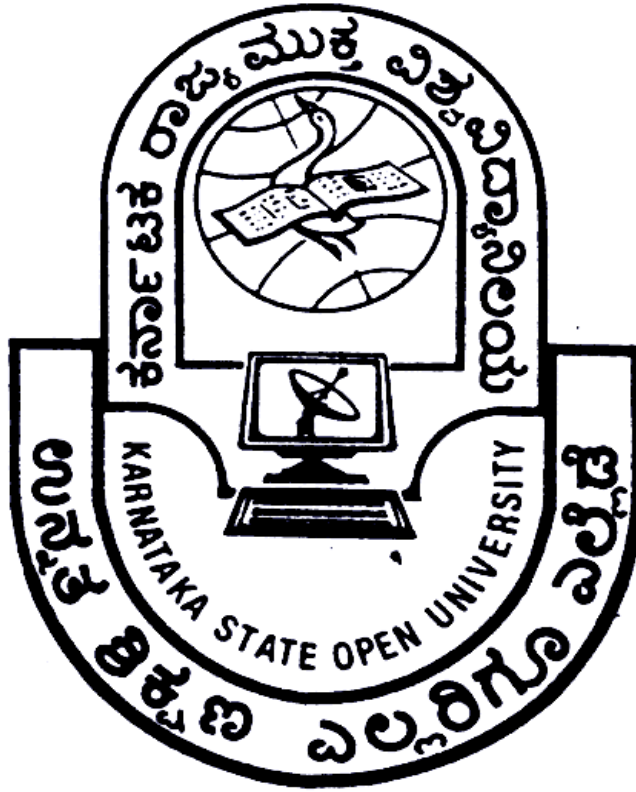


KARNATAKA STATE OPEN UNIVERSITY

PROGRAMME GUIDE

M.Sc in Psychology



**DEPARTMENT OF POST GRADUATE STUDIES AND
RESEARCH PSYCHOLOGY**

Mukthagangothri, Mysore – 570 006

VICE CHANCELLOR'S MESSAGE

Dear Learner,

The family of KSOU welcomes you to pursue the academic programmes you have chosen to achieve not only academic excellence but also to fulfill the desire of your career. The University, established by the Act of State Legislature has created wonderful academic ambience. The programmes offered by the University have been recognized by University Grants Commission. Therefore, the degrees are valid for employment opportunities across the country. The 'core values' of the University are derived from its vision 'Higher Education to Everyone, Everywhere'. The ultimate touchstone of quality higher education is the motto of the University. Today, higher education stands at the crossroads of keeping pace with the emerging needs of the country.

The University has adopted a school concept in its functioning. The school of science headed by a Director offers academic programmes in basic and applied sciences. It combines an inter disciplinary and professional approach to pedagogy and research. The University believes that rigors of the contemporary world require competent quality human resources to create knowledge based society. The academic activities of B.Sc. programmes are initiated through well-established department/s led by the Chairperson/s. Well-qualified teaching faculty with equally dedicated non-academic team is an asset to the University, which is always, committed for the welfare of the students.

The University functions in a 3-tier system of student support service, namely Headquarters, Regional Centres and Learners Support Centres spread all over Karnataka. The learners can undergo teaching-learning process in the notified Regional Centres/Learner Support Centres. The University has adopted a mechanism to deliver Self Learning Material by print, limited audio visual and Counseling/Personal Contact Programme. As a learner, you will have greater opportunity to gain knowledge and skill through those mechanisms. The academic counselors will play a strategic role and supports you from the enrollment of the programme till you accomplish the goal. A proper blending of the knowledge and skill will be imparted so that you will be transformed as a good citizen to contribute to the development of society and the country.

The UGC in its Public Notice dated: 23.02.2018 stated that the Degree/Diploma/Certificate Programme awarded through distance mode are at par with corresponding Degree/ Diploma/ Certificate Programme obtained through conventional universities. The degrees acquired through distance education are recognized for the purpose of employment in State/Central Government, MNCs, Private Sector etc. and also for pursuing higher education in other educational institutes. Therefore, you have greater opportunity of pursuing Higher Education without any kind of fear about your career.

I am sure you will enjoy good experience with services rendered by the university through its Regional centres and Learner Support Centres, besides Headquarters. I wish you all the best in your academic endeavors.

Prof. Vidyashankar S

MESSAGE FROM DEAN (ACADEMIC)

Dear learner,

As you know education imparts knowledge and skills which empowers all to build civilized society. Higher education policy which was once a priority sector is no longer maintaining the same, due to General Agreements and Trade in Services (GATS). The education policy of the government provides a greater opportunity to accelerate Gross Enrolment Ratio (GER).

Higher education is imparted both by conventional system and ODL system. The former education has inbuilt rigidity where ODL enjoy flexibility. Presently the GER in higher education around is 27%, thanks to the role played by ODL system. The ODL system operates under access, flexibility and success.

The Karnataka State Open University, which came up in 1996 under the Act of state legislation 1992 play a stupendous role in imparting quality education. As one of the premier institution in ODL system of the country, the university strive hard to empower various dis-advantaged sections of the society like, house wives, economically and culturally backward, tribal, senior citizens, working groups, differently abled, professionals, technocrat, jail inmates etc., The University cater to the needs of students ranging from the age of 18 years to 80 years.

The programmes offered by KSOU are strictly in conformity with quality and standards set by regulatory bodies UGC/AICTE etc., The Karnataka State Open University was established on 1st June 1996 vide Government Notification No. EDI/ UOV/ 95 dated 12th February 1996- KSOU Act 1992, keeping in view the educational needs of our country, in general, and the state in particular. The University has a long and rich experience in the field of Distance Education as the erstwhile Institute of Correspondence Course and Continuing Education. University Grants Commission (UGC) New-Delhi vide order No: F.No 14-5/2018 (DEB-I) Dated : 14th August 2018 for the period from 2018-19 to 2022-23. The KSOU operates on dictum quality first and students foremost. Further the university is highly committed to provide need based education to the door steps of the students.

The KSOU has students' support services which work in 3 tiers - head office; regional centres and study centres within the jurisdiction of state. The admissions, counseling and the examinations are conducted in different places, hence, education at the door steps.

The dedicated staffs in various department and state of the art student support services create a conducive environment for teaching learning. The university put in places all possible efforts to keep the learners happy from the stage of enrolment till they get employed. I am confident that, as a learner in the university, you will enjoy good experience in the system.

I wish you all the best in your academic endeavors.

Truly yours,
Dean (Academic)

1. Chairman's message

Dear students,

It is my pleasure to welcome you to the Department of Studies and Research in Psychology. We do our best to provide a positive educational experience to our students. We wish you the best learning experience in the Master's of Psychology Degree.

Department of Psychology offers two years M.Sc Programme in Psychology in the distance mode. The subject Psychology has a huge scope in the present day world. The Knowledge of Psychology is being widely used in all the walks of life. Psychology knowledge enables you to understand yourself better and the people around you. The field of Psychology has expanded itself in all the areas and a huge opportunity for jobs is available for the Psychologists in Health Sector, Educational Institutions, Organizations, Government and Non-Government Sectors. Rewarding careers can be in the areas of Mental Health Agencies, Schools as Counsellors, Hospitals, Alcohol and Drug Deaddiction Centres, Rehabilitation Centres, Organizations and Human resource Management.

The Master Degree Programme offered by the Department has the latest specialization fields of Psychology which will not only enhance the subject knowledge but also helps the students to improve their own personality and life. The Psychology programme will help you gain the best theoretical and Practical Knowledge, an exposure towards the skills needed to be acquired by the Psychologists. It provides an opportunity to equip oneself with theoretical as well as practical skills in Psychology. The mode of learning is being provided through the self-learning material, lecture classes, Personal contact Programmes for both theory as well as practical. Department of Psychology has a well-established Laboratory for practical classes for students.

Quality Assurance is taken care with the help of Students feedback on content of the SLM, lectures/practical classes delivered. Academic peers: Academic audit promotes quality and standards.

The faculty members of the department wish you all the very best.

Chairman

Department of Psychology

2. DEPARTMENT OF STUDIES AND RESEARCH IN PSYCHOLOGY

Department of Studies and Research in Psychology in Karnataka State Open University was established in 2006 with the Bachelor's Degree Programme, and later Master Degree programme was started. It also offers the Doctoral programme in Psychology. The Department offers the basic foundation papers in the undergraduate level and it is offering the specialized areas and branches of Psychology in the Master Degree Programme. The goal of the Department is to provide good quality education to equip the students to become Psychologists. It helps in developing the knowledge and skills of a professional Psychologist. It helps in developing the knowledge and skills for teaching at a college or University. It also prepares the students to acquire the knowledge and skills required to engage oneself in practice and in research within any specific area of Psychology.

The Department has a well established Laboratory, Classrooms, auditorium and research facilities. The learners are being introduced to the basic as well as the applied branches of Psychology. They would be learning the History of Psychology, its development, the Biological basis of behaviour, cognition, personality, motivation, emotions as courses which will equip them to further understand the specialization papers of Psychopathology, organizational Psychology, Counselling Psychology. The learners will be carrying out a research activity in their degree which will be beneficial in introducing them towards the research area and also initiate them to pursue research after their Masters Programme. The theoretical knowledge, practical exposure and research knowledge in understanding human behaviour will make them confident about their competence in creating a Career in Psychology Field. The programme is offered in tune with mission of the University in terms of affordability, mass skill development and excellence.

The Faculty members are competent and skilled in their respective specializations with their contributions in the research area. They have published several research articles in highly reputed journals and contributed with number of chapters for the text books. They have been contributing for the programme to be more meaning and fruitful for the learners. The teaching faculty has a wide range of experience with good academic credentials who give their best in training the students in the Distance Education mode.

3. Faculty

Faculty Details

a. Department of Psychology

Sl. No.	Name of the Faculty	Designation	Qualification	Specialization	Expe- rience in Years	Mobile Number
1	Dr. S. Surma	Assistant Professor & Chairperson	M.Sc. Ph.D.	Clinical Psychology	13	9945112468
2	Dr. Mahadevaswamy P	Assistant Professor	M.A. Ph.D.	Psychopathology	07	
3	Dr. P. Manjunatha	Assistant Professor	M.Sc. Ph.D.	Clinical Psychology	11	

4. PROGRAMMES OFFERED

A. BACHELORS DEGREE PROGRAMME IN PSYCHOLOGY (B. A)

B. MASTERS PROGRAMME IN PSYCHOLOGY (M. Sc)

C. DOCTORAL PROGRAMME IN PSYCHOLOGY (Ph. D)

4A. BACHELORS DEGREE PROGRAMME IN PSYCHOLOGY (B. A)

The Undergraduate course offered by the Department provides an opportunity for the students in introducing to the fascinating world of Psychology. It provides the basic foundation by offering the Basic Psychological Processes in the first year. In the second year the learner will be acquiring knowledge about the Developmental Psychology and in the final year they will be learning Social Psychology as well as the Abnormal Psychology in theory and a complete paper of Psychology Practicals. The Undergraduate programme will enable the learner to obtain the knowledge of Psychology and also provide a strong base for further studies.

4B. MASTERS PROGRAMME IN PSYCHOLOGY (M.Sc)

Psychology is one of the most fascinating areas of study. Psychology is a discipline that bridges such disparate fields as biology, education, sociology, health, business, marketing, engineering and neuroscience. Psychological science is integral in understanding the fundamental building blocks of human behaviour and also to address the societal problems of the present day.

Psychology is a branch of science which deals with human behavior. Its main aim is to understand,

interpret and predict the human behavior. It explains how an individual perceive, learn, remember, solve problems, communicate, feel and it helps to formulate different techniques to improve attention, concentration, memory, interpersonal relationships and helps individuals to understand their own emotions and manage them for their effective life.

M. Sc. in Psychology is a Post Graduate Degree course (2years/Four semester) offered by the Karnataka State Open University. It makes the understanding of theoretical knowledge of human behavior and helps the individuals to implement it in their practical life thereby making themselves and their life better.

The scope of Psychology is expanding to all fields of life whether it is from the industries, education or community, the necessity of mental health and its impact upon the physical health, the influence of the positive thoughts, positive attitude in making one's life more acceptable and productive is being realized. Under the programme of M.Sc. Psychology, one studies the growth and development of Psychology its scope, branches the effect of heredity and environment in adjustment in personality development. It includes the study of the measurement of various psychological activities and assessment of personality, Research Methodology, Counseling Psychology, Human Resource Development, Positive Psychology, Health Psychology, each semester has practical's relevant to the theory papers, the practical helps the individuals to undergo various psychological tests thereby providing them better awareness about themselves and the psychological activities . The final semester consists of a dissertation work as one complete paper.

M. Sc in Psychology provides job opportunities in Schools as counselors, Hospitals, Counseling in hospitals in government sector, Social Work, Child and Women Welfare, Military, Judiciary, industries, research organizations, Teachers Training, Universities, colleges, Communication Technology, Mass Media, Marketing, Educational Guidance Centers, Vocational Guidance Centers, Administrative Training Institute, multinational companies, organizations and NGOs, etc.

i. MISSION AND OBJECTIVES OF M.SC. PROGRAMME

a. Mission:

- To communicate the knowledge of Psychology as a scholarly Discipline through this programme.
- To impart knowledge and skills to the learner to become a professional Psychologist.
- To provide education at affordable cost to the masses.
- To develop knowledge and skills for teaching.

- To impart education such that the learners inculcate moral, civil and ethical values.
- To make the learners to embrace the philosophy of learn, earn and return.

ii. Objectives:

- To impart quality education and produce skilled professional psychologist at affordable cost.
- To create an opportunity for learners interested in Psychology to widen their knowledge with a potential to innovate, invent and disseminate knowledge for the welfare of mankind and benefit of society and environment.
- To create awareness towards scientific enquiry and critical thinking in understanding human behaviour.
- To encourage professional and ethical development.
- To enable learner for careers of constructive service in academia, government, industry and health related fields.
- To train the learners with appropriate critical thinking and problem-solving skills and aptitude for taking up jobs in various Mental Health fields.
- To provide basic grounding in research techniques.

4C. DOCTORAL PROGRAMME IN PSYCHOLOGY (Ph.D.)

Ph. D in Psychology is offered in regular mode only as per University Grants Commission (Minimum Standards and Procedure for Award of M.PHIL./PH.D. Degrees) Regulations, 2016 eligibility for admission as per UGC regulation, selection through Entrance Examination, Ph.D. thesis evaluated by at least two external examiners and open Ph.D. viva voce examination.

5. DELIVERY MECHANISM

The delivery mechanism followed in this University is different from that of conventional Universities. The Open University system is more learners oriented, and is geared to cater to the needs of motivated students assuming that the student is an active participant in the teaching-learning process. Instruction to student is imparted through various modes such as print, audio and supported by face to face counseling/PCP. The University follows multi-

channel approach for instruction.

It comprises proportionate combination of:

- * Printed Self-Learning Material.
- * Audio programs transmitted through Radio.
- * Face-to-Face counseling at learners support centres by academic counsellors.

a. **Medium of Instruction:** English

b. **Mode of Instruction**

SLM takes the role of a teacher in distance education system. The study material provided to you along with this programme guide are called self-learning material as it facilitates learning on your own. The lessons are simple and easy to understand. The SLM have been divided into blocks and units. Each block has one credit value which means you have to devote 30 hours of study for one block, be it studying, discussing with counselors, attending classes, writing assignment and so on.

Objectives are given in the beginning of each unit which tells what is expected of you by learning that unit. Check your progress questions are given in content so that you can measure your progress while studying the material. Try to answer these questions which make the SLM self-evaluating. References are given at the end of each unit which gives you sources for furtherance of your study.

c. **Duration of Programme:** The duration of the programme is Two years. However additional two years (N+2) would be provided to complete the programme.

LEARNING OUTCOMES

- Enrich the existing knowledge so as to produce outcomes of comparable quality with on-campus programs.
- Produce competent human resources in the field of Psychology.
- Empower learner' s multiple competencies and adding quality dimension to learner' s knowledge.
- Provide required workforce in Educational Counselling, Clinics, Mental Health Clinics, Counselling, Rehabilitation, Community, Government and non-government agencies for Research & Development and Health Sectors.

6. SYLLABUS



KARNATAKA STATE OPEN UNIVERSITY
MUKTHAGANGOTHRI, MYSURU-570006

DEPARTMENT OF STUDIES AND RESEARCH IN PSYCHOLOGY
Syllabus for M. Sc. in Psychology- Choice Based Credit System (Semester Scheme)

CBCS Course matrix

Course Code	Semester and Course	Credits	Counseling/PCP hours*	Maximum Marks			Examination duration
				Internal Assessment	Term-End Examination	Total	
HC 1.1	Semester - I Course 1	4	12	20	80	100	3
HC 1.2	Course 2	4	12	20	80	100	3
HC 1.3	Course 3 (Practical)	4	120	20	80	100	3
SC 1.1	Course 1	3	09	20	80	100	3
SC 1.2	Course 2	3	09	20	80	100	3
EL-1	Inter Disciplinary course – I	2	06	10	40	50	1 ^{1/2}
	Semester - I Total	20	168	110	440	550	
HC 2.1	Semester - II Course 1	4	12	20	80	100	3
HC 2.2	Course 2	4	12	20	80	100	3
HC 2.3	Course 3 (Practical)	4	120	20	80	100	3
SC 2.1	Course 1	3	09	20	80	100	3
SC 2.2	Course 2	3	09	20	80	100	3
EL-2	Inter Disciplinary course – II	2	06	10	40	50	1 ^{1/2}
	Semester - II Total	20	168	110	440	550	
HC 3.1	Semester - III Course 1	4	12	20	80	100	3
HC 3.2	Course 2	4	12	20	80	100	3
HC 3.3	Course 3 (Practical)	4	120	20	80	100	3
SC 3.1	Course 1	3	09	20	80	100	3
SC 3.2	Course 2	3	09	20	80	100	3
SEC-T	Skill Enhancement course	2	06	10	40	50	1 ^{1/2}
	Semester – III Total	20	168	110	440	550	
HC 4.1	Semester - IV Course 1	4	12	20	80	100	3
HC 4.2	Course 2	4	12	20	80	100	3
HC 4.3	Dissertation	6	180	20	80	100	3
SC 4.1	Course 1	3	09	20	80	100	3
SC 4.2	Course 2	3	09	20	80	100	3
SEC-P	Course 1	2	06	10	40	50	1 ^{1/2}
	Semester – IV Total	22	228	110	440	550	
Semester I to IV Grand total		82	732	440	1760	2200	

HC-Hard Core, SC-Soft Core, EL-Interdisciplinary Elective, SEC-Skill Enhancement Course.

M.Sc. Psychology – Syllabus as per CBCS
M.Sc. Psychology - First Semester

Course	Course Code	Course Title	Credits
HC Course 1	PSY-1.1	History of Psychology	4
HC Course 2	PSY -1.2	Biological Basis of Behaviour	4
HC Course 3 (Practical)	PSY -1.3	Experimental Psychology- Practical-I	4
SC Course 1 (A stream)	PSY –A1.1	Personality and Adjustment- I	3
SC Course 2 (A stream)	PSY –A1.2	Motivation and Emotions-I	3
SC Course 1 (B stream)	PSY –B1.1	Contemporary Developments in Psychology-I	3
SC Course 2 (B stream)	PSY- B1.2	Social and Community Psychology	3
Interdisciplinary Elective 1	EL -1	Introduction to Psychology	2
Total			20

Note: Of the two streams (A stream and B Stream) of Soft Core (SC) courses, the student may choose any one stream.

M.Sc. Psychology - Second Semester

Course	Course Code	Course Title	Credits
HC Course 1	PSY 2.1	Cognitive Psychology	4
HC Course 2	PSY 2.2	Research Methods and Statistics	4
HC Course 3(Practical)	PSY 2.3	Experimental Psychology-Practical -II	4
SC Course 1 (A stream)	PSY –A2.1	Personality and Adjustment-II	3
SC Course 2 (A stream)	PSY –A2.2	Motivation and Emotions –II	3
SC Course 1 (B stream)	PSY –B2.1	Contemporary Developments in Psychology-II	3
SC Course 2 (B stream)	PSY -B 2.2	Advances in Social Psychology and Rehabilitation	3
Interdisciplinary Elective-2	EL -2	Psychology in Everyday Life	2
Total			20

Note: Of the two streams (A stream and B Stream) of Soft Core (SC) courses, the student may choose any one stream.

M.Sc. Psychology - Third Semester

Course	Course Code	Course Title	Credits
HC Course 1	PSY 3.1	Psychological Testing and Assessment	4
HC Course 2	PSY 3.2	Counselling Psychology	4
HC Course 3(Practical)	PSY 3.3	Experimental Psychology-Practical -III	4
SC Course 1 (A stream)	PSY –A3.1	Psychopathology-I	3
SC Course 2 (A stream)	PSY –A3.2	Psychotherapy-I	3
SC Course 1 (B stream)	PSY -B 3.1	Organizational Psychology-I	3
SC Course 2 (B stream)	PSY -B 3.2	Human Resource Development and Management-I	3
Skill Enhancement Course	SEC-1	Life Skills Psychology-I	2
Total			20

Note: Of the two streams (A stream and B Stream) of Soft Core (SC) courses, the student may choose any one stream.

M.Sc. Psychology - Fourth Semester

Course	Course Code	Course Title	Credits
HC Course 1	PSY 4.1	Health Psychology	4
HC Course 2	PSY 4.2	Positive Psychology	4
HC Course 3	PSY 4.3	Dissertation	6
SC Course 1 (A stream)	PSY -A 4.1	Psychopathology-II	3
SC Course 2 (A stream)	PSY -A 4.2	Psychotherapy-II	3
SC Course 1 (B stream)	PSY- B4.1	Organizational Psychology-II	3
SC Course 2 (B stream)	PSY- B4.2	Human Resource Development and Management-II	3
Skill Enhancement Course	SEC-2	Life Skills Psychology-II	2
Total			22

Note: Of the two streams of Soft Core (SC) courses, the student may choose any one stream. Dissertation/project work is compulsory.

Interdisciplinary Electives to be offered by the Department

- Introduction to Psychology
- Psychology in Everyday Life

Skill Enhancement Course to be offered by the Department

- Life Skills Psychology-I
- Life Skills Psychology-II

Soft Core Courses - Streams

	Stream A		Stream B	
First Semester	PSY -A1.1	Personality and Adjustment- I	PSY –B1.1	Contemporary Developments in Psychology-I
	PSY -A1.2	Motivation and Emotions-I	PSY –B1.2	Social and Community Psychology
Second Semester	PSY –A2.1	Personality and Adjustment-II	PSY –B2.1	Contemporary Developments in Psychology-II
	PSY –A2.2	Motivation and Emotions –II	PSY -B 2.2	Advances in Social Psychology and Rehabilitation
Third Semester	PSY –A3.1	Psychopathology-I	PSY -B 3.1	Organizational Psychology-I
	PSY –A3.2	Psychotherapy-I	PSY -B 3.2	Human Resource Development and Management-I
Fourth Semester	PSY -A 4.1	Psychopathology-II	PSY- B 4.1	Organizational Psychology-II
	PSY -A 4.2	Psychotherapy-II	PSY- B 4.2	Human Resource Development and Management-II

Note: Of the two streams of Soft Core (SC) courses, the student may choose any one stream. The student will continue in the same stream for all the four semesters.

Interdisciplinary Electives

SL No	Department	Sub Code	I Semester	Sub Code	II Semester
1	KANNADA	ELK-01	ಅಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ	ELK-02	ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ
2	ENGLISH	ELE-01	Indian Literature -I	ELE-02	Indian Literature -II
3	HINDI	ELH-01	Vyavaharik Hindi Vyakaran	ELH-02	Hindi Cinema
4	TELUGU	ELT-01	Tilak	ELT-02	Telugu Samskruthi – Samaajam
5	HISTORY	ELHS-01	Ancient World Civilisations (Egypt, Mesopotamia, Greek, Roman, Inca, Chinese)	ELHS-02	Social Reform Movement in India
6	ECONOMICS	ELEC-01	Economic Policies of India Since 1991	ELEC-02	Institutions for International Development
7	POLITICAL SCIENCE	ELP-01	Local Government in India.	ELP-02	Indian Constitution
8	PUBLIC ADMINISTRATION	ELPA-01	Indian Polity-1	ELPA-02	Indian Polity-2
9	SOCIOLOGY	ELS-01	Invitation to Sociology	ELS-02	Study of Indian Society
10	JOURNALISM AND MASS COMMUNICATION	ELJ-01	Aspects of Journalism and Mass Communication - I	ELJ-02	Aspects of Journalism and Mass Communication - II
11	ANCIENT HISTORY AND ARCHEOLOGY	ELA-01	World heritage sites of India	ELA-02	Cultural History of Hoysalas
12	EDUCATION	ELED-01	Foundations of Education	ELED-02	Higher Education
13	COMMERCE	ELC –01	Personal Financial Planning	ELC –02	Entrepreneurship Development
14	MANAGEMENT	ELM –01	Disaster Management	ELM –02	E-Commerce
15	BIOCHEMISTRY	ELMBC –01	Basics of Bioinorganic and Biophysical chemistry for Biology graduates.	ELMBC –02	Basic Bioorganic chemistry for Biology graduates.
16	BIOTECHNOLOGY	ELMBT –01	Biotechnology Principles and applications	ELMBT –02	Fundamentals of Biotechnology
17	CHEMISTRY	ELMC –01	Open Elective I	ELMC –02	Open Elective II
18	CLINICAL NUTRITION AND DIETETICS	ELMCND –01	Healthy lifestyles and nutrition	ELMCND–02	Nutraceuticals and health foods
19	COMPUTER	ELMCS –01	Mobile App	ELMCS –02	E-Commerce

	SCIENCE		Development		
20	ENVIRONMENTAL SCIENCE	ELMES –01	Basics of Environmental Science	ELMES –02	Advances in Environmental Science
21	GEOGRAPHY	ELMG –01	Introduction to Physical Geography	ELMG –02	Geography of Karnataka
22	MATHEMATICS	ELMM –01	Fundamentals of Mathematics	ELMM –02	Combinatorics and Graph Theory
23	MICROBIOLOGY	ELMMB –01	Microbial World and Microbial Diversity	ELMMB –02	Microbes in Sustainable Agriculture and Development
24	PHYSICS	ELMP –01	Mechanics	ELMP –02	Waves and Optics
25	PSYCHOLOGY	ELMPSY –01	Introduction to Psychology	ELMPSY –02	Psychology in Everyday Life
26	INFORMATION TECHNOLOGY	ELMIT –01	Green Computing	ELMIT –02	E-Commerce
27	BOTANY (NEW)	ELMBOT –01	Plant-Microbe Interactions	ELMBOT –02	Plant Diversity and Human Welfare
28	ZOOLOGY (NEW)	ELMZ –01	Parasites Vectors & communicable diseases	ELMZ–02	Essential of Reproductive Health
29	FOOD AND NUTRITION SCIENCES	ELMFNS –01	Food Psychology	ELMFNS –02	Nutritional Management in Disaster Conditions

Note:

- A. I and II Semester Open elective (Interdisciplinary Electives) syllabus are attached in Annexure – I and Annexure - II respectively.
- B. The Students may contact respective department chairperson in case of any queries regarding open elective course. The contact details available in the university website.

First Semester

Hard Core Course: PSY 1.1 History of Psychology 4 Credits

Block I: Introduction

Unit 1: Notions of science paradigm

Unit 2: Schools, Systems, Theories and Models in Psychology.

Unit 3: Domains of Psychology- Basic and Applied

Unit 4: Issues and Themes in Psychology

Block II: Historical Developments of Psychology

Unit 5: Origin of Psychological concepts in India.

Unit 6: Eastern Perspectives

Unit 7: Western Perspectives

Unit 8: Early beginnings of scientific Psychology

Block III: Schools of Psychology -I

Unit 9: Structuralism

Unit 10: Functionalism

Unit 11: Psychoanalysis

Unit 12: Behaviorism

Block IV: Schools of Psychology -II

Unit 13: Gestalt Psychology

Unit 14: Humanistic Psychology

Unit 15: Transpersonal Psychology

Unit 16: Positive Psychology

References:

1. Brennan, J. F (2004) History and Systems of Psychology 6th Edition, New York: Prentice Hall.
2. DeWitt, R. (2004) An Introduction to the History and Philosophy of Science. Malden, MA: Blackwell Publishing.
3. Fagan, T.K., & Vandenbos, G.R (1993) Exploring Applied Psychology: Origins and Critical Analysis, APA: Washington, DC.

4. Goodwin, C.J. (1999) A History of Modern Psychology, Hoboken.

Hard Core Course: PSY 1.2 - Biological Basis of Behavior 4 Credits

Block I: Introduction to Bio-psychology.

Unit 1: Meaning and scope of Bio-psychology, History and contemporary trends in understanding brain-behavior relationships, Criticisms of Bio-psychology. Ethology; Animal studies- Contributions of Lorenz, Tinbergen and Skinner.

Unit 2: Methods of Bio-psychology: Genetic studies: Twin studies, Adoption studies, cross foster studies, Gene Analysis, Biographic methods, pedigree Analysis, Family risk studies, inbreeding and out breeding- laboratory studies- field observations and Experiments.

Unit 3: Physiological methods – Brain imaging Techniques: MRI-CT-EEG-MEG-PET-Ablation studies split Brain research, clinical case studies, lesion studies, Electro physiological methods.

Unit 4: Behavioral Genetics: Structure of chromosome- gene- Mendel's contributions; dominant and recessive genes-phenotypes variation- Techniques for griping generic variation- Behavioral effects of genotypes, role of genes in behavioral variation, behavioral effects of genes, pattern of genetic code and Expression- genetic Engineering- Human genome Project – Genetic Disorders.

Block II: Basics of neuro-anatomy and neurophysiology

Unit 5: Overview of nervous system: Organization and Function, Neurons structure and function – Types of Neurons – neurons and glia cells

Unit 6: Nervous system – CNS and PNS Somatic Nerves, cranial nerves, Autonomic nervous system- Sympathetic and parasympathetic nervous system, structure and functions of spinal cord.

Unit 7: Structure and functions of Brain: Brain stem – Medulla – pons – limbic system, Amygdala – Hippocampus – thalamus – Basal ganglia – cerebellum- cerebral cortex, lobes – structure and function – lateralization and localization.

Unit 8: Neurophysiology: synaptic communication – vesicles and Neurotransmitters

Block III: Endocrine system and Behavior: Biological rhythms, Sensory mechanism.

Unit 9: Behavioral Endocrinology- Exocrine and Endocrine system- pituitary – pineal thymus – pancreas – adrenal and gonads, Hormone and Behavior.

Unit 10 : Biological rhythms – circadian rhythm – states of consciousness – stages of sleep –

wakefulness and sleep cycles, science of sleep and dreams-changes in sleep patterns with age – Brain mechanism of sleep, theories of sleep function- Dreaming and Disorders of sleep.

Unit 11: Sensory Mechanism – I-Visual and Audition structure and function of eye - color vision, visual- space perception; structure and function of ear – theories of audition – Audition localization – Hearing loss.

Unit 12: Sensory Mechanism-II- Gustatory and Olfactory Senses – Somato sensory – Skin senses – Pressure, Temperature and Pain – Kinesthesia and Equilibrium – sensory disorders.

Block IV: Brain and Behavior

Unit 13: Learning and memory- Meaning of learning and memory in brain, brain development, localization of learning in brain, memory processes in brain.

Unit 14: Emotions- Meaning and importance of emotions, brain and emotions, limbic system and emotion.

Unit 15: Motivation- Meaning and definitions of motivation, research on motivation in brain, right and left brain lateralization.

Unit 16: Personality- Components of personality, brain and personality.

References:

1. Bakler, and Grafman, J. (1988). Handbook of Neuropsychology. New York : Elsevier.
2. Gregory, R.J. (2000). Neuro Psychological and Geriatric Assessment in Psychological Testing History: Principles and Applications, New York: Allyn and Bacon.
3. Hellmann K.M. and Valevstein, E.C. (1993) Clinical Neuro-Psychology. New Delhi: Oxford University Press.
4. Kalat, J.W. (2004). Biological Psychology. Belmont, C.A. Wadsworth/ Thomson.
5. Levinthal C.F. (1996). Introduction to Physiological Psychology. New York; Prentice hall .
6. Lezak, M.D, (1995). Neuro Psychological Assessment. New York: Oxford University press.
7. Mana. H. (1999). Bio- Psychology. New York: Allyn and Bacon.
8. Pinel. J.P.G, (1998). Bio- Psychology.

Hard Core Course: PSY 1.3 Experimental Psychology (Practical-I) 4 Credits

1. A L for 2 Point Discrimination
2. Knox Cube Test
3. Muller Lyer Illusion
4. Creativity test
5. Color Blindness Test
6. Emotional Intelligence Test
7. Level of Aspiration Test
8. Edwards Personal Preference Test

References:

1. Agarwal, K.G. (1979): Comprehensive Values Scale. Agra, National Psychological Corporation.
2. Bhargava, M. (1997): Modern Psychological Testing and Measurement, Agra, Har Prasad Bhargave.
3. Lewis R Aiken (2000) : Psychological testing and assessment (10th edition) Allyn and Bacon Publication London.
4. Robert S Woodworh and Harold Schlosberg: Experimental Psychology (Revised Edition) Oxford Publication New Delhi.

Soft Core Course: PSY A 1.1 Personality and Adjustment-I 3 Credits

Block I: Introduction to Personality and Adjustment

Unit 1: Concepts, definitions and types of Personality

Unit 2: Determinants of Personality-Biological and Socio-Cultural

Unit 3: Concept and definition of Adjustment; Factors effecting adjustment- frustration, conflict and stress.

Unit 4: Adjustment Mechanisms

Block II: Adjustment and Personality-I

Unit 5: Adjustment and Health.

Unit 6: Freud's Psychoanalytical Theory

Unit 7: Psychoanalytical Theory of Adler and Jung

Unit 8: Trait Theories: Cattell, Allport

Block III: Adjustment and Personality-II

Unit 9: Bandura's Social Cognitive Theory

Unit 10: George Kelly's Social Cognitive Theory

Unit 11: Maslow's Humanistic Theory

Unit 12: Roger's and Goldstein's Phenomenological Theory

References:

1. Allport G.W: Personality, Newyork, Holt, Rinehart and Winston, 1937.
2. Pervin, Lawrence: Personality Theory Assessment and Research, 2nd ed John Wiley & Sons.
3. Hall, C.S. and Lindzey, G : Theories of Personality, Wiley Eastern Ltd., New Delhi, 1970 Pervin, L.A. Petsonality : Theory, Assessment and Research, John Wiley and Son, Inc. New York, 1970
4. Bandura, A. (1971) : Social Learning Theory. New York: General Learning Press.

Soft Core Course: PSY A 1.2 Motivation and Emotions-I

3 Credits

Block I: Introduction to human motivations

Unit 1: Meaning, Definition, nature, importance, concept of motivation, classification of terms needs, drive and motives.

Unit 2: Types of motives: Biological, Psychological

Unit 3: Motivation and behavior: Aggression

Unit 4: Social Cognition and its theories

Block II: Introduction to Emotions

Unit 5: Introduction to Emotions

Unit 6: Classification of Emotions

Unit 7: Biology of emotions

Unit 8: Emotional Development

Block III: Strategies for promoting motivation.

Unit 9: Early programming - role of drugs

Unit 10: Rewards, Incentives and Punishment

Unit 11: Prevention and control of Stress and Anxiety, coping.

Unit 12: Self-motivation, Goal-Setting, motivational analysis and Goal setting strengthening motivation, Application of motivation

References:

1. Back, R.C (2000). Motivations : Theories and principles. Upper Saddle River. NJ: Prentice Hall.
2. John W Santrock, 2006. Psychology Essentials, New Delhi : Tata Mc Graw Hill Publishers
3. Baron. Robert, A 5th Edition, 2007. Psychology, Prentice – Hall of India Pvt, Ltd, New Delhi,

4. Hilgard E.R Atkinson R.C and Atkinson R.L (1975) Introduction to Psychology (6th Edition)
Oxford and IBH Publishing Co, New Delhi.

Soft Core Course PSY B 1.1 Contemporary Developments in Psychology 3 Credits

Block I: Philosophical Perspectives

Unit 1: Philosophy of Science and Psychology-Five major positions in the Philosophy of Science; - radical empiricism,

Unit 2: Logical empiricism and Falsification theory

Unit 3: Thomas Kuhn's Paradigm View , Laudan's version of normative naturalism.

Unit 4: Contextualism in Psychology-Stephen Pepper's four worldviews- 1).formism 2). Organicism

Block II : Methodological Perspectives

Unit 5: The Mechanistic Hypothesis , the Contextualism Hypothesis

Unit 6: Different types of Contextualism in Academic Psychology – Philosophical, modified ,

Unit 7: Developmental Contextualism and Functional Contextualism

Unit 8: Mainstream Psychology and contextualism- compatibility issues

Block III : Psycho-biological Perspectives

Unit 9: Cognitive Neuroscience.

Unit 10: Psycho-linguistics

Unit 11: Evolutionary Psychology

Unit 12: Forensic Psychology

References:

1. Baltes, P.B (1987). Theoretical propositions of life – span developmental psychology : On the dynamics between growth and decline. *Developmental psychology* 1987, Vol, 2.1. No. 5,611-626
2. Freedman, K.L (1999). Laudan's naturalistic axiology. *Philosophy of Science*, 66 (Supplement). PP. -526-37.
3. James, W.A (1904) World of Pure Experience. *The Journal of Philosophy, Psychology and Scientific Methods*, Bol. 1, No. 20, PP. 533-543).
4. Kaye, H. (1977). Early experience as the basis for unity and cooperation of “differences.”, In N. Datan & H.W Reese (Eds.), *Life – Span developmental Psychology: Dialectical Perspectives on experimental research* (pp. 343-364) New York : Academic Press.

5. Kuhn, T (1962/1970). *The structure of Scientific revolution*. Chicago: University of Chicago Press.

Soft Core Course PSY B 1.2 Social and Community Psychology 3 Credits

Block I: Introduction to Social Psychology

Unit 1: Introduction to Social Psychology

Unit 2: Attitudes

Unit 3: Forms of Attitudes

Unit 4: Socialization

Block II: Introduction to Community Psychology

Unit 5: Emergence of Community Psychology

Unit 6: Principles and major techniques of Community Psychology

Unit 7: Community mental health and models

Unit 8: Values of Community Psychology

Block III: Community Mental Health and its models

Unit 9: Community Intervention Programmes

Unit 10: Dealing with community problems-suicide, violence, aggression

Unit 11: Disaster management

Unit 12: Crime and Delinquency

References:

1. Baker F. & Schulberg H.C (1967) The Development of a Community Mental Health Ideology Scale.
2. Hallock. A.C (1956) Community Organization: A dynamic Competent of Community Mental Health Practice.
3. Rapport J & Seidmon (2003) Handbook of Community Psychology.
4. Tricket . E. (2009) Community Psychology

Interdisciplinary Open Elective EL-1 Introduction to Psychology 2 Credits

Block 1: Introduction to Psychology-I

Unit 1: Introducing Psychology -Definition, Scope, and goals

Unit 2: Branches of Psychology

Unit 3: Motivation

Unit 4: Emotions

Block 2: Introduction to Psychology-II

Unit 5: Sensation, Attention and Perception

Unit 6: Learning, Memory and Forgetting

Unit 7: Intelligence

Unit 8: Personality

References:

1. Charles G.Morris. Albert A. Maisto Psychology an Introduction , Prentice Hall. New Jersey.
2. Feldman, A. R., Understanding Psychology IV th Ed, 1996, McGraw Hill, New Delhi.
3. Morgan, King, Weisz & Schopler, Introduction to Psychology-V11 Ed, 1993, Tata McGraw Hill, New Delhi.
4. Ernest R Hilgard, Richard C Atkinson , Rita L Atkinson Introduction to Psychology Oxford Publication, New Delhi.

Second Semester

Hard Core Course PSY 2.1 Cognitive Psychology

4 Credits

Block I: Introduction to Cognitive Psychology

Unit 1: Meaning, Definition, Nature and Scope of Cognitive Psychology

Unit 2: Methods of Cognitive Psychology.

Unit 3: Consciousness Revisited.

Unit 4: History, Contemporary trends and Future of Cognitive Psychology.

Block II: Attention and Perception

Unit 5: Attention: Process, Types-Focused Auditory & Visual, Assessment and Problems of Attention.

Unit 6: Theories of Attention.

Unit 7: Perception and Pattern Recognition, Theories of Pattern Recognition.

Unit 8: Effect of Context and Face Recognition.

Block III: Memory and Cognitive Map

Unit 9: Processes of Memory and Forgetting.

Unit 10: Models of Memory.

Unit 11: Working and Meta Memory and Methods for enhancing Memory.

Unit 12: Cognitive Map.

Block IV: Higher Cognitive Processes

Unit 13: Production and Comprehension of Language.

Unit 14: Reasoning and Decision Making.

Unit 15: Problem Solving and Creativity.

Unit 16: Concept Formation.

References:

1. Robert J. Sternberg and Karin Sternberg (2012) Cognitive Psychology, 6th Edition Wadsworth, Cengage Learning.
2. Cognitive Psychology (2005) Edited by Nick Braisby and Angus Gellatly, Oxford Press.
3. Cognition (2005) Matlin. M 6th Edition, Wiley.

4. Cognitive Psychology: In and Out of the Laboratory (2008), Fourth Edition Kathleen M Galotti, Thomson Wadsworth

Hard Core Course PSY 2.2 Research Methods and Statistics 4 Credits

Block I: Introduction to Research Methods

Unit 1: Scientific Methods and its understanding

Unit 2: Concepts, Constructs and Variables.

Unit 3: Problem and hypothesis

Unit 4: Kinds of Research -Experimental, non – Experimental Qualitative and Quantitative, Causal and Descriptive, Exploratory and Explanatory

Block II: Research Designs

Unit 5: Experimental Designs, Completely Randomized Design, Randomized Block Designs, Latin Squire Design, Greeko-Latin Squire Design, Factorial Designs.

Unit 6: Non-Experimental Designs Ex-Post-Facto Design; Developmental, Correlational Design, Survey Research, Action Research and Evaluation Research. Growth studies

Unit 7: Methods of Data Collection Interview, Questionnaire, Observation: Laboratory and Field Study, Field-Experiment, Case Study and Sampling.

Unit 8: Research report writing; Data Summary, Inferences, making Interpretation and Reporting.

Block III: Introduction to statistics

Unit 9: Types of statistics – Parametric, Non-Parametric and Multivariate.

Unit 10: Tabulation, Frequency distribution, Graphical Representation.

Unit 11: Measures of Central Tendency, Measures of Variability.

Unit 12: Correlation and Regression.

Block IV : Tests of significance

Unit 13: Testing of hypothesis and errors, “t”-Test, Non parametric tests,-X²or Chi-square test, Sign and Rank test.

Unit 14: Multivariate analysis: ANOVA Analysis of Co-variance (ANCOVA), Multiple analysis of variance (MANOVA), Discriminant Analysis, Multiple Regression Analysis.

Unit 15: Post Hoc Comparison Tests: Duncan's Multiple range Test, Tuckey's test and protected "t" test.

Unit 16: Applications of computer in Research.

References:

1. Kerlinger, Fred N (1973) Foundations of Behavioural Research New York : Holt, Rinechart and Winson.
2. James A. Black and Dean j. Champion (1976) Methods and Issues in Social Research. New York: John Wiley and Sons.
3. Kothari. C. R (2015) Research Methodology: Methods and Techniques (3rd Edition) New Delhi: New age International Publishers.
4. Arthur Aron, Elaine N, Arone and Elliot J. Coups (2007) Statistics for Psychology, Fourth Edition, Pearson Prentice Hall.

Hard Core Course PSY 2.3 Experimental Psychology (Practical-II) 4 Credits

1. Bell's adjustment Inventory
2. Eysenck's personality Questionnaire
3. 16PF 'Form C'
4. Comprehensive Interest Schedule
5. Differential Aptitude Test
6. Personal Value Questionnaire
7. Otis Verbal Intelligence Test
8. Raven's Advanced Progressive Matrices

References:

1. Bhargava, M. (1997): Modern Psychological Testing and Measurement, Agra, Hari Prasad Bhargave.
2. Lewis R Aiken (2000): Psychological testing and assessment (10th edition) Allyn and Bacon Publication London.
3. Robert S Woodworh and Harold Schlosberg: Experimental Psychology (Revised Edition) Oxford Publication New Delhi.
4. Frank S. Freeman, (2006) Theory and Practices of Psychological Testing (3rd Edition) Surjeet Publications, Delhi.

Soft Core Course PSY A 2.1 Personality and Adjustment-II 3 Credits

Block I: Personality and Personal Growth

Unit 1: Self and Identity

Unit 2: Self Concept and Personal Growth.

Unit 3: Social Perceptions, Influences and relationships: Impression Formation,

Unit 4: Attribution, Social Conformity, Obedience

Block II: Relationships for Positive Adjustment

Unit 5: Interpersonal Attraction

Unit 6: Development and maintenance of relationships

Unit 7: Friendship-Love-Loneliness

Unit 8: Stress: Meaning, Source, Coping with Stress

Block III: Social Adjustment in Different Settings

Unit 9: Adjustment in Educational Setting.

Unit 10: Adjustment in Social setting: Religion, Caste

Unit 11: Adjustment in Social setting: Socio-Economic Status

Unit 12: Adjustment at Workplace and Challenges

References:

1. Allport G.W: Personality, Newyork, Holt, Rinehart and Winston, 1937.
2. Pervin, Lawrence: Personality Theory Assessment and Research, 2nd ed John Wiley & Sons.
3. Hall, C.S. and Lindzey, G : Theories of Personality, Wiley Eastern Ltd., New Delhi, 1970
Pervin, L.A. Petsonality : Theory, Assessment and Research, John Wiley and Son, Inc. New York, 1970.
4. Bandura, A. (1971): Social Learning Theory. New York: General Learning Press.

Soft Core Course PSYA 2.2 Motivation and Emotions -II

3 Credits

Block I: Theories of Motivation

Unit 1: Instinct theory and Psychoanalytical theory of Motivation

Unit 2: Behavioural and Cognitive theory of Motivation

Unit 3: Cognitive theory of Motivation

Unit 4: Humanistic theory of Motivation

Block II: Neuro–chemistry of Emotions

Unit 5: Biological correlates of Emotions

Unit 6: Chemical Changes – Neurotransmitters- Hormones and endocrine systems

Methods of studying Emotion

Unit 7: Theories of Emotions - James – Lange theory, Cannon- Bard theory,

Unit 8: Scachter and Singer theory of Emotions

Block III: Measurement and Management of Emotions

Unit 9: Measurement of Emotions: Verbal

Unit 10: Measurement of Emotions- Nonverbal Instrument

Unit 11: Emotions and Behavior – Managing negative Emotions

Unit 12: Emotional Frustrations and conflict

References:

1. Back, R.C (2000). Motivations: Theories and principles. Upper Saddle River. NJ: Prentice Hall.
2. John W Santrock, 2006. Psychology Essentials, New Delhi : Tata Mc Graw Hill Publishers
3. Baron. Robert, A 5th Edition, 2007. Psychology, Prentice – Hall of India Pvt, Ltd, New Delhi,
4. Hilgard E.R Atkinson R.C and Atkinson R.L (1975) Introduction to Psychology (6th Edition) Oxford and IBH Publishing Co, New Delhi.

Soft Core Course PSYB 2.1 Contemporary Developments in Psychology-II 3 Credits

Block I: Socio-cultural Perspectives

Unit 1: Cultural and Indigenous Psychology

Unit 2: Community Psychology

Unit 3: Environmental Psychology

Unit 4: Feminism and Gender Psychology

Block II: Psychology in Indian context

Unit 5: Psychology of Underprivileged

Unit 6: Historical Overview of Psychology

Unit 7: Psychology in the new Millennium

Unit 8: Developments in Social Psychology

Block III: Developments in Psychology

Unit 9: Developments in Applied Psychology-I

Unit 10: Developments in Applied Psychology-II

Unit 11: Developments in Indigenous Perspectives-I

Unit 12: Developments in Indigenous Perspectives -II

References:

1. Baltes, P.B (1987). Theoretical propositions of life – span developmental Psychology : On the dynamics between growth and decline. *Developmental psychology* 1987, Vol, 2.1. No. 5,611-626
2. Freedman, K.L (1999). Laudan’s naturalistic axiology. *Philosophy of Science*, 66 (Supplement). PP. -526-37.
3. James, W.A (1904) World of Pure Experience. *The Journal of Philosophy, Psychology and Scientific Methods*, Bol. 1, No. 20, PP. 533-543).
4. Kaye, H. (1977). Early experience as the basis for unity and cooperation of “differences.”, In N. Datan & H.W Reese (Eds.), *Life – Span developmental Psychology: Dialectical Perspectives on experimental research* (pp. 343-364) New York: Academic Press.

Soft Core Course PSYB 2.2 Advances in Social Psychology and Rehabilitation

3 Credits

Block I: Advances in Social Psychology

Unit 1: Perceiving oneself

Unit 2: Perceiving others

Unit 3: Communication

Unit 4: Social Change

Block II: Community Problems

Unit 5: Communal riots, Communal violence and Atrocities

Unit 6: Natural disasters: Tsunami, Earthquake, Draughts, Chemical disasters

Unit 7: Prevention, Nature and Types a) Primary b) Secondary c) Tertiary

Unit 8: Role of psychologists, non- professionals and NGO'S in solving Social Problems

Block III: Rehabilitation

Unit 9: Meaning, Definition and Types of Rehabilitation, difference between habilitation and Rehabilitation

Unit 10: Approaches to psycho-social rehabilitation

Unit 11: Rehabilitation programs- Alcoholics, Drug Addicts, HIV/ AIDS, Advocacy and Empowerment of self- help groups

Unit 12: Rehabilitation programs- Juvenile Delinquency and Criminals

References:

1. Baker F. & Schulberg H.C (1967) The Development of a Community Mental Health Ideology Scale.
2. Hallock. A.C (1956) Community Organization: A dynamic Competent of Community Mental Health Practice.
3. Rapport J & Seidmon (2003) Handbook of Community Psychology.
4. Tricket . E. (2009) Community Psychology

Interdisciplinary Open Elective EL-2 Psychology in Everyday Life 2 Credits

Block 1: Applications of Psychology-I

Unit 1: Psychology as a Profession

Unit 2: Memory Improving Techniques

Unit 3: Stress and Emotional Management

Unit 4: Personality Development

Block 2: Applications of Psychology-II

Unit 5: Psychology in Educational Settings

Unit 6: Psychology in Health Setting

Unit 7: Psychology in Organizational Setting

Unit 8: Adjustment to Family and Work Place

References:

1. Charles G.Morris. Albert A. Maisto Psychology an Introduction , Prentice Hall. New Jersey.
2. Feldman, A. R., Understanding Psychology IV th Ed, 1996, McGraw Hill, New Delhi.
3. Morgan, King, Weisz & Schopler, Introduction to Psychology-V11 Ed, 1993, Tata McGraw Hill, New Delhi.
4. Ernest R Hilgard, Richard C Atkinson , Rita L Atkinson Introduction to Psychology Oxford Publication, New Delhi.

THIRD SEMESTER

Hard Core Course -1 PSY 3.1 Psychological Testing and Assessment 4 Credits

Block I: Introduction to Psychological Testing and Assessment

Unit 1: Concept and meaning of Psychological measurement

Unit 2: Classification of Psychological tests

Unit 3: Types of Scales and Measurement

Unit 4: Nature of test scores

Block II: Test Construction

Unit 5: Steps in the Construction of Ability test

Unit 6: Steps in the Construction of personality Inventories

Unit.7: Steps in the construction of Attitude scale – Likert and Thurstone techniques

Unit 8: Item writing, types of items, sources for preparation of Item pool, Item analysis.

Block III: Reliability and Validity

Unit 9: Meaning and definitions of Reliability and Validity

Unit 10: Methods of establishing Reliability

Unit 11: Methods of establishing Validity

Unit 12: Factors influencing Reliability and Validity

Block IV. Tests for Specific purposes

Unit 13: Testing persons with Mental retardation

Unit 14: Psychological Testing in Educational setting

Unit 15: Psychological Testing in vocational setting

Unit 16: Testing in counseling and clinical setting

References:

1. Cronbach, L.J. (1960). Essentials of Psychological Testing (3rd Ed.) New York : Harper International Edition, Harper and Row.
2. Nunnally J.V (1967). Psychometric Theory New York : McGraw- Hill.
3. Anastasi, A (1968). Psychological testing (3rd Ed.) New York: Macmillian.
4. Freeman F.S (1950). Theory and Practice of Psychological Testing (3rd Ed.) Oxford & IBH Publishing Co.

Hard Core Course -2 PSY 3.2 Counselling Psychology

4 Credits

Block I: Introduction to Counseling Psychology

Unit 1: Meaning, Definition, Nature and Scope; History, Current Status and Future of Counseling Psychology

Unit 2: Counseling Relationship: Counselor as a professional and Counseling as Profession

Unit 3: Counselor: Characteristics, Attitudes and Values

Unit 4: Counselor Issues: Personal, Situational and Ethical

Block II: Approaches and Types of Counseling

Unit 5: Directive and Non-directive Counselling

Unit 6: Eclectic and Transactional Counselling

Unit 7: Individual and Group Counseling

Unit 8: Family and Cross Cultural Counseling

Block III: Processes and Skills of Counseling

Unit 9: Relationship Establishment, Problem Identification and Goal Setting for Change in Counselling

Unit 10: Intervening, Termination and Evaluation of Counselling Outcome

Unit 11: Communication Skills- Listening, Confronting, etc

Unit 12: Therapeutic skills- Reassurance, Persuasion, Confession and Catharsis

Block IV: Counseling in different settings and for different purposes

Unit 13: Marital and Family Problems

Unit 14: Counseling in Educational Setting

Unit 15: Career Counseling

Unit 16: Counseling in Health Setting and for Special Population

References:

1. Rogers. C.D (1951) Counselling and Psychotherapy: New Concepts in Practice. Boston: Houghton Mifflin.
2. Brammer, I & Shostrom, E. (1977) Therapeutic Psychology : Fundamentals of Counselling and Psychotherapy Third Edition. Englewood Cliffs, NJ: Prentice Hall.
3. Egan. G (2002) The Skilled Helper : A Problem Management and Oppurtunity Development Approaches to Helping, 7th Edition: Pacific Groove, CA: Brooks/Cole.

4. Eisenberg, S and Delaney, D.J (1977) The Counselling Process, Second Edition: Rand McNally College Publishing, Chicago.

Hard Core Course -3 PSY 3.3 Experimental Psychology Practical-3 4 Credits

1. Clinical Analysis Questionnaire(CAQ)
2. General Health Questionnaire (GHQ)
3. Beck Depression Inventory (BDI)
4. Fear Questionnaire (FQ)
5. Depression, Anxiety and Stress Scale (DASS-21)
6. Anxiety Self-Analysis Form (ASQ)
7. Mini-Mental Status Examination(MMSE)
8. Functional Behavioural Assessment (FBA)

References:

1. Anne Anastasi, Susana Urbina (2005) Psychological Testing (7th Edition) PHI Publication, New Delhi.
2. Lewis R Aiken (2000): Psychological testing and assessment (10th edition) Allyn and Bacon Publication London.
3. Robert S Woodworth and Harold Schlosberg: Experimental Psychology (Revised Edition) Oxford Publication New Delhi.
4. Frank S. Freeman, (2006) Theory and Practices of Psychological Testing (3rd Edition) Surjeet Publications, Delhi.

Soft Core Course PSY A 3.1 Psychopathology-I

3 Credits

Block I: Introduction to Psychopathology

Unit 1: Definition, Historical Development, Scope and Concepts of Psychopathology

Unit 2: Models of Psychopathology Psychoanalytical Model

Unit 3: Behavioral and Cognitive model of Psychopathology

Unit 4: Humanistic, Existential and neuroscience

Block II: Psychological Disorders

Unit5: Classification of Mental Disorders-Development of the Classification systems.

Unit 6: DSM and ICD systems of classification.

Unit 7: Methods of Assessment and Diagnosis- Case History and Clinical Interview

Unit 8: Methods of Assessment and Diagnosis- Psychological Testing

Block III: Anxiety and Stress

Unit 9: Generalized Anxiety Disorder (GAD): Causes, Types and Symptoms

Unit 10: Panic and Phobic Disorder: Causes, types and Symptoms

Unit 11: Post Traumatic and Somatization Disorder (PTSD): Causes, Types and Symptoms.

Unit 12: Obsessive – Compulsive Disorders: Causes, Types and Symptoms

Reference Books:

1. Barlow, D.H. and Mark Durand (2002) Abnormal Psychology, III Edition, Wadsworth, Behmont, USA.
2. Davison, C.G., and Neale, J.M (1998): Abnormal Psychology, John Wiley and Sons, Inc.
3. Carson, C.R. and Butsher (2000). Abnormal Psychology and Modern Life. Harper and Collins.
4. Hecker, J.E., and Thope (2005). Introduction to Clinical Psychology: Science Practice and Ethics. Pearson Education Inc. First Indian Print, Delhi.

Soft Core Course PSY A 3.2 Psychotherapy -I

3 Credits

Block I: Introduction to Psychotherapy

Unit 1: Nature and Scope of Psychotherapy Procedures – Counseling and Psychotherapy – Therapist, Characteristics & Personal Traits – Applications

Unit 2: Ethics and Training: Ethical Considerations: Confidentiality Informed Consent, Ethical Neutrality – Non-Judgmental Attitude – Law and Psychotherapy – Supervision & Training – Therapeutic Competence- Qualifications – Special Issues and Considerations

Unit 3: Therapeutic Relationship: Principles & Problems:

Unit 4: Need & Importance –Process of Establishing Relationship – Purpose – Drawbacks

Block II: Indian Perspectives

Unit 5: Indian Perspective: Indian Scene – Contrasting Euro American Perspectives on Psychotherapy

Unit 6: Concept of Holistic Health Psychotherapeutic Outlines in, Ancient Indian Thought, Buddhism and Bhagavad-Gita

Unit 7: Supportive Therapies: Meaning, Purpose, Applications and Limitations -Some Illustrative Types: Guidance – Tension Control and Release– Environmental Manipulation – Milieu Therapy – Sociotherapy

Unit 8:–Externalization of Interests - Reassurance – Prestige Suggestion – Pressure and Coercion – Persuasion – Confession and Ventilation

Block III: Types of Psychotherapies

Unit 9: Re-educative and Reconstructive Therapies Meaning, Purpose, Applications and Limitations - Some Illustrative Type-Constraints – Cultural Aspects - Adjunctive Aids – Meaning and Recent Trends

Unit 10: Special Therapies: Meaning, Purpose, Applications and Limitations - Some Illustrative Types based on Play, Art, Music, Dance or Sports

Unit 11: Creative Therapies – Story Telling - Diet Based Therapies - Sensory, Therapies: Animal Assisted Therapies, Aroma Therapy, Auditory Integration, Touch Therapy, Laughter Therapy, Movement Therapy, Alternative Systems of Medicine

Unit 12 : Group Therapies - Meaning, Purpose, Applications and Limitations – Therapeutic Principles - Some Illustrative Types – Activity Group – Directive-Didactive Group - Client Centered Group – Conjoint or Marital Therapy

References:

1. Wolberg, L.R (1977) *The Technique of Psychotherapy*, New York: Grune & Stratton.
2. Wolberg, L. R (1982) *The Practice of Psychotherapy*, New York: Routledge.
3. Welfel, E.R (2013) *Ethics in Counselling and Psychotherapy: standards, research and emerging issues*. Australia: Brooks/ Cole Cengage Learning.
4. Gelso, C.J and Hayes, J.A (1998). *The Psychotherapy Relationship: Theory, Research and Practice*, New York: John Wiley & Sons: New York.

Soft Core Course PSY B 3.1 Organizational Psychology -I

3 Credits

Block I: Introduction to Organizational Psychology

Unit 1: Meaning, Definition, Function of Organizational Psychology

Unit 2: Historical background of Organizational Psychology

Unit 3: Theories, Laws of Organizational Psychology

Unit 4: Models of Organizational Psychology - Role of information technology; Contemporary challenges, diversity and ethics

Block II : Organizational Processes

Unit 5: The Perceptual Processes in Organization: Nature and importance of Perceptual Organization, Social Perception and Impression management

Unit 6: Organizational Behavior: Development of Personality, Dimensions of Attitudes, Values, and Job satisfaction

Unit 7: Primary and Secondary Motives, in Organizations

Unit 8: Theories of Work Motivation, Job Design, Quality of Work life and Socio-technical design.

Block III: Dynamics of Organizational Behaviour

Unit 9: Theories of Learning, Reinforcement and Punishment, Organizational reward System, Behavioral Management

Unit 10: Groups: Nature of Groups, Formal and Informal groups, Teams, Individual and Interpersonal Conflicts

Unit 11: Organizational Conflict and Negotiation skills

Unit 12: Meaning of Stress, Causes and effects, Coping Strategies; Power and Politics, Leadership and its implications in organization

References:

1. Jerald Greenberg: Behaviour in Organisations. 10th ed. PHI Learning Pvt Ltd. ND 2012.
2. Jerald Greenberg and Robert A. Baron: Behaviour in Organisations. 9th ed. PHI Learning Pvt Ltd. ND 2009.
3. Fred Luthans: Organisational Behaviour. 12th ed. McGraw-Hill International ed
4. Stephen P. Robbins: Organisational Behaviour: Concepts, Controversies, Applications.PH

Soft Core Course PSY B 3.2 Human Resource Development and Management-I

3 Credits

Block I: Introduction to Human Resource Development

Unit 1: Meaning, Definition and Importance of Human Resource Development

Unit 2: Role of Human Resource Development in Personnel Development

Unit 3: Human Resource Development Practices in Indian Organizations.

Unit 4: Human Resource Development in non- industrial sectors-Health

Block II: Human Resource Development and Training

Unit 5: Human Resource Development in non- industrial sectors Education and Environment.

Unit 6: Training need and Assessment

Unit 7: Training Methods for managerial

Unit 8: Training Methods for non–managerial Personnel.

Block III: Training Methods and Techniques

Unit 7: Designing training Programs

Unit 8: Designing Training Techniques

Unit 9: Evaluating training

Unit 10: Improving effectiveness of Training Programs

References:

1. Burke, R.J., Cooper, C.L. (Ed.). (2005). Reinventing Human Resource management: Challenges and New Directions. New York: Routledge.
2. Raymond, A.N, Hollenbeck, J.R., Gerhart, B., Wright, P.M. (2004). Fundamentals of Human Resource Management. China: McGraw Hill.
3. Sanghi, S. (2004). Handbook of Competency Mapping: Understanding, designing and implementing competency models in organizations. New Delhi: Sage.
4. Buckley, R. & Caple, J. (1995). The Theory and Practice of Training. London: Kogan and Page

Skill Enhancement Course Sec-I Life Skills Psychology-I

2 Credits

Block 1: Life Skills -I

Unit 1: Self-awareness skills

Unit 2: Interpersonal Skills

Unit 3: Stress management Skills

Unit 4: Emotional management Skills

Block 2: Life Skills -II

Unit 5: Communication Skills

Unit 6: Negotiation Skills

Unit 7: Assertiveness Skills

Unit 8: Empathy Skills

FOURTH SEMESTER

Hard Core Course PSY 4.1 Health Psychology

4 Credits

Block I : Introduction to Health Psychology

Unit 1: Definition- Role of Health Psychologist – Mind- Body Relationship-Changing Patterns of illness- Health care Services- Research methodology: Anecdotal-Case study- Correlational Research- Experimental Research

Unit 2: Models of Health: Biomedical model- challenges to Biomedical

Model, Biopsychosocial Model-Eastern approaches-concept of swasthya, Anasktizen Buddhism.

Unit 3: Health Beliefs and Behavior: The Health Belief Model- Cognitive Model- The theory of planned behavior, Doctor- patient communication-Doctor-patient relationship- The role of Health professionals.

Unit 4: Myths about Health and illness.

Block II: Stress and Health

Unit 5: Meaning and Definition of stress- Models of stress: Hans Selye and General Adaptation syndrome- Lazarus and Folkman's Transactional Model-Eastern conceptualization of stress

Unit 6: Sources and Types of stress: Conflict, Frustration- Pressure- Life Events- Daily hassles-Work and Environment- Eu-stress and Distress.

Unit 7: Stress Responses: Psycho- neuro-immunology, Physiological, Psychological, Emotional and Behavioral Responses.

Unit 8: Stress Moderators: Social Support-Optimism-Sense control and Hardy Personality.

Block III: Chronic Illness and Management

Unit 9: Meaning of Illness Theories of Stress and illness relationship, Infectious Disease- Pain disorders, Pain management.

Unit 10: Stress and Hypertension, Cardiovascular disorders, Diabetes Management.

Unit 11: Stress and Cancer: Management of Cancer, Adjustment to Chronic Illness.

Unit 12: Behavioral Epidemiology of HIV/STDS: Psychological Intervention Programmes.

Block IV: Health Promotion and Disease Prevention

Unit 13: Health Compromising Behavior: Alcohol and Drug abuse, Smoking, Sedentary life styles-

Unsafe sexual behavior.

Unit 14: Coping strategies: Problem focused- Emotion focused- Task Oriented Vs Defense oriented.

Unit15: Health Enhancing Behavior: Exercise- Weight control- Meditation-Yoga- Biofeedback- Positive Thinking.

Unit 16: Health Behavior Modification: Classical conditioning Techniques, Operant Conditioning Techniques, Cognitive Behavioral Approaches and Relapse Prevention.

References:

1. Seligman, M. (2002) Authentic Happiness. New York, Free Press
2. Handbook of Positive Psychology, 2002 Snyder & Lopez (Eds.): Oxford
3. Peterson, C. (2006) A Primer in Positive Psychology. New York, Oxford University Press
4. Myers, D. G. (1992).The pursuit of happiness: Discovering the pathway to fulfillment, wellbeing, and enduring personal joy. New York.

Hard Core Course PSY 4.2 Positive Psychology

4 Credits

Block I: Introduction to Positive Psychology

Unit 1: Meaning, Assumptions, goals and definitions of Positive Psychology and its relationship with other fields.

Unit 2: Importance of Happiness and Well-Being: The causes and effects of happiness, The strategies for enhancing happiness.

Unit 3: Happiness and facts of life–Happiness across the life span: Gender and happiness: Other domains and happiness

Unit 4: Happiness and Well-Being–Cross Cultural Perspectives: Well- Being across the nations: Money and Happiness; relative or universal happiness, Culture and Well –Being.

Block II: Positiveness in oneself

Unit 5 Positive Emotions: Meaning of Positive emotions and health resources; Positive emotions and well –being; cultivating Positive Emotions

Unit 6: Positive Traits: Identification of Positive Traits and Personality, emotions and biology; Positive beliefs and Self- esteem

Unit 7: Virtue and Character: Meaning, classification, Measurement Transcendence- Religion and spirituality; Religion and Virtue.

Unit 8: Personal Goals: Meaning and Definition measuring personal goals and well-being, Materialism and its discontents.

Block III: Promoting the Positive

Unit 9: Self –Regulation and Self-Control: The value of self-control, Personal goals and self-regulation, Planning for self-regulation, Goals that create self-regulation problems, Everyday explanation of self-control failure, Goal disengagement

Unit 10: Prevent the Bad and Enhance the Good. Physical and Psychological prevention, Physical and Psychological Enhancement.

Unit 11: Positive Relationships: Definition and Characteristics of close relationships. Family life cycle, Assessing relationships, Teasing and Humor.

Unit 12: Life above Zero: Positive Psychology revisited ; Interconnection of the “good” and the “bad”
Meaning and Means of a Positive life, Mindfulness and Well-being, Positive Psychology in East-West.

Block IV: Positive Psychology in Practice

Unit 13: Positive Psychology at work: Transformational leadership; Strength based development; Positive and creative organization; Positive Psychology and Executive Coaching.

Unit 14: Positive Psychology in the consulting room: Positive Clinical Psychology, Positive Psychological theory for therapy, Positive Psychological Interventions

Unit 15: Building better communities: Individualism and Collectivism, Social Inclusion, balancing Me and We.

Unit 16: Young People and Education: Positive schooling, Positive teacher, assessing educational success

References:

1. Baumgardner, S. R. & Crothers, M. K. (2009). *Positive Psychology* (1st Ed.). New Delhi: Pearson Education.
2. Liney, P.A & Joseph, S. (2004). *Positive Psychology in Practice* (1st Ed.). Hoboken, New Jersey: John Wiley & Sons
3. Peterson, C. (2006). *A Primer in Positive Psychology*. New York: Oxford University Press.
4. Snyder, C. R. & Lope, S. J. (2007). *Positive Psychology: The scientific and practical explorations of human strengths*. New Delhi: Sage Publications.
5. Sheldon, K.M., Kashdan, T.B. & Steger, M.F. (2011). *Designing Positive Psychology: Taking stock and moving forward*. New York: Oxford University Press.

Hard Core Course PSY 4.3 Dissertation

4 Credits

Each student should carry out a Field Study and Submit the Dissertation for Evaluation to the Department. Dissertation carries 100 Marks. Topics will be finalized by the Department.

Soft Core Course PSYA 4.1 Psychopathology-II

3 Credits

Block I: Mood Disorders

Unit 1: Manic Disorders: Causes, Types and Clinical Features

Unit 2: Depressive Disorders: Causes, Types and Clinical Features

Unit 3: Unipolar: Causes, Types and Clinical Features

Unit 4: Bipolar Disorders: Causes, Types and Clinical Features

Block II: Schizophrenia and Aging Disorders.

Unit 5: Schizophrenia: Causes, Types and Clinical Features

Unit 6: Delusional disorders: Causes, Types and Clinical Features

Unit 7: Aging disorders: Delirium and Dementia

Unit 8: Alzheimer-Causes, Types and Symptoms.

Block III: Personality Disorders

Unit 9: Personality Disorders-I: Causes, Types and Symptoms

Unit 10: Personality Disorders-II: Causes, Types and Symptoms

Unit 11: Organic Mental Disorders: Causes, Types and Symptoms.

Unit 12: Disorders of Childhood and Adolescents: Causes, Types and Symptoms

Reference Books:

1. Barlow, D.H. and Mark Durand (2002) Abnormal Psychology, III Edition, Wadsworth, Belmont, USA.
2. Davison, C.G., and Neale, J.M (1998): Abnormal Psychology, John Wiley and Sons, Inc.
3. Carson, C.R. and Butsher (2000). Abnormal Psychology and Modern Life. Harper and Collins.
4. Hecker, J.E., and Thope (2005). Introduction to Clinical Psychology: Science Practice and Ethics. Pearson Education Inc. First Indian Print, Delhi.

Soft Core Course PSY A 4.2 Psychotherapy- II

3 Credits

Block I: Psychodynamic Approaches to Psychotherapy

Unit 1: Classical Psychoanalysis: Background and Goal - Techniques – Analytical Setting – Role of Analyst - Hypnotherapy – Free Association –

Unit 2: Ventilation – Catharsis – Dream Interpretation – Meaning and Significance of Resistance, Transference and Counter Transference

Unit 3: Neo- Freudian and Modern Psychoanalysis: Background and Types: Insight Oriented & Supportive – Structure and Content – Psychoanalysis: Adler, Eric Fromm, **Unit 4:** Karen Horney and Harry Stack Sullivan

Block II: Cognitive and Humanistic Approaches to Psychotherapy

Unit 5: Cognitive and Behavior Therapy: Meaning and Definitions – Principles - Conceptual Background – Behavior Assessment - Steps and Procedures in Behavior Intervention - Cognitive Behavior Therapy

Unit 6: Client Centered Therapy

Unit 7: Other Therapies - Psychodrama & Role Play, Relaxation Therapies

Unit 8: Individual & Group Therapies: Meaning Classification- Supportive, Analytical, Behavioral and Transactional-Patient Selection and Preparation – Structural Organization and Mechanism – Therapeutic Factors – Cohesion and Collective Transference – Abreaction –Inpatient versus Outpatient Groups

Block III: Social & Group Approaches to Psychotherapy

Unit 9: Social Skill Training -Assertiveness Training-Self Control Techniques–Correspondence Training

Unit 10: Group Education: Psycho Educative Therapies & Continuing Education –Bibliotherapies – Disaster Management: Handling Special Cases and Situations –Advocacy & Self Help Groups - Psychosocial Therapies: Parent Training: Methods and Procedures – Social Casework

Unit 11: Family Therapies: Frequency and Length – Bowens Model, Systems Approach – Structural Approaches – Social Network Therapy – Goals, and Applications - Marital Therapy: Nature, Types and Applications, Conjoint Therapy: Goals- Indications and Contraindications

Unit 12: Specialized Group Therapies: Inspirational Group Therapy Online Therapies –The Twelve

Step Program - Sensitivity Training Educational Group Therapy – Philosophical and Religious Approaches

References:

1. Wolberg, L.R (1977) The Technique of Psychotherapy, New York: Grune & Stratton.
2. Wolberg, L. R (1982) The Practice of Psychotherapy, New York: Routledge.
3. Welfel, E.R (2013) Ethics in Counselling and Psychotherapy: standards, research and emerging issues. Australia: Brooks/ Cole Cengage Learning.
4. Gelso, C.J and Hayes, J.A (1998). The Psychotherapy Relationship: Theory, Research and Practice, New York: John Wiley & Sons: New York.

Soft Core Course PSY B 4.1 Organizational Psychology-II

3Credits

Block I: Macro Perspective of Organizational Behavior

Unit 1: Communication and Communication Technology, Verbal

Unit 2: Non-Verbal Communication, Downward and Upward Communication.

Unit 3: Decision Making Techniques and Group Decision Making

Unit 4: Types of Organizational Structure and Design Classical Organizational Structure and Design

Block II: Organizational Structure and Design

Unit 5: Modern organizational Structure and design, Work design and Work place.

Unit 6: Organizational Culture- Creating and Maintaining

Unit 7: Human Resource Policies and Practices- Selection, Training and Development,

Unit 8: Performance Evaluation, and Job Analysis

Block III: Organizational Dynamics

Unit 9: Organizational Change – Managing change, Resistance to Change, Approaches to Managing Organizational Change

Unit 10: Organizational Development- Approaches

Unit 11: Techniques of Organizational Development

Unit 12: Work Stress and its Management in the context of Globalization.

References:

1. Jerald Greenberg: Behaviour in Organisations. 10th ed. PHI Learning Pvt Ltd. ND 2012.
2. Jerald Greenberg and Robert A. Baron: Behaviour in Organisations. 9th ed. PHI Learning Pvt Ltd. ND 2009.
3. Fred Luthans: Organisational Behaviour. 12th ed. McGraw-Hill International ed
4. Stephen P. Robbins: Organisational Behaviour: Concepts, Controversies, Applications.PH

Soft Core Course PSY B 4.2 Human Resource Development and Management-II

3 Credits

Block I: Introduction to Human Resource Management

Unit 1: Definition and Related concepts of HRM

Unit 2: Importance of HRM,

Unit 3: Functions of H R Manager.

Unit 4: The challenges of HRM and Meeting human Resource Requirements

Block II: Human Resource Management

Unit 5: Nature and Purposes of performance Appraisal,

Unit 6: Developing an effective appraisal program.

Unit 7: Classical Methods of Performance Appraisal

Unit 8: Modern Methods of Performance Appraisal

Block III: Human Resource Development

Unit 9: Changing nature of work emergence of new trends

Unit 10: Alternative work arrangements.

Unit 11: Forecasting the present

Unit 12: Education and the future of work.

References:

1. Burke, R.J., Cooper, C.L. (Ed.). (2005). Reinventing Human Resource management: Challenges and New Directions. New York: Routledge.
2. Raymond, A.N, Hollenbeck, J.R., Gerhart, B., Wright, P.M. (2004). Fundamentals of Human Resource Management. China: McGraw Hill.
3. Sanghi, S. (2004). Handbook of Competency Mapping: Understanding, designing and implementing competency models in organizations. New Delhi: Sage.
4. Buckley, R. & Caple, J. (1995). The Theory and Practice of Training. London: Kogan and Page

Skill Enhancement Course Sec-2 Life Skills Psychology-II

2 Credits

Block I:

Unit 1: Managing relationship Skills

Unit 2: Time Management

Unit 3: Goal setting

Unit 4: Decision making

Block 2:

Unit 5: Problem solving

Unit 6: Critical and creative thinking

Unit 7: Leadership Skills

Unit 8: Positive Thinking Skills

INTER- DISCIPLINARY COURSE

(Open Elective) for First Semester

ವಿಭಾಗ- ಕನ್ನಡ

ಪತ್ರಿಕೆ-೬: ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ EL 1.1 (ಕ್ರೆಡಿಟ್-೩)

ಬ್ಲಾಕ್-೧೯: ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಮುಖ್ಯ ಘಟ್ಟಗಳು

ಘಟಕ-೨೩: ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಹಿನ್ನೆಲೆ ಮತ್ತು ಪ್ರೇರಣೆಗಳು.

ಘಟಕ-೨೪: ನವೋದಯ ಪೂರ್ವ, ನವೋದಯ- ಬಿ.ಎಂ.ಶ್ರೀ., ಕುವೆಂಪು, ದ.ರಾ.ಬೇಂದ್ರೆ, ಶಿವರಾಮಕಾರಂತ, ಮಾಸ್ತಿವೆಂಕಟೇಶ್ ಅಯ್ಯಂಗಾರ್, ಕೆ.ಎಸ್. ನರಸಿಂಹಸ್ವಾಮಿ.

ಘಟಕ-೨೫: ಪ್ರಗತಿಶೀಲ ಮತ್ತು ನವ್ಯ: ಅನಕೃ, ಕಟ್ಟೀಮನಿ, ನಿರಂಜನ, ಚದುರಂಗ, ವಿ.ಕೃ. ಗೋಕಾಕ, ಅಡಿಗ, ಜಿ.ಎಸ್. ಶಿವರುದ್ರಪ್ಪ, ಶಾಂತಿನಾಥ ದೇಸಾಯಿ, ಅನಂತಮೂರ್ತಿ, ಯಶವಂತ ಚಿತ್ತಾಲ, ಲಂಕೇಶ್, ತೇಜಸ್ವಿ, ವೈದೇಹಿ, ವೀಣಾ ಶಾಂತೇಶ್ವರ, ವಿಜಯಾದಿಪ್ತಿ.

ಘಟಕ-೨೬: ಬಂಡಾಯ ಮತ್ತು ದಲಿತ:

ಬರಗೂರು ರಾಮಚಂದ್ರಪ್ಪ, ಬಿ.ಟಿ. ಲಲಿತಾನಾಯಕ, ಸಾರಾ ಅಬೂಬಕ್ಕರ್, ದೇವನೂರು ಮಹಾದೇವ, ಸಿದ್ದಲಿಂಗಯ್ಯ, ಅರವಿಂದ ಮಾಲಗತ್ತಿ, ಮೊಗ್ಗಿ ಗಣೇಶ.

ಬ್ಲಾಕ್-೨೦: ಆಧುನಿಕ ಕನ್ನಡ ಕಾವ್ಯ ಮತ್ತು ಸಾಹಿತ್ಯ ಪ್ರಕಾರಗಳು

ಘಟಕ-೨೭: ಕಾವ್ಯ ಪ್ರಕಾರಗಳು: ಭಾವಗೀತೆ, ಸುನೀತ, ಶೋಕಗೀತೆ, ಪ್ರಗಾಥ.

ಘಟಕ-೨೮: ಕಥನ ಕಾವ್ಯ, ಖಂಡ ಕಾವ್ಯ, ಮಹಾಕಾವ್ಯ.

ಘಟಕ-೨೯: ಸಾಹಿತ್ಯ ಪ್ರಕಾರಗಳು: ಕಥೆ, ಕಾದಂಬರಿ, ನಾಟಕ ಜೀವನ ಚರಿತ್ರೆ.

ಘಟಕ-೩೦: ಲಲಿತ ಪ್ರಬಂಧ, ಆತ್ಮಕತೆ, ಪ್ರವಾಸ ಸಾಹಿತ್ಯ, ಸಂಪಾದನೆ, ವಿಚಾರ ಸಾಹಿತ್ಯ, ವಿಜ್ಞಾನ ಸಾಹಿತ್ಯ

ಪರಾಮರ್ಶನ ಗ್ರಂಥಗಳು

೧. ಹೊಸಗನ್ನಡ ಸಾಹಿತ್ಯ: ಎಲ್.ಎಸ್. ಶೇಷಗಿರಿರಾವ್, ಕನ್ನಡ ಸಾಹಿತ್ಯ ಪರಿಷತ್, ಬೆಂಗಳೂರು, ೧೯೯೨

೨. ಯುಗಧರ್ಮ ಮತ್ತು ಸಾಹಿತ್ಯ ದರ್ಶನ: ಕೀರ್ತಿನಾಥ ಕುರ್ತಕೋಟಿ, ಮನೋಹರ ಗ್ರಂಥ ಮಾಲೆ, ಧಾರವಾಡ, ೧೯೯೧

೩. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಇತಿಹಾಸ: ರಂ.ಶ್ರೀ. ಮಗುಳಿ, ಗೀತಾ ಬುಕ್ ಹೌಸ್, ಮೈಸೂರು, ೨೦೧೮

೪. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಸಂಗಾತಿ: ಕೀರ್ತಿನಾಥ ಕುರ್ತಕೋಟಿ, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಹಂಪಿ, ಹೊಸಪೇಟೆ, ೧೯೯೫

೫. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಸಂಗಾತಿ: (ಪ್ರ.ಸಂ) ಬರಗೂರು ರಾಮಚಂದ್ರಪ್ಪ, ಕರ್ನಾಟಕ ಸಾಹಿತ್ಯ ಅಕಾಡೆಮಿ, ೨೦೧೮

೬. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ: ತ.ಸು. ಶಾಮರಾಯ, ತಳುಕಿನ ವೆಂಕಣ್ಣಯ್ಯ ಸ್ಮಾರಕ ಗ್ರಂಥಮಾಲೆ, ಮೈಸೂರು, ೨೦೧೪

೭. ಹೊಸಗನ್ನಡ ಕಾವ್ಯ ಪ್ರಕಾರಗಳು: ಪ್ರಧಾನ ಸಂಪಾದಕರು, ಎ.ರಂಗಸ್ವಾಮಿ, ಲೇ. ಮ. ರಾಮಕೃಷ್ಣ, ಪ್ರಸಾರಂಗ, ಕರಾಮುವಿ,

ಮೈಸೂರು, ೨೦೧೦

ಲ. ಆಧುನಿಕ ಸಾಹಿತ್ಯ ಪ್ರಕಾರಗಳು: ಪ್ರಧಾನ ಸಂಪಾದಕರು, ಎ. ರಂಗಸ್ವಾಮಿ, ಲೇ. ಡಾ. ಜಿ.ಆರ್. ತಿಪ್ಪೇಸ್ವಾಮಿ, ಪ್ರಸಾರಂಗ, ಕರಾಮವಿ, ಮೈಸೂರು, ೨೦೧೦

DEPARTMENT - ENGLISH

EL-1.1: INTER- DISCIPLINARY COURSE-I (OPEN ELECTIVE)

INDIAN LITERATURE-I

OBJECTIVES

- To help to understand the contribution of Kalidasa to Sanskrit drama as a playwright
- To create an awareness of the importance of Shakuntala and Mrichhakatika as classical Indian texts
- To evaluate Lord Macaulay and Raja Ram Mohan Roy writers of English Prose.
- To introduce the role of Autobiographies in Indian writing in English

BLOCK -I

Kalidasa: Shakuntala

Shudraka: Mrichhakatika

BLOCK -II

Jawaharlal Nehru: An Autobiography

Ram Mohan Roy: Letter to Lord Amherst

Macaulay: Minutes on Indian Education

Vivekananda: Address to the Parliament of Religions

Suggested Reading:

- **M.K.Naik:** Critical Essays on Indian Writing in English. Sahitya Akademi, 1969.
- **Narasimhaiah. C.D:** The Swan and the Eagle. Indian Institute of Advanced Study, 1987.
- **Meenakshi Mukherjee:** The Twice Born Fiction. Heinemann Educational Publishers, 1972.
- **Chirantan Kulshrestha.** Contemporary Indian English Verse: An Evaluation. Arnold-Heinemann, 1981.

DEPARTMENT - HINDI

व्यावहारिक हिंदी एवं व्याकरण

वर्ण विचार

- वर्ण

- स्वर और उसका वर्गीकरण
- व्यंजन और उसका वर्गीकरण
- वर्णों का उच्चारण स्थान
- संधि
- समास

शब्द विचार

- शब्द के भेद
- अर्थ के आधार पर शब्द भेद
- व्युत्पत्ति के आधार पर शब्द भेद
- रचना के आधार पर शब्द भेद
- प्रयोग के आधार पर शब्द भेद
- विकारी और अविकारी शब्द भेद
- अव्यय
- संज्ञा और उसके भेद
- वचन- उसके भेद, वचन परिवर्तन के नियम
- लिंग- उसके भेद, लिंग परिवर्तन के नियम
- काल और उसके भेद
- कारक और विभक्ति- उसके प्रकार,
- सर्वनाम और उसके भेद
- विशेषण और उसके भेद
- क्रिया और उसके भेद
- क्रिया विशेषण और उसके भेद
- समुच्चय बोधक और उसके भेद
- संबंधबोधक और उसके भेद
- विस्मयादिबोधक और उसके भेद
- परसर्ग और उपसर्ग
- वाच्य और उसके प्रकार

वाक्य विचार

- वाक्य का अर्थ और परिभाषा
- वाक्य के प्रकार आदि

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DEPARTMENT - TELUGU

E. L. 1.1 Thilak Prathyeka Adhyayanam

Block - 1:Thilak Kavithvam - 1

Unit - 1:Amrutham Kurisina Raathri

Unit - 2:Thilak Padhya Kavithaa Vaibhavam

Unit - 3:Thilak Abhiruchulu - Alavaatlu

Unit - 4: Thapala bantrothu

Block - 2: Thilak Kavithvam

Unit - 1:Thilak Sahithya Parichayam - 1

Unit - 2: Thilak Sahithya Parichayam - 2

Unit - 3:Thilak vachana kavithaa Vaibhavam - 1

Unit - 4: Thilak Vachana Kavithaa Vaibhavam – 2

DEPARTMENT - HISTORY

ANCIENT WORLD CIVILIZATIONS

(Egypt, Mesopotamia, Greek, Roman, Inca, Chinese)

Objective: The course is aims to understand major world civilizations. It is to provide a global historical perspective of ancient world which special reference to Egypt, china, Greek, Roman, Inca civilizations.

Pedagogy: personal contact programmes, audio video programmes, online lectures
Assignments, etc

Credits: 2.

Examination Duration: 11/2 hours and Maximum Marks:40

Course outcomes:

After completing this course the students should be able to

- Discuss the Egyptian and Mesopotamian civilizations.
- Analyse the political socio economic conditions of Greek Roman civilizations.
- Evaluate the Chinese contributions to ancient world.

Block – I

Unit-1

Egyptian Civilization: Importance of the Nile, Geographical importance, Gift of Nile, Political conditions.

Unit-2

Social, Economic and religious conditions, Literature and learning, arts and architecture.

Unit-3

Mesopotamian Civilization, Sumer and Babylonian, Hammurabi's code, Society and Culture, Economic conditions, art and literature, Assyrian Empire.

Unit - 4

Greek Civilization, Political Organizations, the city, State, Alexander the Great, Greek political theory, Religion, Philosophy, art and architecture, Characteristic of Hellenistic Civilization.

Block – II**Unit - 5**

Roman Civilization, The Land and the people, the Government, Roman Republic, Roman Empire, Roman Republic, The Empire, The Patricians and Plebeians, Punic wars.

Unit – 6

Julius Caesar, his wars, fall Augustus Caesar, Social Economic Conditions, Roman art and architecture.

Unit - 7

Painting, Sculpture, Roman Law, Roman Religion, Philosophy, Roman literature, Decline of the Roman Empire.

Unit - 8

Inca Civilisation, Socio – economic Political conditions, Chinese Civilisation, Socio – economic Political conditions.

Suggested readings:

1. Breasted, J.H. : Ancient Times, A History of the early world.
2. Rostovzeff, M.S. : History of Ancient World
3. Schvieder, H. : The History of Civilization
4. Swain, J.E. : A History of World Civilization
5. Breasted, J.H. : History of Egypt
6. Jastrow, M. : The Civilization of Babylonia and Assyria
7. Bury, J.E. & OTHERS: The Hellenistic Age
8. Bailey, C. : The Legacy of Rome and others
9. Abot, F.F.: Society and Politics of Ancient Rome

DEPARTMENT – ECONOMICS

EL1.1: Economic Policies of India Since 1991.

- **Objective:** To enable the Students to understand the economic policies of India in the era of new economic policy.
- **Pedagogy:** A Combination of Lectures, Group Discussion, Assignments.

- **Credits:** 2 ; Examination Duration: 1½ and Maximum Marks: 50 (Internal Assessment Marks = 10 and Semester-end Examination =40)

Course Inputs

BLOCK – I: India's Economic Policies

UNIT : 1 Economic Policies in India Since 1991

Economic reforms in India – Economic Scenario in India during 1990-91 – Domestic Financial Crisis – Balance of Payment Crisis – Extent of External debt and debt Trap Problem.

UNIT : 2 Need for Reforms

Measures Taken – Devaluation – Privatization – Liberalization – Globalization.

UNIT : 3 Monetary Policy and Fiscal Policy

Narasimhan Committee on Banking and Financial Sector Reforms Since 1998 – Fiscal Reforms: Raja Chellaiah Committee and Tax Reform Policies – Fiscal Prudence and Policies.

UNIT : 4 Structural Adjustments and External Sector in India

Foreign Trade: Trends in Exports and Imports – Balance of Payment and its Crisis – Export Import Policy – In Defence of Import Substitution – Foreign Exchange Policy.

BLOCK : II FDI and the Role of State

UNIT : 5 Foreign Direct Investment (FDI)

Trends in FDI – FDI Policy – Its Impact on the Domestic Economy – Labour Migration: causes and Consequences on Indian Economy – Information and Communication Revolution and India.

UNIT : 6 Challenges to Development in India

Poverty – Unemployment – Poverty alleviation Programmes - urban Poverty and Problems – Income Inequality – Employment Generating Schemes.

UNIT: 7 The Role of State

Parallel Economy in India – Black Money – Corruption – Slams – Redefining the Role of the State and the Markets – Balance between Economic and Socio - Political Goals.

UNIT : 8 Administrative Reforms

Rights to Information – Measures Towards Good Governance – NITI Ayoga and aftermath – Digitalized India – Demonetization – GST – Make in India.

References:

1. Acharya Shankar, (2003) India's Economy: Some Issues and Answers, Academic Foundation, New Delhi.
2. Byres J Terence (Ed.,) (1999) The Indian Economy, Major Debates since Independence, OUP, New Delhi.
3. Datt Ruddar, (2002) Economic Reforms in India - A Critique, S.Chand and Co, New Delhi.
4. Kapila Uma (Ed) (2015) Indian Economy since Independence, Academic Foundations, New Delhi.
5. Kapila Uma, (2005) Understanding the Problem of Indian Economy, Academic Foundation, New Delhi.

6. Misra S.K. & V.K. Puri, (2011) Indian Economy-Its Development Experience, Himalaya Pub., House, Mumbai.
7. NCAER, Economic and Policy Reforms in India, NCAER, New Delhi.
8. Rangarajan C, (1998) Indian Economy- Essays on Money and Finance, UBSPD, New Delhi.
9. Sachs D.Jeffrey, A.Varshney & N Bajpai (Ed)(1999) India in the Era of Economic Reforms,OUP, New Delhi.
10. Vaidyanathan A, India's Economic Reforms and Development, OUP, New Delhi

DEPARTMENT - POLITICAL SCIENCE

(OEL-I) Local Government in India

Block-I

- Unit:1 Meaning, Nature and Scope of Local Governments.
- Unit:2 Evolution of Panchayat Raj Institution in India.
- a) Constituent Assembly and Village Panchayat.
 - b) Balavanth Roy Mehta Committee Report
 - c) Ashok Mehta Committee Report.
 - d) G.V.K. Rao Committee Report.
- Unit:3 Constitutional Amendments and Panchayat Raj Institutions:
- a) Basis of Constitutional Amendment.
 - b) 73rd and 74th Constitutional Amendment.
 - c) Karnataka Panchayat Raj Act of 1983.
 - d) Karnataka Panchayat Raj Act of 1993.
- Unit:4 Zilla Panchayat: Structure, Functions and Sources of Revenue.

Block-II

- Unit:5 Taluk Panchayat : Structure, Functions, Executive Officer, Powers and Functions.
- Unit:6 Gram Panchayat: Gram Sabha, Ward Sabha: Structure, Functions and Sources of Revenue.
- Unit:7 Panchayat Development Officer and Secretary: Powers and Functions.
- Unit:8 Role of Panchayat Raj Institutions in Development (with Reference to Karnataka)
- a) Panchayat Raj in Rural Development.
 - b) Social Change: Empowerment of the Weaker Sections.

References:

1. Verma B. M, Social justice and Panchayath Raj
2. Mutarib-M.A. and Others, Theory of Local Government,
3. Dr. Arjun darshankar, Panchayath Raj aani Nagari.
4. V. B. Patil, Panchayath Raj.
5. A.N. Kulkarni, Bharatiya Sthanik Swashasan,
6. Shantaram Bhosale, Bharatiya Sthanik Shasan,
7. Kikherji. S, Essays on Rural Development.

8. Balaramu. C. H. Administration of Anty Poverty Programmes.
9. 73rd Constitutional Amendment Act, Government of India, 1993.
10. Karnataka Panchayatraj Acts, 1985, 1995.

DEPARTMENT – PUBLIC ADMINISTRATION

INDIAN POLITY – I

BLOCK – 1

- UNIT – 1 Indian Constitution.
- UNIT – 2 Preamble - Meaning and Importance.
- UNIT – 3 Fundamental Rights and Duties.
- UNIT – 4 Directive Principles of State Policy and Relation with Fundamental Rights.

BLOCK – 2

- UNIT – 5 Indian Federalism and Parliamentary system of Government.
- UNIT – 6 Centre - State Relations. Legislative Administrative and Financial
- UNIT – 7 Union Executive - President Elections, Powers and Positions.
- UNIT – 8 Council of Ministers and Prime Ministers - Powers and Functions

DEPARTMENT - SOCIOLOGY

Invitation to Sociology

(02 Credits)

Course Description

This course introduces learners to the basic concepts of sociology. It is particularly designed to orient the learners from interdisciplinary background about the essence of sociology and intends to inculcate sociological imagination.

Course Objectives

- To introduce the learner to the basic concepts and processes of sociology
- to comprehend the structural and organizational aspects of society
- to examine the process of social change

Learning Outcomes and Competencies

After successfully completing the course, following outcomes and competencies are possible among the learners. Learner will have/can

- Conceptual precision and clarity about the basic sociological concepts
- Develop sociological imagination and apply to analyze the contemporary events

- explain major social processes of society
- analytical view about Indian social structure
- explicate major process of social change and can conceptualize the changing aspects of Indian society

Course Contents

Block-1 Basic Concepts and Processes

- Unit-1 Emergence of Sociology-Factors and Early Thinkers-Sociological Imagination
- Unit-2 Society, Community- Associations and Institutions- Culture and Socialization
- Unit-3 Social System, Structure and Function
- Unit-4 Social Processes-Cooperation, Competition, Conflict, Accommodation and Assimilation

Block-2 Social Organization and Social Change

- Unit-5 Caste and Class System-Changes in Caste
- Unit-6 Social Mobility and Types
- Unit-7 Factors of Social Change
- Unit-8 Process of Social Change in India (Sanskritization, Westernization, Modernization and Globalization)

References

1. Berger, Peter L. 1978. An Invitation to Sociology, Allen and Unwin, London. Davis, Kingsley. Human Society, Macmilan, New Delhi.
2. Dumont, Louis, 1988, Homo Hierarchicus. Oxford University Press. Giddens, Anthony. 2009. Sociology. Politi Press, Malden.
3. Inkles, Alex. 2002. What is Sociology, Prentice Hall India, New Delhi. Jayaram, N, 1990, Introductory Sociology, Macmilan, New Delhi.
4. Johnson Harry M., 2011: Sociology: A Systematic Introduction: Allied Publishers, New Delhi.
5. MacIver, R.M and C.H. Page. Society - Introduction to Sociology, Macmilan, New Delhi
6. Samuel, Koenig. 1957. Sociology: An Introduction to Science of Society, Barnes & Nobel Books, London.
7. Singh, Yogendra. 1993: Social Change in India: Crisis and Resilience, Har-Anand, New Delhi.

DEPARTMENT – ANCIENT HISTORY AND ARCHEOLOGY

AHA
OE 1.1

World Heritage Sites of India

Block - 1

Introduction

Unit - 1 Nature - Scope - Criteria for incorporation of World Heritage sites

Unit - 2 Types of World Heritage sites in India

Block - 2 Archaeological and Cave Heritage sites

Unit - 3 Bimbetka - Sanchi- Nalanda – Champaner - Dholavira

Unit – 4 Ajanta – Ellora - Elephant

Block - 3 North Indian World Heritage Sites

Unit – 5 Bodh Gaya — Kajuraho–Konarak–Rani kivav– Jaipur,

Unit – 6 Agra Fort – Red Fort - FathepurSikri–Taj Mahal – Humayun’s Tomb –
Ahamadabad, Qutub Minar

Block - 4 South Indian World Heritages Sites

Unit – 7 Mahabalipuram – Pattadakallu – Chola temples

Unit - 8 Monuments of Hampi – Churches and Convents of Old Goa – Ramappa Temple

References:

1. Marco Canneo, Jasmina: The world heritage sites of UNESCO – The Treasure of Art
2. ASI: World Heritage Sites Series
3. Individual guide: Books on respective city Individual

DEPARTMENT - EDUCATION

IDC – 1 FOUNDATIONS OF EDUCATION

BLOCK-1 FOUNDATIONS OF EDUCATION – I

Unit-1 Philosophical Foundations

Unit-2 Basic Concepts of Philosophy

Unit-3 Psychology as a Science

Unit-4 Basic Concept in Psychology related to Education

BLOCK-2 FOUNDATIONS OF LEARNING – II

Unit-5 Sociological bases of Education

Unit-6 Educational Issues in Indian Society

Unit-7 Cultural and Historical Foundations

Unit-8 Political and Economic bases of Education

References:

1. Harison and Myers (1970), Education, Manpower and Economic Growth, McGrothill, Oxfords, IBH Publishing Co., New Delhi.
2. Kamala Bhatia & Baldev Bhatia, (1974) The Philosophical and Sociological Foundations of Education, Doaba House, New Delhi.
3. Bhatia B.D, (1974), 'Theory and Principles of Education, Doaba House, Delhi'.
4. Sorokim .P, (1947) 'Society, Culture and Personality', Harper and Brothers Publishers, New York.

DEPARTMENT – COMMERCE

EL1.1: Personal Financial Planning

Objective: To enable the Students to understand about the different Investment Avenues, Saving Schemes designed by various agencies particularly for the individuals.

Pedagogy: A Combination of Lectures, Group Discussion, Assignments.

Credits: 2

Examination Duration: 1¹/₂ and Maximum Marks: 50

(Internal Assessment Marks = 10 and Semester-end Examination =40)

Course Inputs

Block I

- **Unit -1: Introduction to Financial Planning:** Introduction - The Process Financial Planning – Client Interactions – Time Value of Money Applications – Personal Financial Statements – Cash Flow and Debt Management – Planning to Finance Education.
- **Unit -2: Financial Planning Process:** Introduction - Setting Goals – Informal Budget Preparation – Investment Opportunities – Financial Vs Physical Investments – Role of a Financial Planner.
- **Unit -3: Savings Plans:** Introduction - Setting Goals – Savings Instruments – Savings Plan – Tax Savings Schemes.
- **Unit -4: Investment Planning:** Introduction - Risk Return Analysis – Mutual Fund – Derivatives – Asset Allocation – Investment Strategies and Portfolio Construction and Management.

Block II

- **Unit -5: Risk Analysis and Insurance Planning:** Introduction - Risk Management and Insurance Decision in Personal Financial Planning – Various Insurance Policies and Strategies for General Insurance – Life Insurance – Motor Insurance – Medical Insurance.

- **Unit -6: Retirement Planning and Benefits:** Introduction - Retirement Need Analysis Techniques – Savings and Investment Plans for Retirement –Employee Provident Fund – Public Provident Fund – Superannuation Fund – Gratuity – Annuity Plans.
- **Unit -7: Tax Planning:** Introduction - Income-tax Computation for Individuals – Companies - Trust and other bodies – Statutory Provisions Pertaining to Capital Gains and Indexation – House Property – Deduction and Allowances.
- **Unit -8:Health Financing:** Introduction - Health Financing Models – Financing of Health in India – National Rural Health Mission – Challenges of Access to Health Care and Service Quality – Health Insurance Mechanism & Financial Protection.

Books Recommended for Reference

01. Khan M.Y, Financial Services, Tata MacGraw Hill.
02. Singhanar V.K, Students' Guide to Income Tax, Taxmann.
03. Ranganathan and Madhuamathi, Investment Analysis and Portfolio Management, Pearson Publications.
04. Gordon and Natarajan, Emerging Scenario of Financial Services, Himalaya Publishing House.
05. George Rejda, Principles of Risk Management and Insurance, Pearson.

DEPARTMENT - MANAGEMENT

COURSE: OE-1 : Disaster Management - Credit: 2

MBAS 459: DISASTER MANAGEMENT

Objectives	: The course aims at familiarizing the students with the concepts of disaster management, need for disaster management and its relevance.
Pedagogy	: Lectures, assignments, Industrial visits and practical exercises, discussions.

1. Understanding Disasters · Meaning, nature, characteristics and types of Disasters, Causes and effects, Disaster: A Global View, Disaster Profile of India, The Disaster Management cycle.
2. Geological and Mountain Area Disasters · Earthquakes · Volcanic Eruption · Landslides Snow Avalanches, Wind and Water Related Natural Disaster · Floods and Flash Floods · Droughts · Cyclones · Tsunamis, Man Made Disasters · Understanding Man-Made Disasters · Fires and Forest Fires · Nuclear, Biological and Chemical disaster · Road Accidents
3. Introduction to disaster Preparedness · Disaster Management: Prevention, Preparedness and Mitigation · Disaster Preparedness: Concept & Nature · Disaster Preparedness Plan · Disaster Preparedness for People and Infrastructure · Community based Disaster Preparedness Plan
4. Roles & Responsibilities of Different Agencies and Govt. · Roll of Information, Education, Communication & Training · Role and Responsibilities of Central, State, District and local administration. · Role and Responsibilities of Armed Forces, Police, Para Military Forces. Role and Responsibilities of International Agencies, NGO's, Community Based Org. (CBO's)

5. Technologies for Disaster Management · Role of IT in Disaster Preparedness · Remote Sensing, GIS and GPS · Use and Application of Emerging Technologies · Application of Modern Technologies for the Emergency communication. · Application and use of ICST for different disasters.
6. Disaster Mitigation · Disaster Mitigation: meaning and concept · Disaster Mitigation Strategies · Emerging Trends in Disaster Mitigation · Mitigation management · Role of Team and Coordination
7. Disaster Management in India Disaster Profile of India – Mega Disasters of India and Lessons Learnt Disaster Management Act 2005 – Institutional and Financial Mechanism National Policy on Disaster Management, National Guidelines and Plans on Disaster Management; Role of Government (local, state and national), Non-Government and Inter-Governmental Agencies. National Disaster management Authority.

References

1. Bryant Edwards (2005): Natural Hazards, Cambridge University Press, U.K.
2. Carter, W. Nick, 1991: Disaster Management, Asian Development Bank, Manila.
3. Central Water Commission, 1987, Flood Atlas of India, CWC, New Delhi.
4. Central Water Commission, 1989, Manual of Flood Forecasting, New Delhi.
5. Government of India, 1997, Vulnerability Atlas of India, New Delhi.
6. Sahni, Pardeep et.al. (eds.) 2002, Disaster Mitigation Experiences and Reflections, Prentice Hall of India, New Delhi.

DEPARTMENT - BIO CHEMISTRY

Basics of Bioinorganic and Biophysical chemistry for Biology graduates.

Bioinorganic chemistry

Coordination Compounds: Transition metals, properties (Colour, Oxidation states, Magnetic properties) Coordinate bond, double and complex salts– differences with examples.

Postulates of Warner's theory. Types of ligands: For examples: uni, bi, polydentate ligands. Coordination number, examples.

Porphyrin nucleus and their classification. Important metallo-porphyrins occurring in nature. Structure and biological importance of Heme, cytochrome, chlorophyll, Vitamin B₁₂.

Nitrogen, Fixation of atmospheric nitrogen – Symbiotic and non-symbiotic. Nitrogen cycle.

Environmental pollution by nitrogen compounds. Phosphorous: Importance of Phosphorous compounds in biological system, phosphorous cycle

Oxygen, Formation of ozone in atmosphere. Role of ozone in maintenance of life on earth. Effect of environmental pollutants on ozone layer.

Sulphur and Selenium, Importance of compounds of Sulphur and Selenium in biological systems. Effect of sulphur compounds on environmental pollution.

Biophysical chemistry.

Units in chemistry, Avogadro's number, Mole, Mole fraction, Molarity, Equivalent weight, Normality, Molality. Colligative Properties, Osmotic pressure and its measurements. Hypo-, Hyper- and isotonic solutions. Effect of osmotic pressure on living cells.

Donnan membrane equilibrium. Relative lowering of vapour pressure, Raoult's law. Elevation of boiling point, depression in freezing point.

Adsorption: Freundlich and Langmuir's adsorption isotherm. Applications of adsorption.

Viscosity: Definition, determination of viscosity of liquids & solutions by Ostwald's viscometer

(solutions of gum and protein to be taken as examples).

Distribution law, Distribution law, partition coefficient, application of distribution law.

Acids, bases and buffers- Lewis concept of acids and bases. Ionic product of water. pH scale, buffers, Henderson- Hasselbach equation, buffer capacity Choice of buffers. Theory of acid base indicators. pH titration curve and iso-electric pH of amino acids.

Selected References:

1. Basic Principles of Organic Chemistry, Roberts and Caserio, W. A. Benjamin, Inc. (1964).
2. Organic Chemistry, Morrison and Boyd, Allyn and Bacon Inc (1992).
3. Principles of Inorganic chemistry by Cotton & Wilkinson, Wiley (1999).
4. Textbook of Organic chemistry by Ahluwalia V K & Madhuri G Narosa publications (2001).
5. Physical chemistry by Castellan G W, Narosa Publications (2004).
6. Physical chemistry by Chakraborty D K, Narosa Publications (2004).

DEPARTMENT - BIOTECHNOLOGY

MBT EL –I- Biotechnology and its Applications

Introduction to biotechnology. Principles of biotechnology, classification.

Recombinant DNA Technology

Introduction, outline of genetic engineering procedure, restriction endonucleases, cloning & expression vectors- plasmids, cloning in plasmid, transformation and detection of transformants- lacZ, genomic and cDNA libraries, gene analysis techniques-hybridization: Southern, Northern, Western, in situ, Polymerase chain reaction.

Microbial and food and environmental Biotechnology

Basics of fermentation technology: Types of microbial culture- batch, continuous and fed-batch. Microbial production: Use of microbes in production of vitamins, enzymes, organic acids, amino acids, polysaccharides, flavors, sweeteners, proteins and antibiotics.

Fermented food products- yogurt, cheese, tempeh, sauerkraut; beverages- wine and beer. Pre- and Pro-biotics, single cell proteins, Genetically modified foods, designer foods.

Current status of biotechnology in environment. Bioconservation, biofuels, gasohol, biogas. Bioremediation: Concepts and principles, bioremediation using microbes, in situ and ex situ bioremediation, biosorption and bioaccumulation of heavy metals.

Plant Biotechnology

Landmarks in Plant tissue culture. Types of cultures- embryo, organ, callus and cell cultures, Somatic embryogenesis, Haploid Production, Androgenesis, Protoplast culture and somatic hybridization. Micropropagation- Methods and stages, applications. Synthetic seeds, somaclonal variation. Production of secondary metabolites by plant cells, Biotransformation.

Plant transformation techniques: Direct and indirect methods of gene transfer in plants. Transgenic plants and crop improvement- herbicide tolerance, disease resistance, abiotic stress tolerance, delayed ripening, improvement of nutritional quality, molecular pharming.

Animal Biotechnology

Basics of animal cell culture techniques, cell lines, physical conditions for culturing animal cells,

equipments required, scale-up of culture methods.

Application of animal cell culture- Hybridomas, production of therapeutic antibodies, stem cell technology, cell and tissue engineering.

Genetic engineering of animals: Methods for gene transfer in animals, microinjection, nuclear transplantation, retrovirus-mediated gene transfer, gene knockdown techniques. Transgenic- animals- sheep, pigs, cattle, chickens; applications of transgenic animals.

DEPARTMENT - CHEMISTRY

ck-1	Title: Periodic Table and chemical Periodicity
it-1	Elements, atomic structure, atomic number, atomic mass, quantum numbers, electronic configuration,
it-2	Periodic properties of elements, State of Matter, their resources. Important periodic properties of the elements, covalent radii, ionic radii, ionization potential, electron affinity and electronegativity
it-3	Concepts of Acids and Bases: Review of acid base concepts. Lux-Flood and solvent system concepts. Hard-soft acids and bases. Applications.
it-4	Solutions: Concentration units, solutions of liquids in liquids, Raoult's law, ideal and non-ideal solutions.

ck-2	Title: Bonding and molecular structure
it-5	Classification of matter: (elements, compounds, substance and mixture), The three states of matter, physical and chemical properties of matter, fundamental particles of atoms, atomic number, atomic mass, atomic structure of atom molecular formula, empirical formula, molecular mass.
it-6	Covalent and ionic compounds, properties of ionic compounds, formation of ionic compounds, covalent compounds, properties of covalent compounds, properties of covalent compounds
it-7	Metals, properties of metals, theory of metallic bond formation, types of metals conductor, semiconductor and insulators, n-type semiconductors and p-type semiconductors, alloys and superconducting materials.
it-8	Acids and bases, general properties of acid and bases, Acid base reactions, oxidation reduction reactions, oxidation number, types of redox reactions, balancing oxidation-reduction equation, exothermic and endothermic reactions energy change in chemical reactions.

DEPARTMENT : CLINICAL NUTRITION AND DIETETICS

OEL-1: HEALTHY LIFESTYLES AND NUTRITION

3 Credits

BLOCK 1: INTRODUCTION TO FOOD AND NUTRITION

Unit 1.- Factors affecting food habits, choices and dietary patterns – Definition of Food, Nutrition, Health, Fitness. Interrelationship between nutrition and health, concept of a desirable diet for optimum nutrition, health and fitness.

Unit 2.- A brief review of nutrients in general –

- Energy and macronutrients – Carbohydrates, Protein, Fat - functions, sources deficiency disorders and recommended intakes.
- Micronutrients: Minerals – calcium, Iron, Iodine, and other elements, Vitamins – FatSoluble & Water Soluble.

Unit 3: Nutritional assessment- Anthropometric, biochemical, clinical, dietary and Biochemical assessments

Unit 4: Basic principles of planning diet –, RDA for Indians, Food groups, Dietary guides and balanced diets.

BLOCK 2: PLANNING OF DIET

Unit 5: Principles of planning a normal diet: characteristics of a normal diet, meeting nutrient requirements of individuals and family. Use of Dietary guidelines for Indians.

Unit 6: Objectives of diet therapy- Regular diet and rationale for modifications in energy and other nutrients, texture, fluid, soft diets etc.

Unit 7: Role of dietician in hospital- specific functions, team approach in patient care, psychological consideration, interpersonal relationship with patients. Nutrition and medical ethics. Hospital dietary- scope and importance, types of food service, quality management.

Unit 8: Nutrition counseling: definition, concept, role of clinical dietician, the recipient and counseling environment and goals of counseling. An overview of systems approach to nutritional care and its components (planning, implementation and evaluation).

REFERENCES

- Srilakshmi B (2004) Nutrition Science. New Age International (P) Ltd, Publishers.
- Kango M (2005) Normal Nutrition, Curing diseases through diet. First Edition CBS Publications. Paul S (2003) Text Book of Bio-Nutrition, Fundamental and Management. RBSA Publishers.
- Williams SR (2000) Nutrition and Diet Therapy. Sixth Edition C.V. Melskey Co.
- Mudambi SR and Rajagopal MV (1997) Fundamentals of Foods and Nutrition. New Age International (P) Ltd, Publishers.
- Swaminathan M (1999) Essential of Food and Nutrition. Vol I and II, Bappco

publications, Madras.

- Corinne, H. Robinson 2010– “Normal and Therapeutic nutrition”, Oxford and IBH publishing company, Bombay.
- B. Srilakshmi – 2012 “Dietetics”, 4th edition, New age international publisher, Chennai

DEPARTMENT - COMPUTER SCIENCE

ELMCS-01 Mobile App Development: Credit 2

Block – I

Unit-1: Introduction to Mobile Computing: applications, a simplified reference model, Wireless Transmission:

Unit-2: Frequencies of radio transmission, signals, antennas, signal propagation, multiplexing, modulation, spread spectrum, cellular system.

Unit-3 Media Access Control: motivation for a specialized MAC, SDMA, FDMA, TDMA, CDMA, and Comparisons.

Unit-4: GSM, DECT, Wireless LAN: Infrared vs. radio transmission, Infrastructure and ad-hoc networks, IEEE 802.11, HPERLAN, Bluetooth.

Block – II

Unit-5: Mobile Network Layer: mobile IP, dynamic host configuration protocol,

Unit-6: ad-hoc networks. Mobile Transport Layer: Traditional TCP, classical TCP improvements,

Unit-7: TCP over 2.5/3G wireless networks. File Systems, World Wide Web,

Unit-8: Wireless Application Protocol (WAP) and WAP 2.0.

Text book:

1. Jochen H. Schiller, Mobile Communications(2e)

Reference

1. Raj Kamal, Mobile Computing
2. Asoke K. Talukder, Roopa R. Yavagal, Mobile Computing
3. Mazliza Othman, Principles of Mobile Computing and Communications
4. Prasant Kumar Pattnaik, Rajib Mall, Fundamentals of Mobile Computing
5. Ivan Stojmenovic, Handbook of Wireless Networks and Mobile Computer
6. David Taniar, Mobile Computing Concepts, Methodologies, Tools, and Applications

DEPARTMENT - ENVIRONMENTAL SCIENCE

ESOEL-1: Basics of Environmental Science

Block I: Ecology and Environment

Unit 1: Definition, Principles and Scope. Biotic and abiotic factors of environment. Ecosystems: pond, forest, river, grassland and estuary ecosystems

Unit 2: Ecosystem – trophic structure, energy flow, food chain, food web, Ecological pyramids.

Unit 3: Population dynamics: Definition, population density, Natality, Mortality, Age structure, Growth pattern, population dispersion.

Unit 4: Biogeochemical cycle – types, sedimentary and gaseous cycles, N, C, S, P, O cycles. Rock and hydrological cycles.

Block II: Biodiversity and Conservation

Unit 5: Biodiversity, Definition, Types of Biodiversity, importance and roles.

Unit 6: Needs and benefits of biodiversity, Loss of biodiversity- causes and consequences, Need for conservation of biodiversity

Unit 7: Conservation strategies, endemic and exotic species, Red Data book, National parks, wildlife sanctuaries, biosphere reserves, biodiversity hotspots, wildlife protection act, biodiversity act, wetland conservation and management, Hotspots of biodiversity.

Unit 8: Project Tiger, Project elephant, Ramsar site and other conservation projects. Experts Committee Reports on Environmental conservation

DEPARTMENT - GEOGRAPHY

ELMG –01, Introduction to Physical Geography (Credit-2)

Block-1

Origin, Shape and Size of the Earth, Movement of the Earth- Rotation and Revolution, Effects of the movement of Earth, Coordinates -Latitude, Longitude and Time; Structure of the Earth, Rocks - types, significance, Weathering –types; Agents of Denudation - River, Glacier, Wind and Under Ground water; Structure and Composition of Atmosphere, Weather and Climate

Block-2

Atmospheric Pressure, Winds and Precipitation; Distribution of Land and Sea, Submarine Relief of the Ocean, Temperature and Salinity of Sea Water; Ocean Tides and Oceanic Currents- Atlantic, Pacific and Indian Oceans; Biosphere- Elements, Ecology, Ecosystem, World's Biomes, Biodiversity – Importance, Types and Conservation

References

1. B.S. Negi (1993) Physical Geography. S.J. Publication, Meerut
2. D.S.Lal (1998) Climatology. Chaitnya publishing house, Allahabad
3. K. Siddhartha (2001) Atmosphere, Weather and Climate. Kisalaya publication, New Delhi
4. R.N.Tikka (2002) Physical Geography. Kedarnath Ramnath & co, Meerut
5. William D. Thornbury (1997) Principle of Geomorphology. New Age International (Pvt Ltd.) New Delhi.

DEPARTMENT -MATHEMATICS

ELMM –01 - FUNDAMENTALS OF MATHEMATICS

(2 Credits)

Block-I: Number Theory: Natural numbers, integers, Real numbers, GCD, LCM, Prime numbers. Surds, Indices, Logarithms, Progressions, Arithmetic Progression, Geometric Progression, Harmonic Progression,

Block-II: Set Theory: Operations of Union, Intersection, Complementation. Relations & Functions: Types of relations One-one, onto, Many-one functions, graphs of functions.

Mathematical Logic: Propositions, logical connectives, Methods of proofs.

Books for Reference:

1. Kolman and Busby: Discrete Mathematics, PHI.
2. S. L. Loney: The Elements of Coordinate Geometry, London Macmillan & Co.
3. B. S. Grewal: Higher Engineering Mathematics, 36th Ed., Khanna Pub.
4. S. Lipschutz and M. Lipson: Theory and Problems of Discrete Mathematics. Schaum Series. 2nd Ed. Tata McGraw Hill.

DEPARTMENT - MICRO BIOLOGY

Microbial World and Microbial Diversity

- i. Introduction to microbial world, Physiochemical and biological characteristics; Characteristics of Acellular microorganisms (Viruses); Baltimore classification, general structure with special reference to viroids and prions.
- ii. Binomial Nomenclature, Whittaker's five kingdom and Carl Woese's three kingdom classification systems and their utility.
- iii. Difference between prokaryotic and eukaryotic microorganisms
- i. General characteristics of Cellular microorganisms, types - archaebacteria, eubacteria, wall-less forms - MLO (mycoplasma and spheroplasts) with emphasis on distribution and occurrence, morphology, mode of reproduction and economic importance.
- ii. Structure, reproduction and economic importance of Mycoplasma.
- i. General concept of Phytoplanktons and Zooplanktons. Characteristics, occurrence, thallus organization and classification of Algae.
- ii. Cyanobacteria - occurrence, thallus organization, cell ultra structure, reproduction and economic importance. Applications of algae in agriculture, industry, environment and food.
- i. Historical developments in the field of Mycology including significant contributions of eminent mycologists.
- ii. General characteristics of fungi including habitat, distribution, nutritional requirements, fungal cell ultra- structure, thallus organization and aggregation, mode of reproduction and
- iii. Economic importance of fungi with examples in agriculture, environment, Industry, medicine and food.
- i. General characteristics, structure, mode of reproduction and economic importance of Actinomycetes with special reference to its application in medicine and industry.
- ii. General characteristics, occurrence, classification structure, reproduction and economic importance of Protozoa.

References:

1. Singh, R.P. General Microbiology. Kalyani Publishers, New Delhi (2007).

2. Aneja, K.R. Experiments in Microbiology, Plant pathology and Biotechnology, Fourth edition, NewAge International publishers.
3. Dubey, R.C. and Maheshwary, D.K. Text book of Microbiology. S.chand and company (1999).
4. Powar, C.B. and Dagainawal, H.F. General Microbiology. Vol-I and Vol- II, Himalaya Publishing House.
5. Chakraborty P. A Textbook Of Microbiology. New central book Agency (2005).
6. Prescott, M.J., Harley, J.P. and Klein, D.A. Microbiology. 5th Edition WCB Mc Graw Hill, New York, (2002).
7. Tortora, G.J., Funke, B.R. and Case, C.L. Microbiology: An Introduction. Pearson Education, Singapore, (2004).
8. Alcomo, I.E. Fundamentals of Microbiology. VI Edition, Jones and Bartlett Publishers. Sudbury. Massachusetts, (2001).
9. Black J.G. Microbiology-Principles and Explorations. John Wiley & Sons Inc. New York, (2002).
10. Pelczar, M.J. Chan ECS and Krieg NR, Microbiology McGraw-Hill.
11. Willey, Sherwood, Woolverton. Prescott, Harley, and Klein's Microbiology McGraw-Hill publication
12. Tortora, Funke, Case. Microbiology. Pearson Benjamin Cummings.
13. JACQUELYN G. BLACK. Microbiology Principles and explorations. JOHN WILEY & SONS, INC.
14. Madigan, Martinko, Bender, Buckley, Stahl. Brock Biology of Microorganisms. Pearson
15. Tom Besty, D.C Jim Koeh. Microbiology Demystified Mc GRAW-HILL.

DEPARTMENT -PHYSICS

MP-EL1: Mechanics

BLOCK-A

- Unit-1: Laws of Motion:** Frames of reference, Newton's Laws of motion, Dynamics of a system of particles, Centre of Mass.
- Unit-2: Momentum and Energy:** Conservation of momentum, Work and energy, Conservation of energy, Motion of rockets.
- Unit-3: Rotational Motion:** Angular velocity and angular momentum, Torque, Conservation of angular momentum.
- Unit-4: Gravitation:** Kepler's Laws (statement only), Newton's Law of gravitation, motion of a particle in a central force field, satellite in circular orbit and applications, geosynchronous orbits, weightlessness, basic idea of global positioning system (GPS).

BLOCK-B:

- Unit-5: Oscillations:** Simple harmonic motion, differential equation of SHM and its solutions, kinetic and potential energy, total energy and their time averages, damped oscillations.
- Unit-6: Elasticity-1:** Hooke's law, stress-strain diagram, elastic moduli-relation between elastic constants, Poisson's ratio, expression for Poisson's ratio in terms of elastic constants, work done in stretching and work done in twisting a wire.

Unit-7: Elasticity-2: Twisting couple on a cylinder - determination of rigidity modulus by static torsion, torsional pendulum-determination of rigidity modulus and moment of inertia - q, η and ϕ by Searles method.

Unit-8: Special Theory of Relativity: constancy of speed of light, postulates of special theory of relativity, length contraction, time dilation.

DEPARTMENT : INFORMATION TECHNOLOGY

ELMIT –01: Green Computing

(2 Credits)

Course Objective: Study the concepts related to Green IT, Green devices and hardware along with software methods, green enterprise activities, managing the green IT and various laws, standards, protocols along with outlook of green IT.

BLOCK 1: Overview of Green Computing

Unit 1: Green IT Introduction, Overview and issues, Initiatives and standards, Pathways of Green computing, Benefits of Green IT, Environmental Impacts of IT

Unit 2: Green devices and hardware Environmental issues arising from electronic devices, life cycle of electronic devices, Hazards and E-waste Recycling, Going paperless, Hardware considerations, Greening information systems, Managing Green IT, 3Rs of Green IT, Thinking About Money-Saving Efforts

Unit 3: Green Data Centres and Associated Energy Challenges, Data Centre IT Infrastructure, Data Centre Facility Infrastructure: Implications for Energy Efficiency, IT Infrastructure Management, Green Data Storage, Storage Media Power Characteristics,

Unit 4: Green network and communications, objectives and challenges of green networking, Enterprise Green IT strategy, Approaching Green IT strategies, Business drivers and dimensions for Green IT strategies, Steps in Developing a Green IT Strategy, Metrics and Measurements in Green Strategies

BLOCK 2: Management of Green Computing

Unit 5: Sustainable Information Systems and Green Metrics, Sustainable IT Services, Sustainable IT Roadmap, Enterprise, Green IT Readiness, Readiness and Capability

Green Enterprises and the Role of IT, Organizational and Enterprise Greening, Information Systems in Greening Enterprises, Greening the Enterprise: IT Usage and Hardware,

Unit 6: Managing Green IT, Strategizing Green Initiatives, Implementation of Green IT, Regulating Green IT: Laws, Standards and Protocols,

Unit 7: Green Cloud Computing and Environmental Sustainability, Cloud Computing and Energy Usage Model: A Typical Example, Features of Clouds Enabling Green Computing, Green Cloud Architecture

Unit 8: Green IT: An Outlook, Awareness to Implementation, Green IT Trends, Greening by IT, A Seven-Step Approach to Creating Green IT Strategy

Text Books:

1. Gangadharan, G. R., & Murugesan, S. (2012). Harnessing Green IT: Principles and practices. Wiley Publication, ISBN: 9788126539680.

2. Smith, B. E. (2013). Green Computing: Tools and Techniques for Saving Energy, Money, and Resources. CRC Press.

DEPARTMENT -BOTANY

Plant-Microbe Interactions

Overview of plant microbes interactions,
Introduction, beneficial microbes, Rhizobium bacterium and nitrogen fixation, mycorrhizal fungi.
Plant pathogens, Agrobacterium tumefaciens and crown gall disease,
Mechanisms of plant disease mechanism, some bacterial plant diseases,
Plant viruses and mechanism of plant against viruses attacks.
Fungal pathogen- mechanism of plant disease,
Oomycete pathogens, Fungal mediated plant.
General concept of plant immunity,
PAMP-triggered immunity (PTI) and effectors-triggered immunity (ETI).
Transcription activator like effector and their role in virulence and disease resistance.

References

1. Lautenberg, B. (2015). Principles of Plant-Microbes Interactions: Microbes for sustainable Agriculture, Springer.
2. Stacey, G. and Keen, N. T. (1997). Plant-Microbes Interactions, Vol 4, . Springer.
3. Ramasamy, K, (2015). Plant Microbes Interactions, New India Publishing Agency.
4. Martin, F. and Kamoun, S. (2014). Effectors in Plant-Microbes Interactions 1st Edition, Wiley Blackwell.

DEPARTMENT -ZOOLOGY

MZO-IE-1: Parasites, Vectors & Communicable Diseases

Introduction to parasites.

Distribution, types, origin and evolution of parasites. Parasitism.
Types: Ecto-parasites, Endo-parasites and their adaptations.

Pathogenic micro-organisms, brief outline and classification of parasitic protozoan's: Entamoeba, Balantidium, Giardia, Trichomonas, Plasmodium, Leishmania and Trypanosoma and their diseases.

Control measures, diagnosis and therapy.

Pathogenic helminthes and vectors.

Etiology, epidemiology, pathogenesis, diagnosis, prevention and control of disease due to *Trichinella spiralis*, *Ancylostoma duodenale*, *Fasciola hepatica*, Schistosoma species.
Pathogenic Cestodes: Life cycle, treatment of diseases caused by Echinococcus, Hymenolepis and Diphyllbothrium. Scope and importance of vectors. Origin and evolution of vectors. Habitat, life cycle, pathogenicity of fleas, mites, ticks, lice's and mosquitoes.

Historical perspectives and scientists involved in the discovery of vectors and communicable Diseases.
Epidemiology, bio-ecology, life cycle of biological and mechanical Vectors. Vector-host-parasites interactions, Host-pathogen interaction, insects transmitting Bacteria and viruses.

Control and management of vectors and vector borne diseases

Control measures: cultural, chemical, biological, genetic and environmental Methods of vectors. Management of biological and mechanical vectors during Different seasons. Integrated Vector Control and Management.

Insecticide resistance in vectors, Drug resistance in pathogens.

Importance of education, awareness among public on communicable diseases and community participation. Covid-19 pandemics. Epidemiology of corona virus and its mutants. Vaccination against corona virus in India and other parts of the world.

DEPARTMENT –FOOD AND NUTRITION SCIENCE

ELMFNS- 01 FOOD PSYCHOLOGY

Credits: 2

BLOCK 1: FOOD: PREFERENCES AND CHOICES

Unit 1: Food: Physiological definition and significance, meaning of food, food classification, Food as statement of self-identity, Social interaction, Cultural identity

Unit 2: The Role of Food and Eating on Personality and Social Development: Psychology of eating, Food and emotion regulation, Food in daily living, Food Socialization, Food and control of others

Unit 3: Food Preferences and Fluctuations: Developmental Models, Cognitive Models & Psychophysiological Models, Physiology of food choice, Likes and Dislikes, acquired food preferences, Attitudes towards change, Food and sensory stimulus, Factors influencing eating behavior – (biological, environmental, individual, food characteristics, culture etc., Effect of eating on food selection and preferences, Understanding of the body and self – selection of the diet.

Unit 4: Food choices across lifespan and influence of society: The changing role of the senses in food choice and food intake across lifespan, Food in security and health across lifespan, Influence of media and advertisements, Digital platform and influence on food choices

BLOCK 2: EATING DISORDERS AND TREATMENTS

Unit 5: Mood, Emotions, food cravings and addictions: relation with food preferences, Connection between mood and eating, Biological and physiological aspects of food cravings, Stress and eating behavior, Food addiction - description, neurobiology of food addiction

Unit 6: Eating disorders and treatment: Anorexia nervosa, Bulimia nervosa and binge eating Disorder-Definition, Symptoms, believed causes, Classification, Risk factors, Common myths of eating disorders, Treatment & dietary management

Unit 7: Overeating, Obesity and Weight management: Definition, Prevalence, Classification of Body Mass Index, Types & patterns, Etiology, Physiological component, Fad diets, Risk factors, Treatment - Weight management (Behavior & Cognitive), Lifestyle modifications, Dietary modification - (calorie restricted diet)

Unit 8: You are what you eat- Approaches to change the dietary behavior: Multidisciplinary approach, Strategies to support healthy dietary behavior: Encouraging healthy eating, Selection of food, Meal & portion size, developing education materials, Motivation & economics, Benefits of exercise, Stage classification for change, Barriers affecting the clinical outcome

REFERENCES:

1. [Smith John L.](#) (2002), The Psychology of Food and Eating (English, Hardcover, Smith John , Publisher: Palgrave MacmillanL.), ISBN: 9780333800201, 0333800206.
Alexandra W. Logue Oct 2017, The Psychology of Eating and Drinking Fourth Edition.

Annexure II

INTER- DISCIPLINARY COURSE (Open Elective) for Second Semester ವಿಭಾಗ- ಕನ್ನಡ

ಪತ್ರಿಕೆ-೬: ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ **EL-2.1 (ಕೆಡಿಟ್-೨)**

ಬ್ಲಾಕ್-೩೮: ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯ ಉಗಮ ಮತ್ತು ವಿಕಾಸ

ಘಟಕ-೧೪೯: ಸಾಹಿತ್ಯದ ಉಗಮ, ಬೆಳವಣಿಗೆ, ಉದ್ದೇಶ.

ಘಟಕ-೧೫೦: ಪ್ರಾಚೀನ ಪೂರ್ವ ಶಾಸನಸಾಹಿತ್ಯ.

ಘಟಕ-೧೫೧: ಪಂಪ ಪೂರ್ವ ಯುಗದ ಸಾಹಿತ್ಯ.

ಘಟಕ-೧೫೨: ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯ ವಿಭಾಗಕ್ರಮ.

ಬ್ಲಾಕ್-೩೯: ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ

ಘಟಕ-೧೫೩: ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ ರೂಪಗಳು; ಚಂಪೂ, ವಚನ, ರಗಳೆ, ಷಟ್ಪದಿ, ಸಾಂಗತ್ಯ ಇತ್ಯಾದಿ.

ಘಟಕ-೧೫೪: ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪರಿಕಲ್ಪನೆಗಳು;

ಚರಿತ್ರೆ-ಪುರಾಣ, ಧರ್ಮ-ಕಾವ್ಯಧರ್ಮ, ಹಿಂಸೆ-ಅಹಿಂಸೆ, ಮಾರ್ಗ-ದೇಶಿ, ಲೌಕಿಕ-ಆಗಮಿಕ, ವಸ್ತುಕ-ವರ್ಣಕ, ಪ್ರಭುತ್ವ-ಪ್ರತಿರೋಧ.

ಘಟಕ-೧೫೫: ಪ್ರಾಚೀನ ಕನ್ನಡ ಕವಿ-ಕೃತಿ-ಕಾಲ-ದೇಶ-ಭಾಗ ೧.

ಪಂಪ, ರನ್ನ, ಮೊನ್ನ, ೧ನೆ ಚಾವುಂಡರಾಯ, ನಾಗವರ್ಮ ೨ನೆಯ ಚಾವುಂಡರಾಯ, ನಾಗಚಂದ್ರ, ನಯಸೇನ, ದುರ್ಗಸಿಂಹ, ಬ್ರಹ್ಮಶಿವ, ಕರ್ಣಪಾರ್ಯ, ಜನ್ನ.

ಘಟಕ-೧೫೬: ಪ್ರಾಚೀನ ಕನ್ನಡ ಕವಿ-ಕೃತಿ-ಕಾಲ-ದೇಶ-ಭಾಗ ೨.

ಆಂಡಯ್ಯ, ನೇಮಿಚಂದ್ರ, ರುದ್ರಭಟ್ಟ ಪ್ರಮುಖ ವಚನಕಾರರು - ಜೇಡರ ದಾಸಿಮಯ್ಯ, ಬಸವಣ್ಣ, ಅಕ್ಕ ಮಹಾದೇವಿ, ಅಲ್ಲಮಪ್ರಭು, ಚನ್ನಬಸವಣ್ಣ, ಹರಿಹರ, ರಾಘವಾಂಕ, ಕುಮಾರವ್ಯಾಸ, ಲಕ್ಷ್ಮೀಶ, ಪ್ರಮುಖ ಕೀರ್ತನಕಾರರು, ಚಾಮರಸ, ಕುಮಾರವಾಲ್ಮೀಕಿ, ಸರ್ವಜ್ಞ, ಷಡಕ್ಷರಿ, ಸಂಚಿ ಹೊನ್ನಮ್ಮ, ನಂಜುಂಡ, ರತ್ನಾಕರವರ್ಣಿ, ಮುದ್ದಣ, ಕೆಂಪುನಾರಾಯಣ.

ಪರಾಮರ್ಶನ ಗ್ರಂಥಗಳು

೧. ಗತಿಬಿಂಬ : ಜಿ.ಎಸ್. ಶಿವರುದ್ರಪ್ಪ, ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
೨. ಕಾವ್ಯ ವಿಹಾರ : ಕುವೆಂಪು, ಉದಯರವಿ ಪ್ರಕಾಶನ, ಮೈಸೂರು, ೧೯೬೯
೩. ಸಮಗ್ರ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : ಬೆಂಗಳೂರು, ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ಬೆಂಗಳೂರು, ೨೦೦೨
೪. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : ಕೆ. ವೆಂಕಟರಾಮಪ್ಪ, ಪ್ರಸಾರಾಂಗ, ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು
೫. ಕರ್ನಾಟಕ ಸಂಸ್ಕೃತಿ: ದೇವುಡು, ಶಾರದಾ ಪ್ರಕಾಶನ, ಮೈಸೂರು, ೧೯೩೫
೬. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಸಂಗಾತಿ : ಕೀರ್ತಿನಾಥ ಕುರ್ತಕೋಟಿ, ಮನೋಹರ ಗ್ರಂಥಮಾಲೆ, ಧಾರವಾಡ
೭. ಶೈಲಿ : ಎಸ್.ವಿ.ರಂಗಣ್ಣ, ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು, ೧೯೭೬
೮. ಶತಮಾನದ ಕನ್ನಡ ಸಾಹಿತ್ಯ : ಸಂಪಾದಕರು, ಜಿ.ಎಸ್. ನಾಯಕ, ಕನ್ನಡ ಸಾಹಿತ್ಯ ಅಕಾಡೆಮಿ, ಬೆಂಗಳೂರು
೯. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ : ರಂ. ಶ್ರೀ. ಮುಗಳಿ, ಕೇಂದ್ರ ಸಾಹಿತ್ಯ ಅಕಾಡೆಮಿ, ನವದೆಹಲಿ, ೧೯೬೩
೧೦. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : ರಂ.ಶ್ರೀ. ಮುಗಳಿ, ಉಷಾ ಸಾಹಿತ್ಯ ಮಾಲೆ, ಮೈಸೂರು, ೧೯೭೧
೧೧. ಬಿಂಬ: ಚದುರಂಗ, ಸಂವಹನ ಪ್ರಕಾಶನ, ಮೈಸೂರು
೧೨. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ ಸಂಪುಟಗಳು : ಕುವೆಂಪು ಕನ್ನಡ ಅಧ್ಯಯನ ಸಂಸ್ಥೆ, ಮೈಸೂರು. ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು, ೧೯೮೨
೧೩. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪ್ರಾಚೀನತೆ: ಪ್ರಧಾನ ಸಂಪಾದಕರು, ಎ. ರಂಗಸ್ವಾಮಿ, ಲೇ. ಎಚ್.ಪಿ. ಗೀತಾ, ಜನಪ್ರಿಯ ಕನ್ನಡ ಮಾಲೆ, ಕನ್ನಡ ಅಧ್ಯಯನ ಮತ್ತು ಸಂಶೋಧನಾ ವಿಭಾಗ, ಕರಾಮವಿ, ಮೈಸೂರು, ೨೦೧೧
೧೪. ಪ್ರಾಚೀನ ಕನ್ನಡ ಕಾವ್ಯ ಸ್ಥಿರತೆ ಮತ್ತು ಚಲನ ಶೀಲತೆ : ಪ್ರಧಾನ ಸಂಪಾದಕರು, ಎ. ರಂಗಸ್ವಾಮಿ, ಲೇ. ಶಿವರಾಮಯ್ಯ, ಜನಪ್ರಿಯ ಕನ್ನಡ ಮಾಲೆ, ಕನ್ನಡ ಅಧ್ಯಯನ ಮತ್ತು ಸಂಶೋಧನಾ ವಿಭಾಗ, ಕರಾಮವಿ, ಮೈಸೂರು, ೨೦೧೨
೧೫. ಕನ್ನಡ ಕೈಪಿಡಿ: ಸಂಪುಟ ೨, ಪ್ರಸಾರಂಗ, ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮೈಸೂರು, ೨೦೦೭

DEPARTMENT - ENGLISH

EL-2.1: INDIAN LITERATURE-II

OBJECTIVES

- To appreciate artistic values in *Hayavadana* and the use of myth
- To know the importance of Indian English historical plays
- To appreciate Sri Aurobindo as a poet and critic
- To comprehend the different theories of aesthetic experience of art

BLOCK -I

Girish Karnad: Hayavadana

Gurucharan Das: Larin Sahib

BLOCK -II

M. Hiriyanna: Art Experience

Sri Aurobindo: Selections: The Poets of the Dawn and The Poets of the Dawn 3 (The Future Poetry)

Suggested Reading:

- **K.R.Srinivas Iyengar:** Indian Writing in English .Macmillan, 1979.
- **M.K.Naik:** Critical Essays on Indian Writing in English.Sahitya Akademi, 1969.
- **Narasimhaiah C.D:** The Swan and the Eagle. Indian Institute of Advanced Study, 1987.
- **Meenakshi Mukherjee:** The Twice Born Fiction. Heinemann Educational Publishers, 1972.

DEPARTMENT - HINDI

हिंदी सिनेमा

- सिनेमा का उद्भव और विकास
- मूक चलचित्र और दादा साहब फाल्के युग
- दूसरा पढ़ाव, सवाक चलचित्र अथवा आलमआरा
- रंगीन सिनेमा का युग
- सामाजिक सिनेमा एक विवेचन
- धर्म एवं सांस्कृतिक सिनेमा एक विवेचन
- राजनैतिक सिनेमा एक विवेचन
- आर्थिक सिनेमा एक विवेचन
- हास्य एवं व्यंग्य सिनेमा एक विवेचन
- बाल सिनेमा
- सिनेमा एवं संवेदना
- सिनेमा एवं भाषा-शिल्प सिनेमा एवं गायन
- सिनेमा एवं पात्र संयोजना
- सिनेमा एवं नैतिक मूल्य
- अनूदित सिनेमा
- सिनेमा का तुलनात्मक अध्ययन
- फिल्म समीक्षा.....आदि

□□□□□□ □□□□□□

- सिनेमा साहित्य और समाज- प्रहलाद अग्रवाल, अनामिका प्रकाशन, नई दिल्ली
- कथाकार कमलेश्वर और हिंदी सिनेमा- उज्ज्वल अग्रवाल, राजकमल प्रकाशन, नई दिल्ली
- बॉलिवुड पाठ विमर्श के संदर्भ- ललित जोशी, वाणी प्रकाशन, नई दिल्ली
- फलैशबैक, प्रभुनाथ आज़मी, शिल्पायन, नई दिल्ली

- नाटक के सौ बरस, हरिश्चंद्र अग्रवाल और अजित पुष्कल, शिल्पायन, नई दिल्ली

DEPARTMENT - TELUGU

E. L. 2.1 TELUGU SAMSKRUTHI - SAMAJAM

Block - 1: ANDHRULA CHARITHRA - SAMSKRUTHI

Unit - 1:Samskruthi Vaisistyam

Unit - 2:Andhrula Charithra - Samskruthi Paraspara Prabhavam

Unit - 3:Andhrula kalalu

Unit - 4: Andhrula basha - samajam

Block - 2: ANDHRULA AACHARALU -SAMPRADHAYALU

Unit - 1:Andhrula Pandugalu

Unit - 2: Sthrela Nomulu - Vratthalu

Unit - 3: Andhrula Sangikaacharalu

Unit - 4: Andhrula Sampradhayalu

DEPARTMENT - HISTORY

OEL2.1 Social Reform Movements in Modern India

Objective: The course is aims to trace the causes for the division of society in various sections and need for reformation. Further it explains age old social evils which crippled Indian society.

Pedagogy: personal contact programmes, audio video programmes, online lectures
Assignments, etc

Credits: 2. Examination Duration: 1 1/2 hours and Maximum Marks: 40

Course outcomes

After completing this course the students should be able to

- Understanding the contributions of the Raja ram Mohan Roy Dayananda Sarawathi towards the Indian modernity
- Analyse the Jyothibai pule Savithribai Pule Ambedkar's contributions to Indian social reform movements
- Evalute the works of Sahu Maharaj and Krishna raja wadiyar IV patronage to social Justice.

Block-I

Unit : 1

Colonial Discovery of India : Orientalism, Anglicism, Evangelism-Understanding Indian Society, Meaning of Social Reform. The Concept of Modernity : Western Impact – Indian Response.

Unit : 2

Rajaram Mohan Roy and Brahmo Samaj, Dayananda Sarawathi and Arya Samaj-Nationalism and Society – Prarthana Samaj.

Unit : 3

Jyothi Ba- Phle and Savithri Ba Pule, Social and education reforms.

Unit : 4

Communalism, Eradication of Communalism, Muslim League, Wahhabi and Pan Islamism-Syed Ahmed and Aligarh Movement.

Block-II

Unit : 5

The debate over the interpretation of Shastras – Ishwar Chandra Vidya Sagar - B.M.Malabari – Vivekananda –M.G. Ranade—Bal Gangadhar Tilak.

Unit :6

Dr. B.R.Ambedkar-, His views on Society, A caste and its annihilation, Religion and Economy, M.K.Gandhi- E.V.Ramswamy Periyar and Sri.Narayanguru, Ayyan kali.

Unit :7

The reformers – Kandukuri Veereshalingam – Pandit Shivanatha Shastry – Gopal Ganesh Agarkar-K.T.Telang-Maharma.

Unit :8

D.K.Karve, Maharaj Saiyyaji Rao Gaekwad of Baroda – Chatrapathi Shahu Maharaj of Kolhapur and Maharaja Krishnaraja Wodeyar IV of Mysore.

Suggested readings:

1. Nararajan : A Century of Social Reform in Indian.
2. Seetharam Singh : Nationalism and Social Reform in India
3. Dhananjaya Keer : Ambedkar, Life and Mission
4. Dhananjaya Keer :Mahatma Jyoti Rao Phule : Father of Social Revolution in India
5. Charless Heimsath R : Indian Nationalism and Hindu social Reform
6. A.S.Altekar : Position of Women In Hindu Civilization.
7. Gail Omvedt : Cultural Revolt in a Colonial Society – The Non – Brahmin Movements in Western India.
8. Gail Omvedt : Dalits and Democratic Revolution.
9. Ravindrakumar : Selected Documents of B.G.Tilak.
10. S. Ramkrishna : Social Reform Movements in Andhra
11. M.K.Gandhi : Women and Social Injustice.

ವಿಜಯ ಪೂರ್ಣಚ್ಚ ತಂಬಂಡ (ಸಂ), ಭಾರತ ಉಪಖಂಡದ ಆಧುನಿಕ ಪೂರ್ವ ಚರಿತ್ರೆ ವಿವಿಧ ಆಯಾಮಗಳು – ಸಂಪುಟ-03, ಪ್ರಸಾರಾಂಗ, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಹಂಪಿ.

DEPARTMENT - ECONOMICS

EL2.1: Institutions for International Development

- **Objective:** To enable the Students to understand the need and importance of various International Institutions.
- **Pedagogy:** A Combination of Lectures, Group Discussion, Assignments.
- **Credits:** 2 ; Examination Duration: 1½ and Maximum Marks: 50 (Internal Assessment Marks = 10 and Semester-end Examination =40)

Course Inputs

Block – I**Economic Issues at Global and National Level****Unit – 1****Globalisation**

Globalisation – Forces Driving Globalisation – Income Inequality – National Integrity –

Impact on Labour – Multinational corporations – Global Business Environment – National Business Environment.

Unit – 2 Legal Issues of Business at Global and National Level

Political Risks – Legal System – Business Ethics – Centrally Planned Economy – Mixed Economy – Market Economy – Human Development

Unit – 3 International Trade

Importance – Volume – Direction – Composition – Trends – Theories of Trade - Mercantilism – Absolute Advantage – Comparative Advantage – International Product Life Cycle – Political, Economic and Cultural Motives behind Government Intervention.

Unit – 4 GATT and WTO

Importance – objectives – Functions - GATT and W.T.O – India and WTO.

Block – II Economic Integration and International Business Issues

Unit – 5 Regional Economic Integration

Meaning – Effects – Integration in Europe: European Union – Integration in Americans : North American Free Trade Agreement (NAFTA) – Latin American Integration Association (LAIA) – Free Trade Area of Americans (FTAA) and Transatlantic Economic Partnership.

Unit – 6 Integration in Asia

Association of Southern East Asian Nations (ASEAN) - Asia Pacific Economic Cooperation (APEC) – Integration in middle East : Gulf Cooperation Council (GCC) – BRICS – SAARC.

Unit – 7 International Financial Markets

International capital markets – Foreign Exchange markets – Currency Convertibility – International Monetary System.

Unit – 8 Issues in International Business

Trade War – Balance of Payment – Terrorism – Oil Crisis – Smuggling – Dumping – Environmental Degradation – Exhibit of Nuclear power – Covid 19 and other pandemics.

References:

01. Apte A.N. (2011) International Financial Management, Tata McGraw Hill Pub., Co. Ltd., New Delhi.
02. Bhambari C.P, (1980) The World Bank and India, Vikas Publishing House, New Delhi.
03. International Development Association, Annual Reports.
04. International Finance Corporation, Annual Reports.
05. International Monetary Fund, Annual Reports.
06. World Bank, (1995) The Evolving Role of the World Bank in the First Half Century, Washington D.C.
07. World Bank, World Bank in India, Washington, D.C. USA
08. World Bank, World Development Reports, and Annual Reports.

Palle Krishna Rao, (2005) WTO, Text and Cases, PSG Excel Series, New Delhi.

DEPARTMENT - POLITICAL SCIENCE

(OEL-I) Indian Constitution

Block-I

- Unit:1 Framing of the Indian Constitution.
- Unit:2 Preamble and Salient Features of the Indian Constitution.
- Unit:3 Fundamental Rights and Duties.
- Unit:4 Directive Principles of the State Policy.

Block-II

- Unit:5 Union Legislature : Composition, Powers and Functions.
- Unit:6 Union Executive : President and Vice-President - Election, Powers and Functions, Prime ministers and Council of Minister - Powers and Functions.
- Unit:7 State Legislature : Composition, Powers and Functions, State Executive - Governor and Chief Minister.
- Unit:8 The Judiciary : Supreme Court and High Court - Composition, Jurisdiction and Functions.

References:

1. Andre Beteille, 1965. Caste, class, and Power. Berkley: University of California Press.
2. Appadorai, A 1968. India: Studies In Social And Political Development 1947-1967. New Delhi: Aisa Publishing House.
3. Desai, A R. 2016. Social Background of Indian Nationalism. Los Angeles: Papular Prakashan.
4. Granville Austin, 2000. The Indian Constitution: Cornerstone of a Nation. Melbourne: Oxford University Press.
5. Hanson and Douglas, 1972. India's Democracy. New York city: W W Norton & Co Inc.
6. Johari J C 1974. Indian Government and Politics. New Delhi: Vishal Publications.
7. Karunakaran, K.P 1964. Continuity and Change in Indian Politics. New Delhi: People's Pub. House.
8. Kochanek. A. 1968. The Congress Party of India: the Dynamics of a One-Party Democracy. New Jersey: Princeton University Press.
9. Morris Jones, 1967. The Government and Politics of India. London: Hutchinson University Library.
10. Myron Weiner, 1957. Party Politics in India. New Jersey: Princeton University Press.
11. Myron Weiner, 1967. Party Building in New Nation. Chicago: University of Chicago Press.
12. Palmer, N D 1971. The Indian Political System. Boston: Houghton Mifflin.
13. Partha Chatterjee, 1998. State and Politics in India. University of Michigan: Oxford University Press.
14. Pylee, M V 1960. Constitutional government in India. Bombay: Asia Pub. House.
15. Rajni Kothari, 1970. Politics in India. The University Of Michigan: Little Brown
16. Rajni Kothari, 1995. Caste in Indian Politics. Telangana: Orient Blackswan.
17. Venkatarangaiya: M Shiviah, 1975. Indian Federalism. New Delhi: Arnold-heinemann Publishers.
18. Zoya Hasan, 2000. The State in Indian Politics. Landon: Sage publication.

DEPARTMENT - SOCIOLOGY

Study of Indian Society -02 Credits

Course Description

Every science has its own classical theories, which stand as eternal in their explanatory power and prowess to transcend the time and region. This course intends to introduce the learners to the classical period of sociology which is not just a bundle of theories but a consistent tradition and formative period, even contemporary theories cannot eschew from being inspired. After studying this course, following learning outcomes can be expected.

Course Objectives

1. To appreciate the organizational framework of Indian society
2. To appreciate the aspects unity and diversity of Indian society
3. Examine the social issues in contemporary India

Learning Outcomes

Following outcomes are expected from the learners after successfully completing the course. Learner can/has

LOC-1: sociological insights about the social structural and organizational aspects of Indian society

LOC-2: present the changes in institutional framework of Indian society

LOC-3: recognize the causes for major social issues and present realistic remedies

Course Content

Block-1 Social Organizations

Unit-1 Unity and Diversity-Problem of Integration

Unit-2 Caste-Characteristics and Recent Changes

Unit-3 Marginalization-SC, ST, OBC and Minorities

Unit-4 Changes in Family and Concerns of the Aged

Block-2 Social Issues in Contemporary India

Unit-5 Environmental Sanitation and Ecological Degradation

Unit-6 Educated Unemployment and Employability

Unit-7 Social Unrest-Terrorism, Naxalism, Communalism and Corruption

Unit-8 Child Rights and Right to Education (RTE)

References

- Ahuja, Ram. 2002. Study of Social Problems. Jaipur & New Delhi: Rawat Publications
- Atal, Yogesh. 1979. The Changing Frontiers of Caste. National Publishing House: Delhi
- Beteille, Andre. 1971. Caste, Class and power. Berkeley: University of California.
- Beteille, Andre. 1974. Social Inequality, New Delhi: Oxford University Press.
- Beteille, Andre. 1992. Backward Classes in Contemporary India. New Delhi: Oxford University Press.
- Berreman, G.D. 1979. Caste and Other Inequalities: Essays in Inequality. Meerut: Folklore Institute.
- Dube, Leela. 1997. Women and Kinship, Comparative Perspectives on Gender Southern South Asia.
- Das, Veena. 2006. Oxford Handbook of Indian Sociology. New Delhi: Sage
- Dube, S C. 1990. Study of Indian Society. New Delhi: National Book Trust
- Jha, Hetukar. 2015. Sanitation in India. Delhi: Gyan Books.
- Karve, Iravathi. 1990. Kinship Organization in India.

- Pais, Richard. 2015. Sociology of Sanitation. Delhi: Kalpaz Publications.
- Pathak, Bindeshwar. 2015. Sociology of Sanitation. Delhi: Kalpaz Publications.
- Singer, Milton & Cohen, Bernards. 1996. Structure and change in Indian Society. Jaipur: Rawat
- Singh, Yogendra, Modernization of Indian Tradition. Jaipur & New Delhi: Rawat
- Srinivas, M N. 1995. Social Change in Modern India: Orient Blackswan
- Srinivas, M. N. 1962. Caste in Modern India and Other Essays. Asia Publishing House: Delhi

DEPARTMENT – ANCIENT HISTORY AND ARCHEOLOGY

AHA
OE 2.1

Cultural History of Hoysalas (OE)

Block - 1

Early Kings

- Unit - 1 Archeological and Literary Sources
Unit - 2 Theories of Origin of Hoysalas – Sala – Nripakama – Ereyanga

Block - 2

Important Rulers

- Unit - 3 Vishnuvardhana - VeeraNarasimha – I
Unit - 4 Ballala – II - Narasimha – II - Narasimha III and Ballala – III

Block - 3

Cultural Contributions

- Unit - 5 Hoysala polity - Economy
Unit –6 Hoysala Society – Religion – Education - literature

Block - 4

Art and Architecture

- Unit - 7 Hoysala Architecture
Unit – 8 Hoysala Art

References:

1. Epigraphia Carnatica: Relevant Volumes
2. Derrett Duncan, M.J: The Hoysalas, 1957
3. Dhakey M.A: Encyclopedia of Indian Temple Architecture
4. Desai P.B: History of Karnataka
5. Foekema Gerard: A Complete Guide to Hoysala Temples
6. Gopinatha Rao T.A: Elements of Hindu Iconography, Vols
7. Kelleson Collyer: The Hoysala Artists – Their Identity Style
8. Krishna Murthy M.S: The Hoysala Art, Kuppam, 2007

9. Padmnabha K: Hoysala Sculptures : A cultural Study
10. Sheik Ali B (Ed): The Hoysala Dynasty , 1972
11. William Cohelo: The Hoysala Vamsha, 1950
12. Annual Reports of the Department of Archaeology, Mysore 1939 – 46
13. Settar S: Hoysala Temples
14. Marg: In Praise of Hoysala Art
15. Narasimhachar R; Lakshmidēvi Temple at Doddagaddhavalī
16. Shastri KAN: The Cholas, 17. Shastri KAN: History of South India

DEPARTMENT - EDUCATION

IDC - 2 HIGHER EDUCATION

BLOCK - 1 HIGHER EDUCATION – ORGANIZATION AND TEACHING – LEARNING

Unit-1 Higher Education

Unit-2 Teaching Learning in Higher Education – I

Unit-3 Teaching-Learning in Higher Education – II

Unit-4 Problems and Innovations in Higher Education

BLOCK - 2 HIGHER EDUCATION – SOCIO-PSYCHOLOGICAL AND MANAGEMENT DIMENSIONS

Unit-5 Socio-Psychological Background of College Students

Unit-6 Problems of College Students

Unit-7 Higher Education – Management Dimensions

Unit-8 Higher Education Teacher

References:

1. Shills Edward (1989) 'The modern university Liberal Democracy'.
2. Abraham, Abu (1988) The Penguin, Book of Indian cartoons, New Delhi.
3. Chandra, Bipan (1984) Communalism Modern India, New Delhi.
4. Chauhan S.S (1989) Innovations in Teaching Learning Process, New Delhi, Vikas.
5. Srivastva A.B and Sharma K.K (1985) Elementary Statistics in Psychology and Education, New Delhi, Sterling Publishers Pvt. Ltd.,

DEPARTMENT - COMMERCE

Elective Course – EL2.1: Entrepreneurship Development

- **Objective:** To enable the Students to understand about the different aspects of Entrepreneurship Development.
- **Pedagogy:** A Combination of Lectures, Group Discussion, Assignments.
- **Credits:** 2 ; Examination Duration: 1½ and Maximum Marks: 50 (Internal Assessment Marks = 10 and Semester-end Examination = 40)

Course Inputs

Block I

- **Unit -1: Entrepreneur and Entrepreneurship:** Introduction - Evolution – Characteristics – Distinction between Entrepreneur and Manager – Functions – Types – Entrepreneur - Concept of Entrepreneurship – Growth of Entrepreneurship in India – Role of Entrepreneurship in Economic Development
- **Unit – 2: Women Entrepreneurship:** Introduction - Concept – Statistical Evidence – New Age Women – Functions – Growth - Problems – Recent trends in Development of Women Entrepreneurship.
- **Unit -3: Rural Entrepreneurship:** Introduction - Meaning – Need – Rural Industrialisation in Retrospect – Problems – Development of Rural Entrepreneurship – NGOs and Rural Entrepreneurship.
- **Unit -4: Conceptual Models of Entrepreneurship:** Introduction - Models of John Kao – Udai Pareek and Nadakarni– NISIET.

Block II

- **Unit – 5: Factors Affecting Entrepreneurial Growth And Competencies:** Introduction - Economic Factors – Non-Economic Factor – Government Actions - Entrepreneurial Competencies: Meaning – Major Entrepreneurial Competencies – Developing Competencies.
- **Unit -6: Entrepreneurial Motivation and Mobility:** Introduction - Motivation – Motivation Theories – Motivating Factors – Achievement Motivation – Factors Influencing Mobility – Occupational Mobility – Locational Mobility.
- **Unit – 7: Entrepreneurship Development Programmes:** Introduction - Need for EDPs - Objectives of EDPs – Course Contents and Curriculum of EDPs – Phases of EDPs – Evaluation of EDPs.
- **Unit -8: Institutional Support System for Entrepreneurship:** Introduction - DICs – SISIs – SIDCOs – NISIET – EDIT – NIESBU – TCOs- A Broad Overview of Central and State Level Financing Institutions.

Books Recommended for Reference

- a. Vasanth Desai, The Dynamics of Entrepreneurial Development and Management, Himalaya Publishing House.
- b. A. N Desai, Entrepreneurship Management, Ashish Publishing House.
- c. Chandra Prasanna, Project Preparation, Appraisal and Implementation, Tata McGraw Hill.
- d. Khanka, S.S, Entrepreneurial Development, S. Chand Publications.
- e. Prasanna Chandra, Projects: Planning, Analysis, Selection, Implementation and Review, Tata McGraw Hill.

DEPARTMENT - MANAGEMENT

E-COMMERCE

Credits: 2

Module 1: E-commerce and its Technological Aspects:

Overview of developments in Information Technology and Defining E-Commerce: The scope of E commerce, Electronic Market, Electronic Data Interchange, Internet Commerce, Benefits and limitations of E-Commerce, Produce a generic framework for E-Commerce, Architectural framework of Electronic Commerce, Web based E Commerce Architecture.

Module 2: Electronic Data Interchange: Benefits of EDI, EDI technology, EDI standards, EDI communications, EDI Implementation, EDI Agreements, EDI Security. Electronic Payment Systems,

Need of Electronic Payment System: Study and examine the use of Electronic Payment system and the protocols used, Study Electronic Fund Transfer and secure electronic transaction protocol for credit card payment. Digital economy: Identify the methods of payments on the net – Electronic Cash, cheques and credit cards on the Internet.

References:

1. Elias. M. Awad, " Electronic Commerce", Prentice-Hall of India Pvt Ltd.
2. Ravi Kalakota, Andrew B. Whinston, "Electronic Commerce-A Manager's guide", Addison-Wesley.
3. Efraim Turban, Jae Lee, David King, H.Michael Chung, "Electronic Commerce–A Managerial Perspective", Addison-Wesley.
4. Elias M Award, "Electronic Commerce from Vision to Fulfilment", 3rd Edition, PHI, Judy Strauss, Adel El-Ansary, Raymond Frost, "E-Marketing", 3RDEdition, Pearson Education

DEPARTMENT - BIO CHEMISTRY

Basics of Bioorganic chemistry for Biology graduates.

Introduction to Organic chemistry: Classification of organic compounds, unique characteristics, IUPAC nomenclature of organic compounds (including bifunctional).

Reaction mechanisms: Classification of organic reactions: substitution, addition, elimination and rearrangement with one example for each. Concepts of the following – carbon anions, carbon cations, free radicals, carbenes, nucleophiles and electrophiles.

Cycloalkanes: Reactivities and relative stability, Bayer's strain theory. Sachse-Mohr theory. Boat and chair form of cycloalkanes. Axial and equatorial bonds.

Arenes: Structure of Benzene–resonance and molecular orbital theories. Aromaticity. Mechanism of Nitration and Friedel-Craft's reaction. Electronic interpretation of the orienting influence of substituents in the electrophilic substitution of Toluene, Chlorobenzene, Nitrobenzene and Phenol. Polynuclear hydrocarbons–Resonance structures of Naphthalene, Anthracene and phenanthrene.

S_N1 and S_N2 reactions, mechanism with an example for each. Concept of elimination reactions. Example –n-butyl chloride.

Alcohols: Classification, monohydric, alcohols-distinguishing reactions for primary, secondary and tertiary alcohols.

Trihydric alcohols: Glycerol, Properties, (KHSO₄, HNO₃, Oxalic acid and HI)

Phenols: Acidity of phenols, Effect of substitution on acidity

Stereochemistry: Stereoisomerism, types, Fischer-projection formulae, asymmetric carbon atom, molecular dissymmetry, chirality, optical isomerism: ex. Glyceraldehyde, Lactic acid, Tartaric acid. Nomenclature of enantiomers. D- and L- system, Racemisation and resolution.

Heterogeneous and Homogeneous hydrogenation of oils.

Selected References:

1. Basic Principles of Organic Chemistry, Roberts and Caserio, W. A. Benjamin, Inc. (1964).
2. Organic Chemistry, Morrison and Boyd, Allyn and Bacon Inc (1992).
3. Principles of Inorganic chemistry by Cotton & Wilkinson, Wiley (1999).
4. Textbook of Organic chemistry by Ahluwalia V K & Madhuri G Narosa publications (2001).
5. Physical chemistry by Castellan G W, Narosa Publications (2004).

6. Physical chemistry by Chakraborty D K, Narosa Publications (2004).

DEPARTMENT - BIOTECHNOLOGY

MBT EL-2 FUNDAMENTAL OF BIOTECHNOLOGY

Scope and Introduction to Biotechnology History & Introduction to Biotechnology What is Biotechnology? Definition of Biotechnology, Traditional and Modern Biotechnology, Branches of Biotechnology

Plant, Animal Biotechnology, Marine Biotechnology, Agriculture, Healthcare, Industrial Biotechnology, Pharmaceutical Biotechnology, Environmental Biotechnology.

Applications Biotechnology Applications of Biotechnology in Agriculture : GM Food, GM Papaya, GM Tomato, Fungal and Insect Resistant Plants BT Crops, BT Cotton and BT Brinjal Pros and Cons Biotechnological applications in Crop and Livestock Improvements Modifications in Plant Quality Golden Rice, Molecular Pharming, Plant Based Vaccines Ethics in Biotechnology and IPR 15 lectures

Food and Fermentation Biotechnology Food Biotechnology Biotechnological applications in enhancement of Food Quality Unit Operation in Food Processing Quality Factors in Pre processed Food Deterioration and its Control Rheology of Food Products Microbial role in food products Yeast, Bacterial and other Microorganisms based process and products Fermentation Technology Definition, Applications of Fermentation Technology Microbial Fermentations Overview of Industrial Production of Chemicals (Acetic Acid, Citric Acid and Ethanol), Antibiotics, Enzymes and Beverages

Molecular Biology - Replication DNA Replication in Prokaryotes and Eukaryotes Semi-conservative DNA replication, DNA Polymerases and its role, E.coli Chromosome Replication, Bidirectional Replication of Circular DNA molecules. Rolling Circle Replication, DNA Replication in Eukaryotes DNA Recombination – Holliday Model for Recombination Transformation

Mutation and DNA Repair Definition and Types of Mutations. Mutagenesis and Mutagens. (Examples of Physical, Chemical and Biological Mutagens) Types of Point Mutations, DNA REPAIR Photo reversal, Base Excision Repair, Nucleotide Excision Repair, Mismatch Repair, SOS Repair and Recombination Repair.

Genetic Engineering Experimental evidences for DNA and RNA as Genetic Material. Genetic Engineering in Ecoli and other Prokaryotes, Yeast, Fungi and Mammalian Cells Cloning Vectors- Plasmids (pBR 322, pUC) Vectors for Plant and Animal Cells, Shuttle Vectors, YAC Vectors, Expression Vectors Enzymes- DNA Polymerases, Restriction Endonucleases, Ligases, Reverse Transcriptase's, Nucleases, Terminal Transferees, Phosphatases Isolation and Purification of DNA (Genomic, Plasmid) and RNA,, Identification of Recombinant Clones

DEPARTMENT - CHEMISTRY

ck-1	Title: Physical parameters of molecules
it-1	Thermodynamics: First and second laws of thermodynamics. Concept of entropy and free energy, entropy as a measure of unavailable energy. Entropy and free energy changes and spontaneity of process.
it-2	Chemical kinetics: Rate and order of reaction. Factor affecting the rate of reaction. And determination Order of reaction. Energy of activation and its determination. Brief account of collision and activated complex theories.
it-3	Acid equilibria: pH scale, buffer solutions, calculation of pH of buffer solutions,

	buffer capacity and buffer index, buffer mixtures.
Unit-4	Electrochemistry: Electrolytic conductance, specific, equivalent and molar conductance, ionic mobility and transference number, factors affecting the electrolytic conductance, Arrhenius theory of strong and weak electrolytes, assumptions of DebyeHuckel theory of strong electrolytes.
Block-2	Title: Organic molecules
Unit-5	Introduction to organic chemistry, atomic orbitals, sigma and pi bond formation-molecular orbital (MO) method, sp, sp ² and sp ³ hybridization, bond length, bond dissociation energies and bond angles
Unit-6	Electronegativity and polarity of the bonds. Classifications and reactions of organic compounds (with examples).
Unit-7	Biological importance of natural products: Amino acids, proteins, carbohydrates (cellulose, starch, glycogen), lipids (fats and oils, phospholipids), nucleic acids, steroids, alkaloids, vitamins, flavonoids.
Unit-8	Applications of synthetic products: Dyes, drugs, polymers (plastics), soaps and detergents, pesticides and pheromones.

DEPARTMENT – CLINICAL NUTRITION AND DIETETICS

OEL - 2: NUTRACEUTICALS AND HEALTH FOODS

2 Credits

BLOCK 1. NUTRACEUTICALS:

Unit - 1: Introduction to Nutraceutical

Unit - 2: Use of Nutraceuticals in Traditional Health Sciences

Unit – 3: Functional Foods

Unit – 4: Development of Nutraceutical and Functional Foods

BLOCK 2: FUNCTIONAL FOODS AND NUTRACEUTICALS OF PLANT, ANIMAL AND MICROBIAL ORIGIN

Unit - 5: Prebiotics and Probiotics

Unit - 6: Bio Active Peptides and Phyto- Chemicals

Unit - 7: Fats and Oils- Omega 3 Fatty Acids:

Unit - 8: Sugar Substitutes / Sweeteners

REFERENCES:

- Tai Hu Guan, (2018), text book of Nutraceuticals and Health, Scitus Academics Publisher, Wilmington DE 19804, United States of America.

- Wildman REC, (2016), Handbook of Nutraceuticals and Functional Foods, 2nd edition, CRC Press publishers, Boca Raton, Florida (USA).
- Athapol Noomhorm, Imran Ahmad, Anil Kumar Anal (2014), Functional Foods and Dietary Supplements Processing, Effects and Health Benefits, first edition, published by John Wiley & Sons, Ltd. UK 111 River Street, Hoboken, NJ 07030-5774, USA
- Wildman REC, (2001) Handbook of Nutraceutical and Functional Foods, CRC Press, USA. Ghosh D et al, (2012) Innovations in Healthy and Functional Foods, CRC Press, USA. Pathak YV (2011) Handbook of nutraceuticals Volume 2, CRC Press, USA.

DEPARTMENT - COMPUTER SCIENCE

ELMCS- 02: E -Commerce

BLOCK-1

UNIT-1: Overview of developments in Information Technology and Defining E-Commerce: The scope of E commerce, Electronic Market, Electronic Data Interchange, Internet Commerce, Benefits and limitations of E-Commerce, Produce a generic framework for E-Commerce,

UNIT-2: Architectural framework of Electronic Commerce, Web based E Commerce Architecture. Consumer Oriented E Commerce E-Retailing: Traditional retailing and e retailing, Benefits of e retailing,

UNIT-3: Key success factors, Models of e retailing, Features of e retailing. E services: Categories of e-services, Web-enabled services, matchmaking services,

UNIT-4: Information-selling on the web, e entertainment, Auctions and other specialized services. Business to Business Electronic Commerce

BLOCK-2

UNIT-5: Electronic Data Interchange: Benefits of EDI, EDI technology, EDI standards, EDI communications, EDI Implementation, EDI Agreements, EDI Security. Electronic Payment Systems, Need of Electronic Payment System:

UNIT-6: Study and examine the use of Electronic Payment system and the protocols used, Study Electronic Fund Transfer and secure electronic transaction protocol for credit card payment. Digital economy: Identify the methods of payments on the net – Electronic Cash, cheques and credit cards on the Internet.

UNIT-7: Security in E Commerce Threats in Computer Systems: Virus, Cyber Crime Network Security: Encryption, Protecting Web server with a Firewall, Firewall and the Security Policy, Network Firewalls and Application Firewalls, Proxy Server. Issues in E Commerce Understanding Ethical,

UNIT-8: Social and Political issues in E-Commerce: A model for Organizing the issues, Basic Ethical Concepts, Analyzing Ethical Dilemmas, Candidate Ethical Principles Privacy and Information Rights: Information collected at E-Commerce Websites, The Concept of Privacy, Legal protections Intellectual Property Rights: Types of Intellectual Property protection, Governance.

References:

1. Elias. M. Awad, " Electronic Commerce", Prentice-Hall of India Pvt Ltd.
2. Ravi Kalakota, Andrew B. Whinston, "Electronic Commerce-A Manager's guide", Addison-Wesley.
3. Efraim Turban, Jae Lee, David King, H. Michael Chung, "Electronic Commerce–A Managerial Perspective", Addison-Wesley.
4. Elias M Award, "Electronic Commerce from Vision to Fulfilment", 3rd Edition, PHI, Judy Strauss, Adel
5. El-Ansary, Raymond Frost, "E-Marketing", 3rd Edition, Pearson Education.

DEPARTMENT - GEOGRAPHY

ELMG –02 Regional Geography of Karnataka (Credits – 2)

Block-1

Physical setting - Location, Administrative divisions, Geology, Physiographic divisions of the Karnataka; Climate and Rivers; Soils and Vegetation; Irrigation in Karnataka, Major Multipurpose River Valley Projects, Major water problems and Issues - Yetthinahole, Linganamakki, Mekedatu, Krishna-Cauvery valley-linking Rivers.

Block-2

Agriculture - Major of Crops: Rice, Jowar, Ragi, Wheat, Oil seeds, Sugarcane, Cotton, Tobacco and Coffee; Minerals Resources - Iron ore, Manganese, Bauxite, Copper, Gold; Major Power Projects - Hydel, Thermal and Atomic Energy power plants; Industries - Cotton Textile, Silk Textile, Sugar, Iron and Steel, Cement and Paper industries, Industrial Regions of Karnataka; Transportation - Roads, Railway, Water way, Ports/Harbors and Airways; Population - growth, distribution and density

References:

1. Directorate of Information and Tourism, Government of KarnatakaKarnataka State Gazetteer
2. Mallappa, P., (2014) Geography of Karnataka, Chethana book publishers, Mysuru
3. N.B.K Reddy & G.S. Murthy, (1967) Regional Geography of Mysore State
4. R.P. Misra, (1973) Geography of Mysore
5. Ranganath, (2018) Geography of Karnataka, Mysore Book House, Mysuru

DEPARTMENT - MATHEMATICES

Combinatorics and Graph Theory (ELMM –02) 2 Credits

Block-I: Permutations and Combinations, Pigeon-hole principle, Principle of inclusion and exclusion.

Block-II: Graphs, Vertices of graphs, Walks and connectedness, Degrees, Operations on graphs, Blocks – Cutpoints, bridges, Block graphs and Cutpoint graphs. Trees - Elementary properties of trees,

Books for Reference:

1. C. L. Liu – Elements of Discrete Mathematics, McGraw-Hill, 1986.
2. Kenneth H. Rosen – Discrete Mathematics and its Applications, McGraw-Hill, 2002.
3. F. Harary – Graph Theory, Addition Wesley Reading Mass, 1969.
4. N. Deo – Graph Theory With Applications to Engineering and Computer Science, Prentice Hall of India, 1987.
5. K. R. Parthasarathy – Basic Graph Theory, Tata McGraw-Hill, New Delhi, 1994.
6. G. Chartand and L. Lesniak – Graphs and Diagraphs, wadsworth and Brooks, 2nd Ed.,
7. Clark and D. A. Holton – A First Look at Graph Theory, Allied publishers.
8. D. B. West – Introduction to Graph Theory, Pearson Education Inc.,2001, 2nd Ed.,

9. J. A. Bondy and U. S. R. Murthy – Graph Theory with applications, Elsevier, 1976.

DEPARTMENT - MICROBIOLOGY

Microbes in Sustainable Agriculture and Development

- i. Soil Microbiology: Soil as Microbial Habitat, Soil profile and properties,
- ii. Soil formation, Diversity and distribution of microorganisms in soil.
- iii. Microbial Activity in Soil and Green House Gases- Carbon dioxide, methane, nitrous oxide, nitric oxide – production and control
- i. Mineralization of Organic & Inorganic Matter in Soil: Mineralization of cellulose, hemicelluloses, lignocelluloses, lignin and humus, phosphate, nitrate, silica, potassium .
- ii. Microbial Control of Soil Borne Plant Pathogens: Biocontrol mechanisms and ways, Microorganisms used as biocontrol agents against Microbial plant pathogens, Insects, Weeds.
- iii. Biofertilization, Phytostimulation,
- iv. Bioinsecticides: Plant growth promoting bacteria, biofertilizers – symbiotic (Bradyrhizobium, Rhizobium, Frankia),
- v. Non Symbiotic (Azospirillum, Azotobacter, Mycorrhizae, MHBs, Phosphatesolubilizers, algae),
- vi. Novel combination of microbes as biofertilizers, PGPRs
- i. Secondary Agriculture Biotechnology: Biotech feed, Silage, Biomanure, biogas, biofuels – advantages and processing parameters.
- ii. GM crops: Advantages, social and environmental aspects, Bt crops, golden rice, transgenic animals.

References:

1. Eldor A. Paul. Soil Microbiology. Ecology and Biochemistry. VI Edition: Academic Press, (2007).
2. Eugene L. Madsen. Environmental Microbiology: From Genomes to Biogeochemistry. I Edition, Wiley-Blackwell Publishing. (2008).
3. Agrios, G.N. Plant pathology. Harcourt Asia Pvt. Ltd. (2000).
4. Buchanan. B.B., Gruissem, W. and Jones, R.L Biochemistry and Molecular Biology of Plants. I.K. International Pvt. Ltd. (2000).
5. Mehrotra R S and Ashok Agrawal. Plant Pathology. Tata Mc Graw Hill , 6th reprint (2006).
6. K. S. Bilgrami, H. C. Dube. A textbook of modern pathology. 6th Edition, Vani Educational Books, a division of Vikas, (1984).
7. K.R. Aneja .Experiments in Microbiology, Plant Pathology and Biotechnology . New Age Publications. 2017

DEPARTMENT - PHYSICS

MP-EL2: Waves and Optics

BLOCK-A:

Unit-1: Superposition of Two Collinear Harmonic oscillations: linearity & superposition principle. (i) Oscillations having equal frequencies and (ii) oscillations having different frequencies (Beats).

Unit-2: Waves Motion- General: Transverse waves on a string, travelling and

standing waves on a string, normal modes of a string, group velocity, phase velocity, plane waves, Spherical waves, wave intensity.

Unit-3: Fluids: Surface tension: synclastic and anticlastic surface - excess of pressure - application to spherical and cylindrical drops and bubbles. viscosity - rate flow of liquid in a capillary tube - Poiseuille's formula - determination of coefficient of viscosity of a liquid.

Unit-4: Sound: Simple harmonic motion - forced vibrations and resonance intensity and loudness of sound, intensity levels, musical notes, musical scale, acoustics of buildings: reverberation and time of reverberation, absorption coefficient, Sabine's formula - measurement of reverberation time.

BLOCK-B:

Unit-5: Wave Optics: electromagnetic nature of light, definition and properties of wave front, Huygen's Principle.

Unit-6: Interference: Interference: division of amplitude and division of wavefront. Young's double slit experiment, interference in thin films: parallel and wedge-shaped films, Newton's Rings: measurement of wavelength and refractive index.

Unit-7: Diffraction: Fraunhofer diffraction- single slit and double Slit, multiple slits and diffraction grating, Fresnel diffraction: half-period zones, zone plate, Fresnel diffraction pattern of a straight edge, a slit and a wire using half-period zone analysis.

Unit-8: Polarization: Transverse nature of light waves, plane polarized light – production and analysis, circular and elliptical polarization.

DEPARTMENT -INFORMATION TECHNOLOGY

ELMIT –02 E-Commerce (2 Credits)

Block 1: Fundamentals of E-commerce

Unit 1 : Introduction to E-commerce

What Is E-commerce? The Difference Between E-commerce and E-business, Technological Building Blocks Underlying E-commerce: the Internet, Web, and Mobile Platform, Major Trends in E-commerce, Unique Features of E-commerce Technology

Unit 2 : Types of E-commerce:

Business-to-Consumer (B2C) E-commerce, Business-to-Business (B2B) E-commerce. Consumer-to-Consumer (C2C) E-commerce, Mobile E-commerce (M-commerce), Social E-commerce, Local E-commerce E-commerce: A Brief History, Understanding E-commerce: Organizing Themes, Academic Disciplines Concerned with E-commerce

Unit 3 : E-Commerce Infrastructure

The Internet, Technology Background , Internet – Key Technology concepts, TCP/IP, IP addresses, Domain names, DNS and URLs, Client Server Computing, Cloud computing model, Mobile platform

Unit 4 : Internet and Web

Hypertext, HTML, XML, Web servers and clients, Web browsers, Communication tools – E mail, messaging apps, online message boards, Internet Telephony

Block 2: Construction of E-commerce presence

Unit 5: E-commerce presence – Building an e-commerce idea, Systematic approach, Choosing software and hardware, E-commerce site tools

Unit 6: E-commerce security E-commerce System environment, Security threats, Technology solutions

Unit 7: E-commerce payment systems : Management policies, E-commerce payment systems, Electronic billing presentment and payment

Unit 8: E-commerce Business Strategies : E-commerce business models, Major B2C Business models, B2B Business models,

References:

1. Laudon, Kenneth C., and Carol Guercio Traver. *E-Commerce 2020-2021*. Pearson, 2020.
2. Laudon, Kenneth C., and Carol Guercio Traver. *E-commerce Essentials*. Pearson, 2014

DEPARTMENT - BOTANY

Plant Diversity and Human Welfare

Plant Diversity and its Scope Levels of biodiversity: Genetic, Species and Ecosystem; Agrobiodiversity and cultivated plant taxa and related wild taxa.

Values and uses of Biodiversity, Methodologies for valuation, Ethical and aesthetic values, Uses of plants; Ecosystem services.

Loss of Biodiversity Loss of biodiversity- causes and implications, Hot spots of biodiversity, extinction of species, projected scenario for biodiversity loss.

Management of Plant Biodiversity Organizations associated with biodiversity management, IUCN, UNEP, WWF, UNESCO, NBPGR; Methodology for execution;

Biodiversity legislation; Information management and communication.

Conservation of Biodiversity, Role of Plants in Relation to Human Welfare Conservation of genetic, species and ecosystem diversity,

In situ and ex situ conservation strategies, India's biodiversity and its conservation Social approaches to conservation,

Biodiversity awareness programmes, Sustainable development.

Importance of forestry their utilization and commercial aspects; Avenue trees; Ornamental plants of India; Alcoholic beverages; Fruits and nuts; Wood and its uses; their commercial importance.

References

1. Krishnamurthy, K.V. (2004). An Advanced Text Book of Biodiversity - Principles and Practices. Oxford and IBH Publications Co. Pvt. Ltd. New Delhi
2. Singh, J.S., Singh, S.P. and Gupta, S. (2006). Ecology Environment and Resource Conservation. Anamaya Publications, New Delhi, India.
3. Reddy, K.V. and Veeraiah, S. (2010). Biodiversity and Plant Resources. Aavishkar publication, New Delhi.
4. Heywood, V. H. and Watson, R. T. (1995). Global biodiversity and Assessment. Cambridge University Press.

DEPARTMENT –FOOD AND NUTRITION SCIENCE

OEL-2: NUTRITIONAL MANAGEMENT IN DISASTER CONDITIONS

BLOCK- I: NATURAL / MANMADE DISASTERS

Unit-1: Emergency Situations-Famine, Drought, Flood, Earthquake, Cyclone, War, Civil and Political Emergencies.

Unit-2: Nutrition in Emergencies, Nutritional Problems and Communicable Diseases.

Unit-3: Feeding Programs during Emergencies.

Unit-4: Assessment and monitoring of Nutritional Status and relief measures during emergencies.

BLOCK- I: NUTRITIONAL RELIEF AND REHABILITATION

Unit-5: Assessment of Food needs in emergency situations, Food Distribution Strategy, Local food rehabilitation.

Unit-6: Special Foods/ Rations for Nutritional Relief, Organizations for Mass Feeding/ Food Distribution, and Supplementary Feeding.

Unit-7: Transportation, Storage, Feeding Centres, Sanitation, Hygiene and Identifying Reaching the Vulnerable Group.

Unit-8: Public Nutrition Approach to Tackle Nutritional and Health Problems in Emergencies, food security.

REFERENCES:

Jaspars, S. & Young, H. (1996), General Food Distribution in Emergencies: from Nutritional Needs to Political Priorities. Good Practice Review 3. 1996. Relief and Rehabilitation Network, Overseas Development Institute. London.

Young H., Jaspars S., Brown R., Frize J. & Khogali H (2001), Food Security and Assessments in Emergencies: A Livelihoods Approach. Humanitarian Practice Network, Overseas Development Institute. London

ANNEXURE-III

A. Question Paper Pattern

I Semester M.Sc. in Psychology Examination

Time: 3 Hours

Max. Marks: 80

Instruction: Answer all the sections.

Section A

Answer any **FOUR** questions from the following:

$4 \times 5 = 20$

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Section B

Answer any **THREE** questions from the following:

$3 \times 10 = 30$

- 7.

- 8.
- 9.
- 10.
- 11.

Section C

Answer any **TWO** questions from the following:

$2 \times 15 = 30$

- 12.
- 13.
- 14.

