PVD) iii) Chemical vapour deposition (CVD) iv) Micro emulsion. Synthesis using micro-organisms and plant extract.	
B.Sc	Lab Course	July	To determine critical solution	03

S.Y			temperature of Phenol- water system.	
			To determine solubility of benzoic acid at different Temperature and determine H of dissolution process.	03
			To determine heat of neutralization (ΔH_n) of NaOH and HCl	03
B.Sc T.Y	Lab Course	July	Separation and Identification of both components : Benzoic Acid + β -naphthol	03
			Salicylic Acid + P- nitro aniline	03
			β -naphthol + Acetanilide	03
B.Sc F.Y	Lab Course	July	Preparation of 0.1N. NaOH solution and its standardization by given oxalic acid solution.	
			Preparation of 0.1 N oxalic acid solution and its standardization by given KMNO ₄ solution.	
B.Sc S.Y	Physical Chemistry	August	Thermodynamic-II: <i>Second Law of Thermodynamics:</i> Need for the law, different statement of the,law Carnot Cycle and its efficiency, Numerical Problems. Carnot Theorem. Concept of Entropy: Definition, Physical significance, Entropy as a State Function, Entropy change in Physical change, Entropy as criteria of Spontaneity & Equilibrium Entropy Change in Ideal Gases.	20
B.Sc T.Y	Physical Chemistry	August	Elementary Quantum Mechanics: Black body radiation, Planck's radiation law, photoelectric effect, Bohr's modes of hydrogen atom (no derivation) and its defects.Compton effect. De Broglie Hypothesis, the Heisenberg's uncertainty principles, Harmiltonian operator, Schrödinger wave equation and its importance, physical interpretation of the wave function, postulates of	10

			quantum mechanics. Schrödinger wave equation for H-atom, separation into three equations (without derivation), quantum numbers and their importance	
B.Sc S.Y	Lab Course	August	Partition coefficient of Benzene-water system using benzoic acid.	03
			Determine the molecular mass of polymer from viscometry measurements	03
			To investigate the Kinetics of iodination of Acetone.	03
B.Sc T.Y	Lab Course	August	m-nitroaniline + Naphthalene	03
			α -naphthol + O-nitroaniline	03
			Cinnamic Acid + Naphthalene	03
B.Sc F.Y	Lab Course		Identify two acid and two basic radical from the given binary mixture. $\text{CdSO}_4 + \text{NH}_4\text{Cl}$	03
			$\text{BaCO}_3 + \text{Al}_2(\text{NO}_3)_3$	03
			$\text{NiSO}_4 + \text{MgCO}_3$	03
			$\text{ZnCO}_3 + \text{KBr}$	03
B.Sc S.Y	Physical Chemistry	September	Gibbs and Helmholtz Functions: Gibbs Function (G) and Helmholtz Function (A) as Thermodynamic Quantities. A and G as criteria for Thermodynamic Equilibrium and Spontaneity, their Advantage over Entropy change. Variation A with P, V and T.	
			Chemical Equilibrium: Equilibrium Constant and Free Energy. Thermodynamic Derivation of Law of Mass Action. Le Chatelier's Principle. Reaction Isotherm and Reaction Isochore.	10
B.Sc T.Y	Physical Chemistry	September	Spectroscopy: Introduction - Electromagnetic radiation, regions of the spectrum, basic	10

			features of different spectrometers, statement of the Born-Oppenheimer approximation. Rotational Spectrum - Diatomic molecules, energy levels of a rigid rotor (semi classical principles), selection rule, rotational spectra of rigid diatomic molecule, determination of bond length, numerical problems.	
			Physical properties and molecular structure: Optical activity and its measurement, dipole moment and its measurement by temperature change method, magnetic property and its measurement by Guoy balance method.	
B.Sc S.Y	Lab Course	September	Estimation of Zinc gravimetrically as Zinc ammonium phosphate ($ZnNH_4PO_4$)	03
			Estimation of Zinc by EDTA solution using EBT indicator.	03
			Estimation of Nickel gravimetrically as Ni-DMG	03
			Estimation of Nickel by EDTA using Murexide indicator	03
B.Sc T.Y	Lab Course	September	Salicylic Acid + Naphthalene	03
			β -naphthol + m-dinitrobenzene	03
B.Sc F.Y	Lab Course	September	Determination of Equivalent weight of mg.	03
			To Determine Viscosity of given liquid (Water / Ethanol) by viscometer .	03
			To determine surface tension of given liquid.	03
			Verification of Lambert-Beer's law using Spectrophotometer.	03
B.Sc S.Y	Physical Chemistry	October	Clapeyron Equation, Clausius-Clapeyron Equation and its Application.	

B.Sc T.Y	Physical Chemistry	October	Applications of optical activity, dipole moment and magnetic property for determination of structure of molecule.	
B.Sc S.Y	Lab Course	October	To determine the equilibrium constant for the reaction: $KI + I_2 \rightleftharpoons KI_3$	
			Determine the molecular mass of polymer from viscometry measurements.	
BSc T.Y	Lab Course	October	Cinnamic Acid + P- nitro aniline	03
B.Sc F.Y	Lab Course	October	To study the effect of acid strength on the hydrolysis of an ester.	03
B.Sc S.Y	Physical Chemistry PaperNo.XI	November	Phase Equilibrium: Statement and Meaning of the Terms: <i>Phase, Component, Degree of Freedom</i> , Derivation of Phase Rule Equation. Phase Equilibria of the One Component System: Water System. Phase Equilibria of Two Components System: Solid-Liquid Equilibria, Simple Eutectic Pb-Ag. System Desilverisation of Lead. Solid Solutions: Compound Formation with congruent Melting Point (Mg-Zn) and Incongruent Melting Point ($FeCl_3 \cdot H_2O$) System. Freezing Mixture, Acetone-Dry Ice.	15
B.Sc T.Y	Inorganic Chemistry Paper XVI	November	Metal-ligand Bonding in Transition Metal Complexes: Limitations of Valence Bond Theory An Elementary idea of Crystal Field Theory Crystal Field Splitting in Octahedral, Tetrahedral and Square Planar Complexes	12
B.Sc S.Y	Lab Course	November	To determine normality and strength of HCl using (0.1N) NaOH Solution Conductometrically	03

			To determine normality and strength of acetic acid using (0.1N) NaOH solution Conductometrically.	03
			To determine normality and strength of HCl using (0.1N) NaOH solution by pH-metrically	03
B.Sc T.Y	Lab Course	November	Estimation of Carbonyl group by hydrazone formation method	03
			Estimation of ascorbic acid	03
			Estimation of vitamin C in commercial Glucon D	03
B.Sc F.Y	Lab Course	November	Organic Qualitative Analysis: Benzoic Acid	03
			Organic Qualitative Analysis: salicylic acid	03
B.Sc S.Y	Physical Chemistry PaperNo.XI	December	Freezing Mixture, Acetone-Dry Ice. Liquid-Liquid Mixture: Raoult's Law and Henry's Law. Ideal and Non-Ideal system. Azeotropes: HCl-H ₂ O and Ethanol-Water System. Partially Miscible Liquids: Phenol-Water, Trimethyl Amine-Water, Nicotine water System, Lower and Upper consulate Trimethyl Amine-Water, Nicotine water system, Lower and Upper Consulate Temperature. Effect of Impurity on Consulate Temperature.	
B.Sc T.Y	Inorganic Chemistry	December	Factors affecting Crystal Field Parameters	
			Electronic Spectra of Transition Metal Complexes: Types of Electronic Transitions Selection rules for d-d transitions Spectro-chemical series Orgel Energy level diagram for d1, d5 and d9 Electronic Spectrum of [Ti (H ₂ O) ₆] ³⁺ complex ion.	07
			Organometallic Compounds: Definition, Nomenclature and classification of Organometallic	10

			Compounds.	
B.Sc S.Y	Lab Course	December	To verify Lambert-Beers Law using KMnO ₄ solution	03
			To estimate the amount of Sugar using Polarimeter.	03
			To determine refractive index of ethanol water system.	03
B.Sc T.Y	Lab Course	December	Preparation of Hydrazobenzene from azobenzene.	03
			Preparation of Phthalic anhydride from phthalic acid.	03
			Preparation of 2, 4 dinitrophenyl hydrazone of acetone.	03
			To prepare picrate of Naphthalene.	03
B.Sc F.Y	Lab Course	December	Organic Qualitative Analysis: β -naphthol	03
			Organic Qualitative Analysis: p-nitroaniline,	03
B.Sc S.Y	Physical Chemistry	January	Electro Chemistry-I: Electrical Transport: Conduction in metals and in Electrolyte Solutions. Specific Conductance and equivalent conductance, measurement of equivalent conduction, variation of equivalent and specific conductance with dilution. Numerical problems. Kohlrausch's law and its application. Arrhenius Theory of Electrolyte Dissociation and its limitations. Weak and Strong Electrolytes, Ostwald's Dilution Law, its use and Limitations. Transport Number: Definition, Determination by Hittorfs Method and Moving Boundary Method. Conductometric Titration: Types and its advantages.	15
B.Sc T.Y	Inorganic Chemistry	January	Preparation, Properties, Bonding and Applications of alkyls and aryls of - Li, Al, Hg, Sn and Ti. A Brief account of metal - ethylenic Complexes Nature of bonding in metal carbonyls.	
			Bioinorganic Chemistry:	10

			Essential and trace elements in biological processes. Metalloporphyrins with special reference to hemoglobin and myoglobin Biological role of alkali (Na ⁺ , K ⁺) and alkaline earth metal ions(Mg ²⁺ , Ca ²⁺).	
B.Sc S.Y	Lab Course	January	Preparation, Crystallization and Physical Constant: Acetyl Derivatives : a) Aniline b) Salicylic Acid	03
			Preparation, Crystallization and Physical Constant: Benzoyl Derivatives : a) Aniline b) B-naphtol	03
			Estimation of nitro group by reduction.	03
B.Sc T.Y	Lab Course	January	Determine the Strength of HCl and CH ₃ COOH in a given mixture by titrating against strong base conductometrically.	03
			Determine the amount of Fe ²⁺ in the given solution potentiometrically	03
			To determine the interfacial tension between two immiscible liquids.	03
			Determine the strength of oxalic acid conductometrically using sodium hydroxide solution.	03
B.Sc F.Y	Lab Course	January	Organic Qualitative Analysis: Acetanilide.	03
			Organic Estimation: Phenol by Bromination	03
B.Sc S.Y	Physical Chemistry	February	Electrochemistry-II 15 Hrs Types of Reversible Electrodes: Gas- Metal Ion, Metal-Metal Ion, Metal- Insoluble salt Anion and Redox Electrodes. Nernst Equation, Derivation of Cell, E.M.F. and single Electrode potential, Standard Hydrogen Electrode, Reference Electrodes, Standard Electrode Potential, Sign Conventions, Electro-Chemical Series and its significance. Electrolytic and	15

			Galvanic Cells, Reversible and Irreversible Cells, Conventional Representation of Electro Chemical Cells. E.M.F. of a cell and its measurement, Calculation of Thermodynamic Quantities of Cell Reactions (G, H and K) Definition of pH, pKa- Determination of pH using SHE and Glass Electrode by Potentiometer method. Buffer- Acidic and Basic Buffers, Mechanism of Buffer Action, Henderson-Hasselbalch equation. Corrosion: Dry (Atmospheric) Corrosion and Wet (Electro Chemical) Corrosion Electrochemical Theory of Corrosion.	
B.Sc T.Y	Inorganic chemistry	February	Nitrogen fixation	
			Chromatography: Definition and classification of chromatography Paper and Thin Layer Chromatography Method of Development (Ascending, Descending Chromatography) Locating Technique (UV-light / Chemicals) R f value Comparison between paper and TLC Applications.	06
B.Sc S.Y	Lab Course	February	Bromo-Derivatives : a) Phenol b) Cinnamic Acid	03
			Estimation of ester by hydrolysis.	03
			Estimation of amides by hydrolysis.	03
B.Sc T.Y	Lab Course	February	To study the effect of addition of an electrolyte NaCl / KCl on the solubility of benzoic acid at room temperature.	03
			Determine the amount of Fe ²⁺ in the given solution potentiometrically	03
B.Sc F.Y	Lab Course	February	Estimation of basicity, molecular weight of organic acid	03

Mr. Yewale D.A

ANNUAL TEACHING PLAN 2018-2019

(I, III, V Sem)

Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com F.Y. Ist Sem.	Financial Accounting (60 Periods)	JUN.	Unit I: Book-Keeping and Accountancy: - Theory) Meaning. Definitions, Concepts, Objectives, Need, Scope, Classification, and Rules of Accounts, Accounting Cycle, Journal, Ledger, Balancing of Account.	15
		JULY.	Unit II: Depreciation: - Annuity and Sinking fund Method (Numerical)	15
		AUG.	Unit III: Final Account of Sole Trader: - (Numerical) Meaning Importance, Preparation of Manufacturing Account, Trading Account. Profit and Loss Account and balance sheet, Adjustment.	10
		SEPT.	Unit IV: Hire purchase System & Installment Method:- C Theory on Hire Purchase & Numerical on Installment Method) Meaning, Calculations of Interest, Accounting for hire purchase transactions by Asset purchase method based on full cash price, Journal Entries, Ledger Accounts and Discloser in Balance sheet for hire and vendor	10

		OCT .	Unit V: Royalty Accounts:- Numerical) Royalty, Minimum Rent, Short Workings, Recoupment of Short Working, Lapse of Short Working, Journal Entries and Ledger Accounts in the Books of Landlord and Lessee	10
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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com F.Y. Ist Sem.	Entrepreneurship Development-I	JUN.	Unit I: Entrepreneur: Concept of Entrepreneur Definition, Characteristics. Functions, Entrepreneurs and Intrapreneur. Role of an Entrepreneur in Economic Development.	15
		JULY.	Unit II: Entrepreneurship: Concept, Meaning. Definition, Characteristics, Importance of Entrepreneurship. Challenges, Issues & Barriers of Entrepreneurship.	15
		AUG.	Unit III – The Dynamic New Trends of Entrepreneurship: Startup Accelerators, Student Sandbox and Business Labs, Crowd Funding. Venture Capital, Co-Working Spaces, Boot Camps, Online Entrepreneurship Degree. .	10
		SEPT.	Unit IV - Evolution Essential of 21 Century Entrepreneurship. Importance of Entrepreneurship in 21 Century, Stan-up Schemes, Start-up India, Stand up India, Pradhan Mantri Kaushal Vilas Yojana, Siill India.	10
		OCT .	Usit V Projeet Idestification:	10

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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com F.Y. Ist Sem.	Business and Industrial Economics	JUNE TO OCT	I. Introduction to Business Economics: Meaning, definition, nature, characteristics, significance and scope of business economics, objective of a business firm.	10
			II Theory of Consumer Behaviour The indifference curve approach: Meaning, definition, assumptions and properties of indifference curve, consumers equilibrium.	
			III Elasticity of Demand Concept, Measurement and determinants of elasticity of demand. Price elasticity, income elasticity and cross elasticity, importance of elasticity of demand, Demand Forecasting Methods	
			IV- Market Structures Market Structures and Business decisions; Objectives of a business firm; a. Perfect Competition: Meaning,	

			<p>Concept and features; b. Monopoly: Meaning, Concept and features; Securities Exchange Board of India (SEBI), Foreign Exchange Management Act (FEMA)</p>	
			<p>V Factor Pricing Marginal Productivity theory and demand for factors; Nature of supply of factor inputs; Determination of wage rates under perfect competition and monopoly's <i>interest concept</i>, theories of interest.</p>	

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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com S.Y. IIIrd Sem.	Principal of Business Management (60 Periods)	JUN.	Unit-I : Introduction to Management Meaning, Definitions, Nature, Characteristics, Importance, functions of Management. Development of Management thoughts- Contribution of F.W. Taylor, Henry Fayol, MaryParker follett, Elton Mayo, Peter Drucker.	15
		JULY.	Unit -II : Planning Meaning, Definitions, Nature, Characteristics & Importance of Planning, Limitations of planning, Types of plans, planning process.	15
		AUG.	Unit -III : Decision Making Meaning, Definitions, Nature, Characteristics &, Technique of decision making. Problems in decision making. Unit - IV : Organizing Meaning, Definitions, Importance of organization. The Process of organization, Types of organization, principles of organization.	15
		SEPT.	Unit -V : Staffing Meaning, Definitions, objectives, Characteristics & Importance of staffing. Man power planning, source of recruitment, selection procedure, Induction, promotion, Training of Executive or management development, types of training, Performance appraisal - meaning importance and methods.	15

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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com T.Y. Vth Sem.	Cost Accounting-I	JUN.	Unit-I Cost Accounting: Meaning and definition, limitations of financial accounting, Development of Cost Accounting, Functions, Objective, Advantages and Limitations of Cost Accounting, Difference between Financial and cost ^ Accounting, Elements of Cost, Classification of Costs. (Theory Only)	15
		JULY.	Unit-II Material: Concepts and objective of material control. Need and essentials of Material Control, Purchase procedure, Functions of purchase department Classification and Coding of Materials, Fixation of levels of material. Economic 0 ²) order quantity. (Theory only)	15
		AUG.	Unit-III Storage and Handling of Material : Organization and layout of stores, material handling costs, Bincards, Stores routine, issue of materials, issue procedure, methods of pricing material issues, Fifo, Lifo, simple average, weighted average (12) Method. (Theory and Numerical)	10
		SEPT.	Unit-IV Labour: Meaning and definition, Methods of time keeping and time-booking, labuor control, methods of wage payment, time and piece rate, incentive schemes- Taylor's differential piece rate system, Halsey plan, Rowan plan. ^ [Numerical Problem]	10

		OCT	Unit-V Overheads: Definition of Overhead, Direct and Indirect Cost, Importance of Overhead, Allocation, Apportionment and Absorption of Overheads, Methods of (12) distribution-Primary, Secondary distribution repeated methods [Numerical Problem]	10
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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com T.Y. Vth Sem.	New Auditing Trends (60 Periods)	June	Unit – I Auditing :Meaning and, objectives, scope ,General Principles ,Types of Errors and Frauds, Audit Programmed, Audit Note book	15
		July	Unit – II Internal Check System : Internal control, objects and significance of Internal check and auditor.	10
		Aug	Unit – III Vouching: Meaning Need, Importance Vouching of cash & Credit transaction verification and valuation Asset and liabilities	10
		Sept	Unit – IV Audit limited company – Company Auditor – Appointment of Auditor ,Power and duties and liabilities of Auditor Remuneration of Auditor ,and Removal of Auditor Audit report ,Types of report slandered report and Qualified report.	10
		Oct	Unit – V Audit computerized system- Auditing in an EDP environment Planning and audit in Computer Environment ,General EDP Control, EDP Application control system Development ,Data transfer Audit Practice in relation to computerized system Assisted Audit Techniques.(CAAT)	15

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ANNUAL TEACHING PLAN 2018-2019

(II, IV, VI Sem)

Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com F.Y. II nd Sem.	Final Account (60 Periods)	NOV	Unit-I Accounting Principles and Accounting Standards (Theory) AS-1, AS-2, AS-9, AS-10, AS-	01
		DEC	Unit-II Final Accounts of Non-trading Concerns (Numerical) Meaning of Non-trading concerns, features, Capital and Revenue Receipts and Expenditures, difference between Receipts and Payments Account, Income and Expenditure Account Preparation of Final Accounts.	15
		JAN	Unit-III Branch Accounts (Numerical) Meaning of branch and branch account, objectives of branch account, Classification of branches, Accounting for Dependent Branches-Methods of accounting for branch accounting: Debtors System -Meaning, cost price method and invoice price method, accounting entries in the books of head office and ledger accounts. Stock and Debtors System -meaning, accounting entries in the books of head office and ledger accounts	15

		FEB	Unit- IV Departmental Accounts (Numerical) Meaning, Objectives, Advantages of Department Accounts, Accounting Procedure- Unitary method and Tabular or Columnar Method, Allocation of Expenses and Incomes, Inter-departmental Transfers, Preparation of Departmental Trading, Profit and Loss Account and Balance Sheet.	10
		MAR	Unit-V Consignment Accounting (Numerical) Meaning of Consignment Account, Distinction between consignment and sale, Valuation of inventories, goods invoiced above cost, normal loss, abnormal loss, Accounting entries in the books of the consignor and consignee, Ledger accounts- consignment account, Goods sent on consignment account, inventories on consignment account, inventory reserve account consignee's account, consignor's account.	10

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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com F.Y. II nd Sem.	Entrepreneurship Development-II	NOV.	Unit - I : Entrepreneurship -Evolution of the concept -Characteristics -Growth in India -Role of Entrepreneurship in Economic Development	5
		DEC.	UnitII: Emerging Trends in Entrepreneurship Development. -Women Entrepreneurship: Concept, Functions, Problems, Growth. -Rural Entrepreneurship: Meaning, Nature, Need & Importance, Problems -Traditional Pattern of Entrepreneurship in India	10
		JAN.	Unit III: Entrepreneurship Development Programme -Need for EDP -Objectives of EDP -Contents of EDP -Phases of EDP -Evaluation of EDP	15
		FEB.	Unit IV: Project Identification & Resource Management -Meaning of Project -Project Identification -Project Selection -Resources of (Finance, Material, Market, Man power, Power, Land & Building) -Preparation of Project	15
		MARCH.	Unit V: Project Preparation 15 -Introduction about Project -Background about Project (Product/Service) -Brief information about Product, Marketing, Resources generation etc. -Requirements of Project: Required Resources, Budget, Plant, Machinery & Other related things (Based on fixed and working capital	15

			approach) -Processing, Duration required and expected outcome -Marketing, Services etc. (Project selection or Project Preparation should be based on such a project which is currently working in your environment and known to the students, Support factual - information, data and documents	
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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com F.Y. II nd Sem.	Business Organisation And Management- II	NOV TO MAR	<p>Unit 1: Foundation of Indian Business Lectures: 12 Manufacturing and Service Sectors; Small and Medium Enterprises; Problems and Government policy. India's experience of liberalization and globalization. Technological innovations and skill development. 'Make in India' Movement. Social responsibility and ethics Emerging opportunities in business; Franchising, Outsourcing, and E-commerce.</p>	12
			<p>Unit 2: Business Enterprises Lectures: 12 Forms of Business Organization: Sole Proprietorship, Joint Hindu Family Firm, Partnership firm, Joint Stock Company, Cooperative society; Limited Liability Partnership; Choice of Form of Organization. Government - Business Interface; Rationale and Forms of Public Enterprises. International Business. Multinational Corporations.</p>	
			<p>Unit 3: Management and Organization Lectures: 12 The Process of Management: Planning; Decision-making; Strategy Formulation. Organizing: Basic Considerations;</p>	

			<p>Departmentation – Functional, Project, Matrix and Network; Delegation and Decentralization of Authority; Groups and Teams.</p>	
			<p>Unit 4: Leadership, Motivation and Control Lectures: 12 Leadership: Concept and Styles; Trait and Situational Theory of Leadership. Motivation: Concept and Importance; Maslow Need Hierarchy Theory; Herzberg Two Factors Theory. Control: Concept and Process.</p>	
			<p>Unit V: Functional Areas of Management Lectures: 12 Marketing Management: Marketing Concept; Marketing Mix; Product Life Cycle; Pricing Policies and Practices Financial Management: Concept and Objectives; Sources of Funds – Equity Shares, Debentures, Venture Capital and Lease Finance. Securities Market, Role of SEBI. Human Resource Management: Concept and Functions; Basic Dynamics of Employer – Employee Relations</p>	

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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com S.Y. IVth Sem.	Principal of Business Management (60 Periods)	NOV.	Unit I: Direction Meaning, Definitions, Importance, Principles of Direction, Characteristics of a good order, Written Vs. oral directives, Techniques of Direction. Chapter -	15
		DEC.	Unit II : Leadership Meaning, Definitions, Characteristics & Importance of Leadership, Types of leaders. Leadership theories - Traditional theories - Trait theory, group and exchange theory, Behavioural Theories- Liker's four systems.	15
		JAN.	Unit III : Motivation, Morale and Human Relations .. Meaning, Definitions, Nature, Features, Importance of Motivation, kinds of Motivation, Morale - Meaning and importance of morale, Human relation approach, Psychological and Sociological framework of human relations, importance of human relations. Chapter -	10
		FEB.	Unit IV : Co-ordination Meaning, Definition, features and Importance of Co-ordination. The elements of coordination, steps for achieving effective co-ordination. Chapter -	10
		MARCH.	Unit V : Controlling Meaning, Definitions, Elements of control, The control process, importance of control, The control cycle, Essential Steps in control Procedure, control technique, requirement of good control system.	10

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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com T.Y. VIth Sem.	Cost Accounting-II	NOV.	Unit-I Single or Output Costing: Elements of cost, Preparation of Cost Sheet, tender and Quotations.	15
		DEC.	Unit-U Contract Costing: Complete and incomplete Contracts, work in Progress Profit on Contract.	15
		JAN.	Unit-III Operating Cost Sheet: Electricity & Transport	10
		FEB	Unit IV : Process costing	10
		MARCH.	Unit V: Reconciliation: Reconciliation of Cost and Financial Accounts	10

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Class	Subject Unit & Title Of The Paper	Month	Topics/Sub-Topics To Be Thought , Theory Or Practical	No Of Periods Required
B. Com T.Y. VI th Sem.	New Auditing Trends (60 Periods)	Nov	Unit I: Cost and Management Audit: -(A) Cost Audit Meaning, definition, nature, objective of Cost Audit advantage of cost audit . Cost Auditor Qualification and Appointment of cost auditor, rights and power of cost auditor, Cost auditor program, Cost audit report. (B) Management Audit Meaning & definition and objective of Management Audit ,Need for Management Audit , Works & duties of Management Audit .	15
		Dec	Unit II- Human Resource Audit :- Meaning Definition ,Scope and Importance of Human Resource Audit Advantage and Disadvantages of Human resource Audit.	15
		Jan	Unit. III:- Investigation:- Meaning Definition ,Objectives and characteristics of Investigation Difference Between Audit and Investigation ,Types of Investigation	10
		Feb	Unit IV Trends of Cooperative Audit :- Special Features in respect of Audit of Cooperatives Sugar Industry	10
		Mar	Unit V Tax Audit :- Meaning of Tax Audit , Auditor role under Income Tax Act, Compulsory Tax Audit , Certification for claiming, Exemptions, Selective Tax Audit ,Tax Consultancy and Representation .	10


 J/C Principal
 Kalikadevi Arts, Commerce & Sci.
 College, Shirur (Ka), Dist. Beed.

