

**M.G.V.C. ARTS, COMMERCE AND SCIENCE COLLEGE,
MUDDEBIHAL**

TEACHING PLAN FOR THE YEAR 2022-2023


Class: B.A -1st Semester,

Subject: Sociology (NEP)

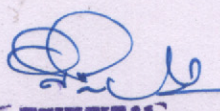
Paper: DSC – 1 : Understanding Sociology

Name of the faculty: Dr. S. B. Jadhav.


Month	Chapters	Hours (42)
	Unit – 1 Sociology as Science	
September To October	Chapter No. 1 Sociology as a study of Groups and Social Interaction –Definition, Scope and Need; Sociology as Science Vs. Sociology as Social Reform Chapter No. 2 Foci of Sociology: Social Institutions Chapter No. 3 Sociological Eye (Randall Collins), Sociological Imagination Charles Wright Mills' distinction between trouble (i.e. personal in nature and issue, i.e. public in nature) Chapter No. 4. Sociological Perspectives: Functionalist, Conflict, Symbolic Interactionist, Feminist	17 Hours
	Unit – 2 Culture and Socialization	
October to November	Chapter No. 5. Culture: Definition and Elements of Culture; Comparison between Culture and Civilization; Acculturation: Robert Ezra Park's idea of Melting Pot; Cultural Contact, Cultural Shock, Counter Culture and Contra Culture Chapter No. 6. Global Culture: Globalization of Values; Cultural Imperialism	14 Hours


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	<p>Chapter No. 7. Emerging Issues in Culture: Consumer Culture, Children as Consumers, Cyber culture, Netiquette in the age of Digital Living and Digital Divide</p> <p>Chapter No. 8 Socialization: Definition, Stages, Theories of Self: Charles Horton Cooley and George Herbert Mead.</p>	
	Unit – 3 Social Change	
November To December	<p>Chapter No. 9 Meaning, Definitions and Features, Changes due to Industrialization, Rationalization, Globalization, Urbanization and Information Explosion</p> <p>Chapter No. 10. Consequences of Change: Changing age Structure of Societies: Technological Impact on Social Life; Changing Environment.</p>	11 Hours


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TEACHING PLAN FOR THE YEAR 2022-2023

Class: B.A –1st Semester.

Subject: Sociology (NEP)

Paper: DSC - 2: Changing Social Institutions in India

Name of the faculty: Dr. S. B. Jadhav.

Month	Chapters	Hours (42)
	Unit – 1 Family and Marriage	
September and October	Chapter No. 1 Family - Definitions of Family and Household; Changing structure of family; changes in size and composition Chapter No. 2 Weakening of Gender and Age Stratification - democratization of relationships: between spouses, parent-children; stepparenting Chapter No. 3 Changes in care giving of children and elderly Chapter No. 4 Marriage – Definition, changing patterns of marital relations- cohabitation, separation, divorce and remarriage. Chapter No. 5 Changes in Age of Marriage, Marriage Decision Making and Regional Variations Chapter No. 6 Decrease in number of Children and Voluntary Childlessness.	16 Hours
	Unit – 2 Religion and Education	
October to November	Chapter No. 7. Religion:- Definition; Secularization vs. Resurgence of Religion in Modern World Chapter No. 8. Challenge of Diversity - Religious Freedom vs. State Laws Chapter No.9. Education: Definition; Education as Socialization; types of Education - formal and informal Chapter No. 10. Functional view - Manifest and Latent Functions; Conflict view- Education as tool for Perpetuating Inequality	13 Hours

	Chapter No. 11. Schooling and Life Chances (Max Weber's views) – increasing Enrolment Ratio Chapter No.12. Education and Employability - Technology and Digital Divide.	
	Unit – 3 Economic and Political Institutions	
November To December	Chapter No. 13. Definitions of Economy and Work Chapter No. 14. Gender Stratification in work and its Feminization Chapter No. 15 Job insecurity, Unemployment; Outsourcing – opportunities and threats Chapter No. 16 Definitions of Political Institution, Government, Governance and State Chapter No. 17 Status of Democracy in India : Social Reality Chapter No. 18 Challenges: Militancy, Fundamentalism, Regionalism.	13 Hours



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TEACHING PLAN FOR THE YEAR 2022-2023

Class: B.A –1st Semester.

Subject: Sociology (NEP)

Paper: OE 1.3: Sociology of Mass Media

Name of the faculty: Dr. S. B. Jadhav.

Month	Chapters	Hours (39)
	Unit – 1 Introduction to Mass Media	
September to October	Chapter 1 Meaning. Definitions, Characteristics and functions of mass media Chapter 2. Evolution of mass media and digital revolution in India Chapter 3. Importance of Mass media and communication.	13 Hours
	Unit – 2 Types of Mass media	
October to November	Chapter 4. Typology of Media Chapter 5. Print Media: Merits and demerits Chap 6. Electronic Media: Merits and demerits, digital divide Chapter 7. Social Media: Types and Implications.	13 Hours
	Unit- III Mass Media and society	
November To December	Chapter 8: Impact of media on culture, education, consumer behavior and politics Chapter 9: Impact of Globalization and Mass Media Chapter 10: Abuse of Media, commercialization of news & media imperialism Chapter 11: Ethics and Social Responsibility of Mass media, Media, technology and culture.	13 Hours



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TEACHING PLAN FOR THE YEAR 2022-2023


Class: B.A –3rd Semester.

Subject: Sociology (NEP)

Paper: DSC 5: Social Stratification and Mobility

Name of the faculty: Dr. S. B. Jadhav.

Month	Chapters	Hours (42)
	Unit – 1 Stratification - Features and Forms	
September to October	Chapter No. 1. Basic characteristics of Stratification. Chapter No.2. Forms of Social Stratification - Slavery, Estate, Caste, Class. Chapter No.3. Dimensions of Social Stratification - Income, Wealth, Power, Occupational Prestige, Schooling.	14 Hours
	Unit – 2 Perspectives on Stratification	
October to November	Chapter No. 4. Functional Theory: Kingsley Davis and W. E. Moore's perspective and critique by Melvin. M. Tumin. Chapter No.5. Marxian Theory: Class and Social Change. Chapter No.6. Weber's Theory: Class, Status and Group Power.	14 Hours
	Unit- III Social Mobility	
November To December	Chapter No.7. Meaning and Determinants of Social Mobility, Forms of Social Mobility: Horizontal and Vertical, Intergenerational and Intragenerational Mobility Chapter No.8. Rise of Middle Class - Role of Education and Profession.	14 Hours


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TEACHING PLAN FOR THE YEAR 2022-2023

Class: B.A –3rd Semester.

Subject: Sociology (NEP)

Paper: DSC-6: Sociology of Urban Life in India

Name of the faculty: Dr. S. B. Jadhav.

Month	Chapters	Hours (42)
	Unit – 1 Introducing Urban Sociology	
September to October	Chapter No. 1. Meaning of Urban Sociology and its importance; characteristics of Urban Society. Chapter No.2. Meaning of Urban, Urbanism and the City; Types of City: Metropolitan, Megacity, Smart City and Global City. Chapter No.3. Urbanization, Rural-Urban Continuum, Suburbs, Urban Sprawl, Edge Cities.	17 Hours
	Unit – 2 Perspectives on Urban Society	
October to November	Chapter No. 4. Ecological Theory (Chicago School). Chapter No.5. World and Global Cities (Saskia Sassen). Chapter No.6 Spaces of Flows (Manuel Castells), Cities in the South.	09 Hours
	Unit- III Urban Policy	
November To December	Chapter No.7. Inequalities: Caste, Class, Gated Communities and Social Exclusion. Chapter No.8. Culture and Leisure, Elite and Popular Culture. Chapter No.9. Urban Governance: Urbanization and Environmental Concerns, Recent Urban Development Programmes in India.	16 Hours


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TEACHING PLAN FOR THE YEAR 2022-2023

Class: B.A – 3rd Semester.

Subject: Sociology

Paper – OE-3.2 : Sociology of Tourism and Management

Name of the Faculty: Dr. S. B. Jadhav.

Month	Chapters	Hours (39)
	Unit – 1 Sociology, Tourism, Tourists	
November To December	Chapter No. 1. Definitions of Sociology, Culture, Tourism, Tourists, Tourist Gaze; Relation between Tourism, Leisure and Recreation; Sociology of Tourism its Significance. Chapter No.2. Types of Tourism: Cultural, Heritage, Health, Food, Sports Religious , Educational and Eco Tourism Chapter No.3. Tourism and Locals; Hosts and Guests: Mutual Impact, Cultural Impact of Tourism.	14 Hours
	Unit – 2 Tourism System	
December To January	Chapter No. 4. Development and Structure of the Tourist System - Motivation and Role of Tourist Chapter No.5. Impact of Tourism on Host Place: Social, Economic, Climate and Environmental Chapter No.6. Sustainable Tourism and Sustainability of Tourism.	10 Hours
	Unit- III Tourism Management	
January To February	Chapter No.7. Demand for Tourism at Individual and Market level; Tourism Consumer Behaviour: Roles and Decision Making Process; Accommodation: Definition and Management of Commercial Accommodation; Transportation as Tourist Product; Role of Intermediaries	15 Hours

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TEACHING PLAN FOR THE YEAR 2022-2023

Class: B.A – 3rd Semester.


Subject: Sociology

Paper – OE-3.2 : Sociology of Tourism and Management

Name of the Faculty: Dr. S. B. Jadhav.

Month	Chapters	Hours (39)
	Unit – 1 Sociology, Tourism, Tourists	
November To December	Chapter No. 1. Definitions of Sociology, Culture, Tourism, Tourists, Tourist Gaze; Relation between Tourism, Leisure and Recreation; Sociology of Tourism its Significance. Chapter No.2. Types of Tourism: Cultural, Heritage, Health, Food, Sports Religious , Educational and Eco Tourism Chapter No.3. Tourism and Locals; Hosts and Guests: Mutual Impact, Cultural Impact of Tourism.	14 Hours
	Unit – 2 Tourism System	
December To January	Chapter No. 4. Development and Structure of the Tourist System - Motivation and Role of Tourist Chapter No.5. Impact of Tourism on Host Place: Social, Economic, Climate and Environmental Chapter No.6. Sustainable Tourism and Sustainability of Tourism.	10 Hours
	Unit- III Tourism Management	
January To February	Chapter No.7. Demand for Tourism at Individual and Market level; Tourism Consumer Behaviour: Roles and Decision Making Process; Accommodation: Definition and Management of Commercial Accommodation; Transportation as Tourist Product; Role of Intermediaries	15 Hours

<p>Chapter No.8. Marketing for Tourism: Definition; Difference between Marketing and Selling; Tourism as a Service Industry: Product, Price, Promotion and Place</p> <p>Chapter No.9. Information Technology and Tourism: ICT as a Business Tool: e-Tourism.</p>	
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TEACHING PLAN FOR THE YEAR 2022-2023

Class: B.A – 5th Semester.


Subject: Sociology (CBCS),

Paper – I: Sociology of Rural Development in India

Name of the Faculty: Dr. S. B. Jadhav.

Month	Chapters	Hours (39)
	Unit – 1 Unit- I Introduction	
September to October	1. Meaning, Nature and Significance of Rural Development 2. Objectives of Rural Development in India 3. Land Tenure, Agrarian Relations Land Reforms, and Social Changes 4. Green Revolution, White Revolution , Red Revolution, Yellow Revolution, Blue Revolution: Objectives and Achievements.	14 Hours
	Unit – 2 Rural Community	
October to November	1. Characteristics of Rural Community 2. Rural Problems: Rural Poverty, Rural Unemployment, 3. Rural Health and Sanitation 4. Indebtedness: Causes and Effects, Farmer"s Suicide	14 Hours
	Unit- III Peasant Movements in India	
November To December	1. Meaning and Nature of Peasant Movements 2. Bardoli Satyagraha, Telangana Movement and Naxabari Movement 3. Peasant Movements in Karnataka: Mahadayi, Naragunda Bandaya, Kaveri 4. Impact of Peasant Movement.	14 Hours

	Unit- IV Panchayat Raj System and Rural Development	
December To January	1. Constitution of Gram Panchayat, Taluk Panchayat, and Zilla Panchayat 2. Panchayat Raj: Objectives, Functions and Its Duties 3. People's Participation and Women's Participation in Governance 4. Role of Personnel in Rural Development-Village Level Worker(VLW) Adyaksh and Upadyekshas, Grama Sevak(GS), Block Level Development Officers(BDO) and District Level Officers(CEO)	14 Hours
	Unit- V Rural Development Programmes	
January To February	1. Agencies of Rural Development – Govt. and NGO's 2. Programs of Rural Development in India MGNREGA, Drinking Water and Sanitation, Swacha Bharat, SHG's, Akshara Dasoha, National Rural Livelihood Mission 3. LPG, GATT, WTO 4. Impact of Globalization on Rural Society.	14 Hours


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TEACHING PLAN FOR THE YEAR 2022-2023

Class: B.A – 5th Semester.


Subject: Sociology (CBCS),

Paper – II: Sociology Urban Society in India

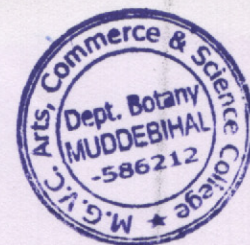
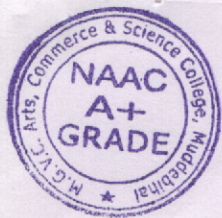
Name of the Faculty: Dr. S. B. Jadhav.

Month	Chapters	Hours
	Unit – 1 Unit- Introduction to Urban Society in India	
September to October	1. Meaning and Characteristics of Urban Society 2. Significance of Study of Urban Life 3. Types of Cities 4. Urban Development in Ancient and Medieval Periods	14 Hours
	Unit – 2 Cities in India	
October to November	1. History and Growth of Cities in India 2. Factors for the Growth of Cities 3. Metropolitan and Mega Cities: Meaning and Characteristics 4. Growth of Metropolitan and Mega Cities in India	14 Hours
	Unit- III Urbanization in Modern India	
November To December	1. Meaning and Nature of Urbanization 2. Rural-Urban Migration 3. Factors Responsible for Rapid Urbanization 4. Consequences of Over Urbanization and its Measures	14 Hours
	Unit- IV Urban Problems in India	
December To January	1. Problems of Housing, Slums and Sanitation 2. Urban Crimes, Drug Addiction 3. Water Supply and Transportation	14 Hours

	4. Environmental Problems: Pollution and its Effects, Remedies for Environmental Problems	
	Unit- V Urban Planning and Development	
January To February	1. Urban Development and Its Objectives 2. Urban Policy and Urban Development Programmes 3. Urban Governance and its Role 4. Challenges of Urban Management.	14 Hours


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DEPARTMENT OF BOTANY

PLAN OF TEACHING

Title of the Course: Microbial Diversity & Technology

Name- Prof: S.V.Gurumath

Class- B.sc I Semester

Year: 2022-23

Class	Month	Topics to be Covered	Hours Allotted
B.Sc I Sem	November	Chapter No. 7 Microbial cultures and preservation-Microbial cultures. Pure culture and axenic cultures, subculturing. Preservation methods-overlaying cultures with mineral oils, lyophilisation. Microbial culture collections and their importance. A brief account on ITCC, MTCC and ATCC.	05 Hrs
B.Sc I Sem	December	Chapter No. 4. Culture media for Microbes- Natural and synthetic media, Routine media - basal media, enriched media, selective media, indicator media, transport media, and storage media.	05 Hrs
B.Sc I Sem	January	Chapter No. 5. Sterilization methods -Methods of disinfection: antiseptic, tyndallisation and Pasteurization. Sterilization-Physical methods: dry heat, moist heat, UV light, ionization radiation, filtration. Chemical methods - phenolic compounds, anionic and cationic detergents.	05 Hrs
B.Sc I Sem	February January	Chapter No. 6. Microbial Growth-Microbial growth and measurement. Nutritional types of Microbes- autotrophs and heterotrophs, phototrophs and chemotrophs; lithotrophs and organotrophs.	05 Hrs

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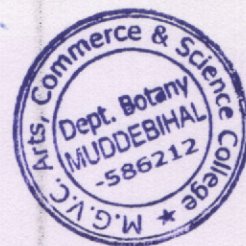
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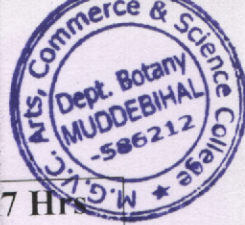
Title of the Course: Microbial Diversity & Technology

Name-Prof: B.N.Chawadapur

Class- B.sc I Semester


Year: 2022-23

Class	Month	Topics to be Covered	Hours Allotted
B.Sc I Sem	November	Chapter No. 1: Microbial diversity-Introduction to microbial diversity; Hierarchical organization and positions of microbes in the living world: Whittaker's five-kingdom system. Distribution of microbes in soil, air, food and water. Significance of microbial diversity in nature.	05 Hrs
		Chapter No. 8. Viruses- General structure and classification of Viruses; ICTV system of classification. Structure and multiplication of TMV, SARS-COV-2, and Bacteriophage (T2). Cultivation of viruses. Vaccines and types.	04 Hrs
B.Sc I Sem	December	Chapter No. 9. Viroids- general characteristics and structure of Potato Spindle	02 Hrs
		Chapter No. 10. Bacteria- General characteristics and classification.(Bergey's classification) Archaeobacteria and Eubacteria. Ultrastructure of Bacteria; Bacterial growth and nutrition. Reproduction in bacteria- asexual and sexual methods. Study of <i>Rhizobium</i> and its applications. A brief account of Actinomycetes. Mycoplasmas and Phytoplasmas- General characteristics and diseases	05 Hrs



B.Sc I Sem	January	Chapter No. 11. Fungi -General characteristics and classification (Alexopoulos classification). Thallus organization and nutrition in fungi. Reproduction in fungi (asexual and sexual). Heterothallism and parasexuality. Type study: Morphology of <i>Phytophthora</i> , <i>Rhizopus</i> , <i>Neurospora</i> , <i>Puccinia</i> , <i>Penicillium</i> and <i>Trichoderma</i> . Morphology and reproduction of <i>Phytophthora</i> and <i>Puccinia</i> . VAM Fungi and their significance. Microbial plant diseases -Late Blight of Potato, Black stem rust of wheat; Downy Mildew of Bajra, Grain smut of Sorghum, Sandal Spike, Citrus Canker, Root Knot Disease of Mulberry. Economic importance of Fungi.	07 Hrs
B.Sc I Sem	February January	Chapter No. 12. Lichens – Structure and reproduction. VAM Fungi and their significance. Fungal diseases-. Black stem rust of wheat; Downy Mildew of Bajra, Grain smut of Sorghum, Citrus Canker, Economic importance of Fungi. 3 Hours	03 Hrs


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
Title of the Course: Microbial Diversity & Technology

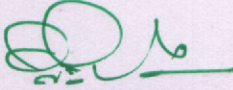
Name- Prof: Laxmi Arjunagi

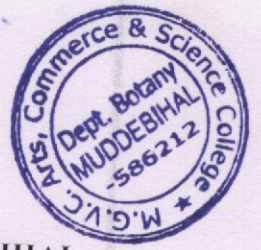
Class- B.sc I Semester

Year: 2022-23

Class	Month	Topics to be Covered	Hours Allotted
B.Sc I Sem	November	Chapter No. 2 History and development of microbiology-Microbiologists and contributions of - Leeuwenhoek, Louis Pasteur, Robert Koch, Joseph Lister, Dmitri Iwanowski, Sergius Winogradsky and M W Beijerinck and Paul Ehrlich. Contributions of any two Indian microbiologists	05 Hrs
B.Sc I Sem	December	Chapter No. 3 Microscopy-Working principle and applications of light, dark field, phase contrast and electron microscopes (SEM and TEM).	05 Hrs
B.Sc I Sem	January	Microbiological stains (acidic, basic and special) and Principles of staining. Simple, Gram's and differential staining.	05 Hrs


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DEPARTMENT OF BOTANY

PLAN OF TEACHING


Topic: Plant Anatomy and Development Biology


Name- Prof: S.V.Gurumath

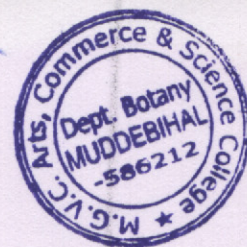
Class- B.sc III Semester

Year: 2022-23

Class	Month	Topics to be Covered	Hours Allotted
B.Sc III Sem	November	DEVELOPMENT BIOLOGY Unit III: Morphogenesis and Differentiation. Differentiation and cell polarity in acellular(Dictyostelium), Unicellular(Acetabularia) and multicellular system (root hair and stomata formation)	05 Hrs
B.Sc III Sem	December	Shoot Apical meristem(SAM): Origin, structure and function,; Differentiation of root, stem, leaf Transition from vegetative apex into reproductive apex Developmental patterns at flowering apex: ABC model specification of floral organs.	05 Hrs
B.Sc III Sem	January	Modification of gene action by growth hormones and cellular differences between floral organs. Senescence – a general account.	04 Hrs


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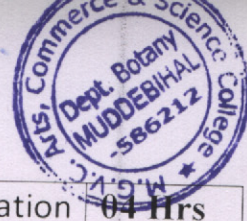
Title of the Course: Plant Anatomy and Development Biology

Name-Prof: Laxmi.Arjunagi


Class- B.sc III Semester

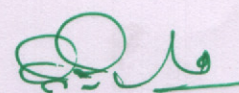
Year: 2022-23

Class	Month	Topics to be Covered	Hours Allotted
B.Sc III Sem	November	Unit IV: Reproductive Biology Introduction, Scope and contributions of Indian embryologists: P. Maheswari, B G L Swamy, M.S. Swaminathan and K.C. Mehta. Microsporangium: Development and structure of mature anther, Anther wall layers, Tapetum - types, structure and functions and sporogenous tissue. Microsporogenesis - Microspore mother cells, microspore tetrads, Pollinia. Microgametogenesis - Formation of vegetative and generative cells, structure of male gametophyte. Pollen embryo sac (Nemec phenomenon).	06 Hrs.
B.Sc III Sem	December	Megasporangium - Structure of typical Angiosperm ovule. Types of ovule- Anatropous, Orthotropous, Amphitropous, Circinotropous. Megagametogenesis - Types of development of Female gametophyte/embryo sac monosporic-Polygonum type, bisporic - Allium type, tetrasporic - Fritillaria type. Structure of mature embryo sac. Pollination and fertilization: Structural and functional aspects of pollen, stigma and style.	04 Hrs



B.Sc III Sem	January	Post pollination events; Current aspects of fertilization and Significance of double fertilization, Post fertilization changes. Endosperm –Types and its biological importance. Free nuclear (Cocos nucifera) cellular (Cucumis), helobial types. Ruminant endosperm. Embryogenesis – Structure and composition of zygote, Dicot (Capsella bursa-pastoris) and Monocot (Najas) embryodevelopment. A general account of seed development.	04 Hrs
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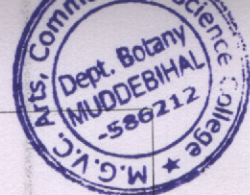
Title of the Course: Cell and Molecular Biology

Name-Prof: B.N.Chawadapur


Class- B.sc Vth Semester Paper 2

Year: 2022-23

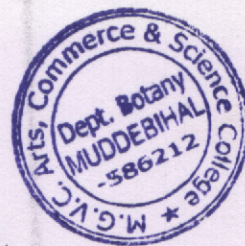
Class	Month	Topics to be Covered	Hours Allotted
B.Sc V Sem	November	Unit 1: Techniques in Biology Principles of microscopy; Light Microscopy; Phase contrast microscopy; Fluorescence microscopy; Confocal microscopy; Sample Preparation for light microscopy; Electron microscopy (EM)- Scanning EM and Scanning Transmission EM (STEM); Sample Preparation for electron microscopy; X-ray diffraction analysis. Cell as a unit of Life The Cell Theory; Prokaryotic and eukaryotic cells; Cell size and shape; Eukaryotic Cell components. Cell Membrane and Cell Wall The functions of membranes; Models of membrane structure; The fluidity of membranes; Membrane proteins and their functions; Carbohydrates in the membrane; Faces of the membranes; Selective permeability of the membranes; Cell wall.	15 Hours
B.Sc V Sem	December	Unit 2: Mitochondria: Structure, marker enzymes, composition; Semiautonomous nature; Symbiont hypothesis; Proteins synthesized within mitochondria; mitochondrial DNA. Chloroplast:	15 Hours



		Structure, marker enzymes, composition; semi autonomous nature, chloroplast DNA. ER, Golgi body & Lysosomes: Structures and roles. Peroxisomes and Glyoxisomes: Structures, composition, functions in animals and plants and biogenesis. Nucleus: Nuclear Envelope- structure of nuclear pore complex; chromatin; molecular organization, DNA packaging in eukaryotes, euchromatin and heterochromatin, nucleolus and ribosome structure (brief).	
B.Sc V Sem	January	Unit4: Transcription (Prokaryotes and Eukaryotes) Types of structures of RNA (mRNA, tRNA, rRNA), RNA polymerase- various types; Protein synthesis in Prokaryotes and eukaryotes, genetic code. Regulation of gene expression Gene concept and protein synthesis, Prokaryotes: Lac operon and Tryptophan operon; and in Eukaryotes.	15 Hours


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DEPARTMENT OF BOTANY

PLAN OF TEACHING

Topic: Economic Botany and Biotechnology

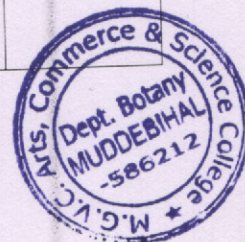
Name- Prof: S.V.Gurumath

Class- B.sc Vth Semester Paper-1

Year: 2022-23

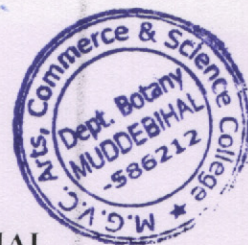
Class	Month	Topics to be Covered	Hours Allotted
B.Sc V Sem	November	Unit 3: Microbial genetic manipulation: Bacterial transformation, selection of recombinant and transformants, genetic improvement of industrial microbes, nitrogen fixers and fermentation technology. Immunology: Hybridoma and monoclonal antibodies, ELISA and Immunodetection. Molecular diagnosis of human disease, Human gene Therapy. Plant tissue culture: Micropropagation; haploid production through androgenesis and gynogenesis; brief account of embryo & endosperm culture with their applications.	15 Hrs
B.Sc V Sem	December	Unit4: Recombinant DNA Techniques: Biotechnology scope, tools of genetic engineering, gene cloning techniques, gel electrophoreses, Bioreactor, transgenic plants. Agro bacterium and retroviruses as natural genetic engineer. Intellectual property rights and possible ethical risks. Blotting techniques: Northern, Southern and Western Blotting, DNA•	05 Hrs

B.Sc III Sem	January	Fingerprinting; Molecular DNA markers i.e. RAPD, RFLP, SNPs; DNA sequencing, PCR and Reverse Transcriptase-PCR. 15 hours	05 Hrs
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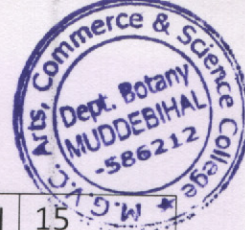
Title of the Course: Economic Botany and Biotechnology & Cell and Molecular Biology

Name-Prof: Laxmi.Arjunagi


Class- B.sc Vth Semester Paper 1&2


Year: 2022-23

Class	Month	Topics to be Covered	Hours Allotted
B.Sc V Sem	November	Unit1: Origin of Cultivated Plants: Concept of centers of origin, their importance with reference to Vavilov's work. Cereals: Origin, morphology and uses of Wheat, Jowar and Rice. Legumes: General account with special reference to Gram and Soybean. Pulses: Origin, morphology and uses of Chick pea, Cow pea and Lentil.	15 Hrs.
B.Sc V Sem	December	Unit2: Spices: General account with special reference to clove and black pepper (Botanical name, family, part used, morphology and uses). Beverages: Tea (morphology, processing, uses). Oils and Fats: General description with special reference to groundnut. Rubber: General description with special reference to Hevea sp. Fiber Yielding Plants: General description with special reference to Cotton (Botanical name, family, part used morphology and uses).	15 Hrs



B.Sc V Sem	January	Unit 3: Cell Cycle• Overview of Cell cycle, Mitosis and Meiosis; Molecular controls. Genetic material• Gene concept: DNA: Miescher to Watson and Crick- historic perspective, Griffith's and Avery's transformation experiments, Hershey-Chase bacteriophage experiment, DNA structure, types of DNA, types of genetic material. DNA replication (Prokaryotes and eukaryotes): bidirectional replication, semi-conservative,• semi discontinuous RNA priming, θ (theta) mode of replication, replication of linear, ds- DNA, replicating the end of linear chromosome including replication enzymes.	15 Hours
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