

INFORMATION BROCHURE

Guideline for **RESEARCH PROGRAMME MASTER OF PHILOSOPHY (M.PHIL.)**



DR. C.V. RAMAN UNIVERSITY

(Established By Government of Chhattisgarh Act No.13 of 2005 and approved vide UGC Act (f) 1956)

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RESEARCH PROGRAMME
MASTER OF PHILOSOPHY (M.Phil.)**

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Web : www.cvru.ac.in



DR. C.V. RAMAN UNIVERSITY
(Established by Government of Chhattisgarh Act No. 13 of 2005
and approved vide UGC Act 2(f) 1956)



Accredited with B+ Grade by NAAC.



Ranked under 200 top Universities by NIRF.

Kargi Road Kota Distt. – Bilaspur (Chhattisgarh) India
Ph: +91-7753-253801, 09617779322 Fax : 07753-253728

About the University

Dr. C.V. Raman University is located in state of Chhattisgarh on the Bilaspur Amarkantak highway about 25 kms from Bilaspur. The campus is spread over nearly 50 acres of well-developed land in a serene environment providing on excellent surrounding for teaching and learning, well equipped with all the facilities, faculties and department.

Dr. C.V. Raman University is one of the pioneer University in the State of Chhattisgarh. It has been Setup on 3rd November 2006 and inaugurated on 14th October 2007 in a tribal scheduled area of the Chhattisgarh state with a view to take up education, research, training and extension activities in this under developed region of the state.

At present, the university runs eight (8) faculties with 32 Teaching Departments in which 61 UG, PG & Diploma programmes are being conducted. The University works as per the norms of the regulatory bodies & is recognized by UGC and approved by AICTE, NCTE, BCI & DEB for its various courses running successfully. Being the member of AIU & ISO:2008 certified, accredited with B+ grade by NAAC, & ranked under top 200 universities by NIRF, the University has already paved the way of its huge experiences in its chapter of 11 years through its spectacular achievements in the field of education, sports, music, science, language, industries and administration. By organizing various activities such as workshops, seminars, conferences & other personality development career oriented programmes, the University has proved its accountability & rapid growth & is gradually moving towards the golden path to reach the height of excellence. Recently UGC & MHRD allotted Pt. Deendayal Upadhyay Kaushal Kendra(DDUKK) to University for running B.Voc. and M.Voc. programmes, as the University had already been working with NSDC through CVRU-NSDC Academy by running skill oriented programmes to fulfill the mission of skill India. Besides this the University provides research programmes (M.Phil./Ph.D.) in different Departments of the University.

Besides all these educational developments, CVRU made a major development by launching its community radio station, “90.4FM Radio Raman” that broadcasts educational and entertainment based content, along with recorded lectures to far flung areas.

The university has gained a lot of goodwill and prestigious awards like the Chhattisgarh Achievers Awards 2013 for ‘Best University of the Year’, Rajiv Gandhi Achievers Awards for ‘Education’, The Best University Award by ‘Sadhna News’, World Education Summit Awards 2014 for ‘Innovation in Open and Distance Learning’ and an accreditation by NILET in 2014. It is known for its plethora of opportunities beyond the classroom education wherein sports and extra-curricular activities effectively inculcate a sense of team spirit along with developing leadership qualities among all students and make them go ‘Beyond learning’.

Vision & Mission

To be transformed into a University of global standards imparting world class education through skilled manpower which can make a significant contribution to the nation building and cater to the needs of the society by creating an intellectual domain that initiates, nourishes and perpetuates values of humanity conscious, co-existence & achievement of excellence.

Dr. C.V. Raman University is the University whose whole mission is to provide access and opportunity to students from all sectors of the country’s diverse population as well as from other countries by providing quality education thereby improving the socio-economic status of the society. The Prime mission of CVRU is also to promote excellence in value based education and skill based teaching-learning.

Objectives

- To make provisions for research, advancement and dissemination of knowledge.
- To create & nurture higher levels of intellectual abilities
- To provide quality education that enables students to achieve bright professional careers.
- To establish state of the art facilities for the students
- To maintain the standards of degree, diploma, certificate & other academic distinctions in accordance with the norms laid down by concerned regulatory bodies.

Programme Offered by the University:

Faculty name	Department	Courses
Engineering & Technology	Department of Civil Engineering	BE
	Department of Computer Science Engineering	Diploma, BE, M.Tech(CS)
	Department of Electrical Engineering	Diploma, BE, M.Tech(PS)
	Department of Electrical & Electronics Engineering	BE
	Department of Electronics & Communication Engineering	BE, M.Tech (DC, VLSI)
	Department of Information Technology Engineering	BE, M.Tech(SE)
	Department of Mechanical Engineering	Diploma, BE, M.Tech(PE)
Education & Physical Education	Department of Education	B.Ed., M.Ed., BA (Education), MA (Education)
	Department of Physical Education	BPE, MPE
Information Technology	Department of Information Technology	DCA, BCA, PGDCA, M.Sc.(IT)
Commerce & Management	Department of Commerce	B.Com.(CA), B.Com, M.Com
	Department of Management	BBA, MBA, PGDBM
Sciences	Department of Physics	B.Sc.(Hon.), M.Sc.
	Department of Chemistry	B.Sc.(Hon.), M.Sc.
	Department of Mathematics	B.Sc.(Hon.), M.Sc.
	Department of Botany	B.Sc.(Hon.), M.Sc.
	Department of Zoology	B.Sc.(Hon.), M.Sc.
	Department of Microbiology	B.Sc.(Hon.), M.Sc.
	Department of Biotechnology	B.Sc.(Hon.), M.Sc.
	Department of Rural Technology	B.Sc.(Hon.), M.Sc.
Arts	Department of Geography	BA, MA
	Department of Political Science	BA, MA
	Department of Economics	BA, MA
	Department of History	BA, MA
	Department of Sanskrit	BA, MA
	Department of Hindi	BA, MA
	Department of English	BA, MA
	Department of Social Work	MSW
	Department of Library Science	B.Lib., M.Lib.
	Department of Chhattisgarhi	BA, MA
Law	Department of Law	BA.LLB, LLB, LLM
Mass Communication	Department of Journalism & Mass Communication	BJMC, MJMC
Skill	Skill Development	Diploma, B.Voc.

Facilities available at CVRU

1. Central library

- Well qualified and experienced staff to take care of the smooth library working.
- A collection of around 40,000 text and reference books on varied subjects to cater to the needs of variety of users.
- Subscription to 217 journals and periodicals giving an insight to the latest developments.
- Around 600 CDs and floppies containing learning material, software and CBTs.
- Well-furnished Reading Halls.
- Coverage by Intercom System and Dialup services.
- Aesthetic Interiors
- Adequate seating arrangement.
- Separate CD and Floppy (E-Documents) Section.

2. Infrastructure Facilities

- Sufficient classroom with smart class facility.
- Air- conditioned conference hall of 300 seating capacity with Audio-Video Projection & Video conference facility.
- Air-conditioned hall in new administrative building with the capacity of 100 and also 1 board room for conducting meetings.
- Moot court of 50 seating capacity.

3. Sports facilities -

- Playgrounds: A playground each for cricket & football Games and Basketball, Volleyball & Badminton Courts separately.
- One Gymnasium is available in boy's hostel.

4. Hostel Facilities:

For Boys

Number of boy's hostels available in campus are 2 with each block of capacity of 250 inmates and each block contains 1, 3 & 4 seater rooms. Facilities available in hostels are Wi-Fi, Infirmary, Mess & Dining Hall, Common Room, indoor game facility.

For Girls

Number of girls hostels available in campus is 1 with a of capacity of 80 inmates and contains 1, 3 & 4 seater rooms. Facilities available in hostels are Wi-Fi, Dining Hall, Common Room,.

5. Canteen:

We have one canteen and one NESCAFE available in camps.

6. Medical Facility :

The university has its own health center and dispensary comprising of two full time medical superintendents, i.e., one chief medical officer Dr. AvijitRoyzada (M.D.) and one medical supervisor to cater to the needs of the medical services. The CVRU health center and the dispensary of the university within its premises offers full time medical facilities for the students, faculties, non-teaching staff, administrative staff and other employees of the university. The dispensary provides service in the hostels also extends its emergency services too throughout the campus. All the students, staff, faculty and other employees of the university are provided medicines at free of cost. One medical officer and one assistant medical officer along with a medical compounder are appointed to take care of CVRU health center and helps to avail the medical facility for each and every one in the university premises. The health center of the university consists of the complete first aid facility, primary medical treatment facility as well as some of the diagnostic equipment and sufficient pharmaceutical medical store.

The following facilities are available in the medical dispensary:

- Sphygmomanometer
- ECG machine
- Stethoscope
- Stretcher and wheel chair
- Patient table
- Well managed medical almirah for proper medicine storage
- Blood pressure instrument
- Blood sugar testing instrument (Glucometer)
- Electronic BP-Measuring machine
- Weight-machine
- Biochemical lab for Hb-test & blood group test.
- Nursing table
- Clinical laboratory facility
- Pulse-oxymeter machine
- Sterilizer machine
- Electric water heater

Besides this, we are also having an MOU with the Sai Baba Nursing Home, at Ring Road, Bilaspur in which for the special cases emergency and serious treatment, the students of our university are recommended and referred for the further treatment free of cost to the nursing home.

7. Banking Facility

A branch of “**Bank of India**” with an **ATM facility is inside the University Campus** and the other 2 ATM Punjab National Bank, & State Bank of India are at the University Entrance Gate and also one stationary shop is available inside the campus for the benefit and academic requirements of the students.

8. Transport Facilities

The university runs a fleet of 14 busses to help students and staff members’ employee to and fro from regions around the city. The bus service is available over a 35km radius around the institute. A nominal fee is collected for the transportation at a yearly basis. Details of the routes and their respective timings are also available. This service is offered to provide hassle-free and safe transportation. Parents are urged to convince their wards to travel in the college busses only in view of safety issues on the highway. We also provide special pre-arranged transportation services for field trips and sporting events within the state.

Research Programme (M.Phil.)

Dr. C.V. Raman University offers M.Phil.Programme through various disciplines. Award of M.Phil. degree will be made on the basis of academic achievements in research work and published work as well as the papers presented in seminars, conferences etc. in various disciplines.

The University also encourages interdisciplinary areas through a system of co-supervision and provides excellent opportunities for such programmes. The research work shall be an original work characterized either by the discovery of facts, or by a fresh approach towards the interpretation and application of facts. It shall demonstrate the candidates capacity for critical examination and sound judgment and shall represent original contribution to the existing knowledge.

The degree of Master of Philosophy (M.Phil.) is awarded for research work in areas recognized by the academic departments of the University. The degree of Master of Philosophy (M.Phil.) will be awarded in the discipline of the department in which the candidate is registered.

⇒ **Disciplines & subjects offering M.Phil. Programme are:**

Disciplines	Subjects
Science	<i>Physics, Chemistry, Mathematics, Botany, Zoology, Microbiology, Biotechnology, Rural Technology</i>
Commerce & Management	<i>Commerce & Management</i>
Education & Physical Education	<i>Education & Physical Education</i>
Arts	<i>Geography, Political Science, Economics, History, Sanskrit, Hindi, English, Sociology, Library & Information Science, Social Work, Chhattisgarhi</i>
Information technology	<i>Information Technology & Computer Application</i>
Law	<i>Law</i>

⇒ **Eligibility:**

For M.Phil. Programme:

A candidate for the degree of Master of Philosophy must, at the time of application, hold Master's degree with at least 55% marks (50% marks in case of SC/ST/PH/VH/category candidates) or an equivalent grade of Deemed University or any other University incorporated by any law for the time being in force and recognized by the University.

⇒ **Admission Procedure:**

The entrance exam for admission to M.Phil. programme consists of one theory paper of 100 marks having two sections. The duration of examination will be of 2 hours.

Section I- Contains 40 questions (multiple choices) to assess the candidate's general awareness, verbal ability, quantitative ability, data interpretation, analysis, synthesis, reasoning, basics of computing and research aptitude (40 marks)

Section II consisting of 30 questions (multiple choices) to assess the candidates capability of defining certain concepts & knowledge from the relevant discipline in which he/she seeks registration as indicated in application form (60 marks).

⇒ **Fees Structure:**

The fee structure of M.Phil. programme will be as per fee fixation committee of Govt. of Chhattisgarh or as decided by Board of Management (BoM) of the University.

⇒ **The syllabus for Entrance exam:**

The syllabuses for entrance exam are as follows:

(1)Discipline: Science

Subjects Name	Subject Code
(i) Physics	01
(ii) Chemistry	02
(iii) Mathematics	03
(iv) Botany	04
(v) Zoology	05
(vi) Microbiology	06
(vii) Biotechnology	07
(viii) Rural Technology	08

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Subject: Physics

Unit – I: (Mathematical Physics, Classical Mechanics, Quantum Mechanics, Statistical Mechanics)

Linear differential equations, Fourier series, Fourier and Laplace transforms, Kepler's law and planetary motion, Lagrange and Hamilton's formalisms, Basic Postulates of quantum mechanics, Wave – Particle duality, Heisenberg's uncertainty principle, Schrodinger equation, Macro state and microstates, Phase space, Probability ensembles, Partition function, BE, MB, FD Statistics.

Unit – II: (Atomic & Molecular Physics, Nuclear & Particle Physics)

Spectra of one-and many-electron atoms, Hyperfine structure, LS & JJ coupling, Zeeman, Paschen Back and Stark effect, X-rays, Basic nuclear properties, Liquid drop model, Nuclear shell model, Laws of radioactivity, Nuclear reactor, Elementary particles.

Unit – III: (Solid State Physics, Solid State Devices, Electronics)

Crystal structure of materials, Free electron theory, Band theory of solids, Superconductivity, P-N-Junction Diode, Zener Diode, Transistor, Optoelectronic devices, Photonic devices, Modulation & Demodulation of AM, PM, FM, Digital Logic family, ICs and Microprocessors.

Unit – IV: (Electromagnetic Theory, Electrodynamics, Plasma Physics)

Electrostatic Field, Electromagnetic Induction, Gauss's Law and its applications, Laplace and Poisson equations, Maxwell's equations and electromagnetic waves, Poynting vector, Motion of Charged Particle in electric and magnetic field, Occurrence of Plasma, Plasma Oscillation, Debye Shielding, Plasma Heating, Plasma Confinement & Pinch effect, Magnetosonic and Alfvén waves.

Unit – V: (Properties of Matter, Sound & Acoustics, Material Science & Remote Sensing)

Surface Tension, Elasticity, Viscosity, Sound waves, Ultrasonic & Infrasonic Waves, Reverberation, Sabine's Formula, Acoustics of Hall, Introduction of long form of modern periodic table, Classification of materials, Properties of materials, Remote sensing and its applications, Microwave remote sensing dielectric behavior of material.

Reference Books:

1. Mathematical Physics by H.K. Dass published by S.Chand Publication.
2. Solid State Physics by M.A. Wahab published by Narosa Publication.
3. Handbook of Electronics by Gupta & Kumar published by Pragati Edition.
4. Material Science by V. Raghwan published by PHI.
5. Electrodynamics by G.F. Griffiths published by PHI.
6. Atomic & Molecular Physics by H.Kaur published by Pragati Edition.

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Subject: Chemistry

INORGANIC CHEMISTRY

Unit I-Analytical Principles : - Volumetric Method, Theories of indicator- Acid –Base, Redox, Metallochromic Indicator, complex precipitation, Redox titration. Gravimetric Method:- Mechanism of precipitate, formation, Precipitation from Homogeneous Solution, Co- Precipitation and post Precipitation.

Unit-II-Main group Element:- Boron –Nitrogen compound, S-N compounds, sulphurs Compound Molecular sulphides: such as P_4S_3 , P_4S_7 , P_4S_9 , P_4S_{10}

Unit-III-Metal Complex: - VSEPR Theory, L.F.T. Splitting of d- Orbital in different ligand field , John Teller Effect, M.O. Diagram of complex with and without bond.

Unit-IV:- Nuclear Chemistry- Nuclear Reaⁿ, type of nuclear Reaⁿ , Spontaneous and reduced fission, nuclear fission Reaⁿ , breeder reactor .

Unit-V-Bio-Inorganic Chemistry:-Essential and trace element in Biological Process Metalloporphyrins with special reference to haemoglobin and myoglobin, Na/K pump.

PHYSICAL CHEMISTRY:-

Unit-I-Thermodynamics:-Maxwell Relation, Joule Thomson effect, The third law of Thermodynamics, Joules Thomson Co-efficient for Vander Waal's gas.

Unit-II:-Chemical Kinetics:- Theory of reaⁿ rate, free energy of activation and volume of Activation Thermodynamic formulation of reaⁿ rate, Arrhenius equation and its limitation, Activation energy.

Unit-III-Quantum Mechanics:-Black body radiation, quantum mechanical explanation Photoelectric effect.

Unit-IV-Surface Chemistry:- Catalysis :-Mechanism and theories of homogeneous and heterogeneous catalysis, Acid- base, Enzyme catalysis.

Unit-V-Spectroscopy-I Selection rule, Maxwell Boltzmann distribution, statement of the Born open heimer approximation, degree of freedom, Energy level of a rigid rotor.

ORGANIC CHEMISTRY:-

Unit-I Separation Techniques:-Chromatography:-Chromatography method, Classification of chromatography, separation Theory of Chromatography, Application, Paper chromatography, TLC,column method.

Unit-II-Principles of Organic Chemistry:- Elimination, Substitution Reaⁿ ,Carbocations Carbanions ,Carnations Addition, Electrometric, Mesomeric.

Unit-III- Chemistry of Polymer:-Step-growth, free radical, Addition, ionic Polymerization, Characterization of polymers polyurethenes manufacture and application of Polyolifines.

Unit-IV-Organic Photochemistry:- Energy transfer, Sensitization and quenching, Singlet and triplet state and their reactivity, Photo Reaction of Carbonyl compound and enes dines, arenes ,Norrish reaction of acyclic ketones .

Unit-V-Chemistry of Natural Product:- Biosynthesis of terpenes & alkaloids, carbohydrate Protein and Nucleic Acid.

Reference Books :-

1. Inorganic Chemistry, Gurdeep R.Chatwal,Sham K. Aanand, Himalaya Publishing House
2. Physical Chemistry, Gurdeep R.Chatwal,Sham K. Aanand, Himalaya Publishing House.
3. Organic Chemistry, Advance Organic Chemistry, Dr.Jagdamba Singh L.D.S. Yadav, Pragati Prakashan
4. Unified Chemistry, Tandon, Rathore, Agrawal Shiiiv Lal Agrawal & Company.
5. Analytical Chemistry, Gurdeep R.Chatwal,Sham K. Aanand-Himalaya Publishing House.

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Subject: Mathematics

Unit - I

(A) **Linear Algebra** :Finite dimensional vector spaces , Linear transformations and their matrix representations, rank, systems of linear equations, Eigen values and Eigen vectors, minimal polynomial, Cayley-Hamilton Theorem, diagonalisation, Hermitian, Skew-Hermitian and unitary matrices.

(B) **Modern Algebra** :Group, subgroup, Normal group and Normal subgroups, Homomorphism, Isomorphism and Automorphisms, Euclidean domains, Principal ideal domains and unique factorization domains. Prime ideals and maximal ideals in commutative rings, Fields, finite fields.

Unit – II

(A) **Complex Analysis** :Analytic functions, bilinear transformations, complex integration, Cauchy's integral theorem and formula, Liouville's theorem, maximum modulus principle, Taylor and Laurent's series.

(B) **Real Analysis** :Sequences and series of functions, uniform convergence, power series, Fourier series, functions of several variables, maxima, minima; Riemann integration, multiple integrals, line, surface and volume integrals, theorems of Green, Stokes and Gauss; metric spaces, completeness.

Unit - III

Ordinary Differential Equations :First order ordinary differential equations, existence and uniqueness theorems, systems of linear first order ordinary differential equations, linear ordinary differential equations of higher order with constant coefficients, method of Laplace transform.

Unit - IV

Functional Analysis :Banach spaces, Hahn-Banach extension theorem, open mapping and closed graph theorems, principle of uniform boundedness; Hilbert spaces, orthonormal bases, Riesz representation theorem, bounded linear operators.

Unit - V

Probability and Statistics :Mean, Median, Mode, Standard deviation, mean deviation, range, quartile deviation, moment, Probability space, conditional probability, expectation, conditional expectation, Sampling distributions; Testing of hypothesis, standard parametric tests based on normal, Chi-Square and t test, F – distributions.

Reference Books:

1. Mathematical Analysis by Rudin, McGraw Hills
2. Discrete Mathematics by Truss, Pearson Education
3. Linear Algebra by Ramachandra, McGraw Hill Pub.
4. Mathematical Statistics by M.Ray, S-Chand Pub.
5. Abstract Algebra by S.David, Wiley Pub.
6. Ordinary Differential Equation by Garrett, Wiley Pub.

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Subject: Botany

Unit –I

Microbiology and Pathology - Viruses and Bacteria Structure, classification and reproduction. General Account of infection, immunity and serology: Microbes in industry and agriculture. Important plant diseases in India caused by fungi. Modes of infection and methods of control.

Unit –II

Plant Groups and Morphology, anatomy and embryology of Angiosperms - Structure, reproduction, life- history, classification, evolution, ecology and economic importance of algae , fungi, bryophytes, pteridophytes and gymnosperms. Tissues and tissue systems. Morphology and anatomy of stem, root and leaf (including development aspects and anomalous growth), Morphology of flower. Structure of anther and ovule, fertilization and Development of seed.

Unit –III

Physiology : Photosynthesis history, factors, mechanism and importance. Absorption and conduction of water and salts. Transpiration, Major and minor essential elements and their role in nutrition, Nitrogen fixation and nitrate reduction Enzymes, Respiration and fermentation. General account of growth. Plant hormones and their functions. Photo-periodism. Seed dormancy and germination.

Unit –IV

Ecology - Scope of ecology, structure, function and dynamics of ecosystems, Plant communities and succession. Ecological factors. Applied aspects of ecology including conservation and control of pollution.

Unit –V

Taxonomy and Economic Botany - Principles of nomenclature and classification of angiosperms. Modern trends in Taxonomy. General account of important sources of food, fiber , wood and drugs.

Reference Books:

1. Mechanisms of environmental stress resistance in plants, Basra, A.S. & Basra, R.K. 1997. Harwood Academic Publishers, The Netherlands.
2. Plant Physiology, Singh, Pandey and Jain, Rastogi Publication.
3. Ecology and Environment. P.D. Sharma, Rastogi Publication.
4. Plant Pathology. P.D. Sharma, Rastogi Publication.
5. A Textbook of Botany, Singh, Pandey and Jain, Rastogi Publication.
6. Taxonomy of Angiosperms, Singh and Jain- Rastogi Publications.

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Subject: Zoology

Unit-I

Non-Chordata and Chordata :A general survey, classification and relationship of the various **Phyla**.**Protozoa** : Study of the structure, bionomics and life history of Paramecium, malarial parasite, Typanosoma. Protozoa & disease. **Porifera** :Sycon. **Coelenterata** : Structure and life history of Obelia and Sea anemones, Corals, **Helminths**, Structure and life history of Planaria.Fasciola., Medical importance of Nematodes. **Annelida**, Neries ,**Arthropoda**, Palaemon**Mollusea**. Unio ,Pearl Formation Modifications of nervous system. **Echinodermata** ,Asterias and its larva. General organisation and characters, outline classification and inter- relationship of Proto -Chordata. Pisces, Amphibia ,Reptilia, Aves and Mammalia. Neoteny and retrogressive metamorphosis. A general study of comparative account of the various systems of vertebrates. Locomotion and respiration in fishes, structure and affinities of Dipnoi.Structural peculiarities of Amphibia. Poisonous and non- poisonous snakes of India, Aerial adaptations of birds. Structural peculiarities and affiniting distribution relation of prototheria and Metatheria.

Unit-II

Ecology and Economic Zoology: Environment : Abiotic factors and their role ; Biotic factors -Inter and Intra-specific relations. Ecosystem, Niogeo-Chemical cycles. Adaptation in fresh water, marine and terrestrial habitats. Pollution in air, water and land. Wild life in India and its conservation. Parasitism, Commensalism and Host parasite relationship. Parasitic protozoan's and helminthes of man. Beneficial and harmful insects.

Unit-III

Cell Biology, Genetic and Embryology -Structure and function of cell and cytoplasmic constituents : structure of nucleus , plasma membrane, mitochondria, Golgi-bodies, endoplasmic reticulum and ribosome's , cell division, mitosis and meiosis. Gene structure and function: Watson-Crick models of DNA, sex-chromosomes and sex -determination. Mendelian laws of inheritance, linkage and crossing over, mutation and evolution, cytoplasmic inheritance genes and diseases. Gametogenesis, fertilization, types of eggs, cleavage, development up to gastrulation in Branchiostoma, frog and chick , Metamorphosis in frog; Formation and fate of extra embryonic membranes in chick; formation of amnion, allantois and classification of placenta in mammals, function, of placenta in mammals.

Unit-IV

Evolution and Systematics - Origin of life, History of evolutionary thought. Lamarckism Darwinism, Sources and nature of organic variation. Natural selection, Isolation. Concept of species and sub-species, principles of classification, zoological nomenclature and international code. Fossils, geological eras, distribution of animal's zoogeographical realms of the world.

Unit-V

Biochemistry and Physiology -Structure of carbohydrates, lipids, amino-acids, proteins and nucleic acids, glycolysis and Krebs cycle, oxidation and reduction . Oxidative phosphorylation , energy conservation and release, ATP, cholesterol. Enzymes and coenzymes, Hormones and their functions. roles of Pituitary, Thyroid ,Parathyroid, Pancreas, Adrenal, Testis, Ovary and Pineal body. Composition of blood, blood groups in man , coagulation. oxygen and carbon dioxide transport, nephron and urine formation, mechanism of conduction along axon and across synapse ,neurotransmitters, Vision, Hearing and other receptors, mechanism of contraction of skeletal muscle, role. of salivary gland, liver, pancreases and intestinal glands indigestion. Absorption of digested food

Reference Books:

1. The Biology of Biodiversity, M. Kato. Springer.
2. Molecular Markers. Natural History and Evolution, J.C. Avise. Chapman&Hall, New York.
3. Biodiversity, E.O. Wilson. Academic Press, Washington.
4. Principle of Animal Taxonomy. G.G. Simpson. Oxford IBH Pub.Co.
5. Elements of Taxonomy. E. Mayer.
6. The Diversity of Life (The College Edition), E.O. Wilson. W.W.Northern& Co.
7. Threatened Animals of India, B.K. Tikadar. ZSI Publication, Calcutta.
9. Fundamentals of Ecological Modelling, Jorgensen, S.E., Elsevier New York.

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Subject: Microbiology

Unit –I

General Microbiology: History of Microbiology. A brief idea of microbial diversity and scope of microbiology. Principles of classification of microbes; morphology, metabolic and molecular criteria for the classification, a brief introduction to major group of bacteria.

Unit –II

Microbial and Enzyme Technology: Enzymes from microbial sources, large scale production of enzymes, recovery of enzymes, enzyme purification methods- enzyme precipitation, separation by chromatography, enzyme reactors.

Microbial Physiology and Biochemistry: Overview; Scope and importance structure and function of biomolecules; Carbohydrates, Proteins, Lipid, Enzymes; Characteristics, Ribozymes, co-enzyme. Metabolism; General concept-application of second law of thermodynamics, redox potential, outline of intermediary metabolism; free energy change of the reaction catabolism-anabolism.

Unit –III

Microbial Genetics: Nucleic acids: Structure, physical and chemical properties of DNA and RNA, extrachromosomal DNA profile, function and evolution. DNA replication, damage and repair, spontaneous and induced mutation, reversion of mutation, Genetic recombination, Molecular models and mechanism, Gene conversion, Gene expression and regulation, Use of microbes in genetic engineering.

Biochemical and Molecular Technology: Electrophoresis, Isolation, Purification, Blotting, DNA amplification: PCR, DNA sequencing Gene silencing, Chromatography, Gel filtration, Ion exchange, Affinity Chromatography, TLC, HPLC, spectroscopy and Microscopy.

Unit –IV

Immunology: Introduction to immune system: Innate and adaptive immune responses; Cells and organs of immune system. Antigen antibody interactions and its applications. Immunology in health and disease- autoimmunity, immunodeficiencies hypersensitivity; Concept of immunotherapy.

Microbial Genomics: Tools for studying DNA/gene, Genomes: Size, physical structure, genome analysis, gene duplication, mapping of genome and functional genomics.

Unit –V

Bioprocess Technology and Engineering: An introduction to fermentation processes- Range of fermentation process, microbial biomass, microbial enzyme, microbial metabolites and transformation processes. Microbial growth kinetics. The isolation, preservation and improvement of industrially important and useful micro-organisms.

Reference Books:

1. Principles and Techniques of Biochemistry and Molecular Biology. Wilson K. and Walker J. (2008). Cambridge University press.
2. Foundations in Microbiology. Talaro K.P. and Talaro A. (2006). McGraw-Hill college Dimensi.
3. Analysis of Biological Molecules: An introduction to Principles, Instrumentation and Techniques, Potter GWH and Potter GW (1995). Kluwer Academic Publisher.
4. Prescott/Harley/Klein's Microbiology, Willey J, Sherwood L. and Woolverton C (2007). McGraw Hill.
5. Experiments in Microbiology, Plant Pathology and Biotechnology. Aneja KR. (2005). New Age International (P) Ltd, Publishers.

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Subject: Biotechnology

Unit –I

Biochemistry: Biomolecules and their conformation; Weak inter- molecular interactions in biomolecules; Chemical and functional nature of enzymes; Kinetics of single substrate and bi-substrate enzyme catalyzed reactions; Bioenergetics; Metabolism (Glycolysis, TAC and Oxidative phosphorylation); Membrane transport and pump; Cell cycle and cell growth control; Cell signaling and signal transduction.

Molecular Biology and Genetics: Molecular structure of genes and chromosomes; DNA replication and control; Transcription and its control; Translational processes; Regulatory controls in prokaryotes and eukaryotes; Mendelian inheritance; Gene interaction; Complementation; Linkage, recombination and chromosome mapping; Extrachromosomal inheritance; Chromosomal variation; Population genetics; Transposable elements, Molecular basis of genetics diseases and applications.

Unit –II

Bioprocess Engineering: Kinetics of microbial growth, substrate utilization and product formation: Simple structured models; Sterilization of air and media; Batch, fed-batch and continuous processes; Aeration and agitation; Mass transfer in bioreactors; Rheology of fermentation fluids; Scale-up concept; Design of fermentation media; Various type of microbial and enzyme reactors; Instrumentation in bioreactors.

Unit –III

Plant and Animal Biotechnology: Special features and organization of plant cells; Totipotency; Regeneration of plants; Plant products of industrial importance; Biochemistry of major metabolic pathways and products; Autotrophic and heterotrophic growth; plant growth regulator and elicitors; Cell suspension culture development; methodology, kinetics of growth and production formation, nutrient optimization; Production of secondary metabolites by plant suspension culture; Hairy root cultures and their cultivation. Techniques in raising transgenics.

Unit –IV

Immunology: The origin of immunology; Inherent immunity; Humoral and cell mediated immunity; Primary and secondary lymphoid organ; Antigen; B and T cells and Macrophages; Major histocompatibility complex (MHC); Antigen processing and presentation; Synthesis of antibody and secretion; Molecular basis of antibody diversity; Polyclonal and monoclonal antibody; Complement; Antigen-Antibody reaction; Regulation of immune response; Immune tolerance; Hyper sensitivity; Autoimmunity; Graft versus host reaction.

Unit –V

Recombinant DNA Technology: Restriction and modification enzymes; Vectors; Plasmid, bacteriophage and other viral vectors, cosmid, Ti plasmid, yeast artificial chromosomes; cDNA and genomic DNA library; Gene cloning; Expression of cloned gene; Transposons and gene targeting; DNA labeling; DNA sequencing; Polymerase chain reaction; DNA fingerprinting; Southern and northern blotting; In -situ hybridization; RAPD; RFLP; Site-directed mutagenesis; Gene transfer technologies; Gene therapy.

Reference Books:

1. Principle of Biochemistry, Nelson D and Cox MM. (2009). W.H. Freeman and Company, New York.
2. Analysis of Biological Molecules: An introduction to Principles, Instrumentation and Techniques, Potter GWH and Potter GW (1995). Kluwer Academic Publisher.
3. Instrumental methods of Analysis. Willard, HH and Merritt LL (1986). CBS Publisher and Distributors.
4. Isotopes and radiations in Biology. Thornburn CC (1987). Butterworth and Co. Ltd., London.
5. Prescott/Harley/Klein's, Willey J, Sherwood L. and Woolverton C (2007). McGraw Hill.

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Rural Technology

Unit – I: Rural technology: - Definition, concept and scope of rural technology in present scenario, Appropriate technology, characteristics of technology, characteristics of innovation, concept and factor related to the technology transfer.

Unit – II: Rural Development:- concepts, strategies and experience, Rural Society and Panchayat Raj, Characteristics of Rural life, Rural Social structure.

Unit – III: Scope , development & future prospects of medicinal plants- cultivation techniques of medicinal plants, brief discussion about useful part of medicinal plants, factor influencing variability of drugs, indigenous drug, plant protection technique and disease of medicinal plant, their identification and control measures.

Unit – IV: Entrepreneurship- Meaning, definition and concept of Entrepreneurship. Importance of being an entrepreneur, qualities of a successful entrepreneur, types of entrepreneurs, functions of an entrepreneur, issues and Problems faced by Entrepreneurs

Unit–V: Rural development program for rural area upliftment- IRDP, TRYSEM, CAPART, MGNERGA, WDP, SGSY, PMKVY, NRLM, NRHM, UBA etc.

Reference Books:

1. Rural Development, G. R. Madan
2. Rural Sociology, A. R. Desai
3. Medicinal plants of India Vol 1 & 2 ICAR by Kirtikar&Basu .
4. Compendium of Indian Medicinal plants Vol 1-4 R.P. Rastogi& B.N. Mahrotra.
5. “Indigenous medicinal specialties” U.S. Narayan Rao
6. Entrepreneurial Development- S.S. Kanka:
7. Challenges and Perspectives- Nirmal K. Gupta: Small Industry

(2)Discipline: Commerce &Management

	Subject Name	Subject Code
(i)	Commerce	01
(ii)	Management	02

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Commerce

Unit-I

Accounting: - Basic Accounting concepts, Accounting Standards, Dissolution & Amalgamation, Accounting of company – valuation of shares, Amalgamation, Absorption and Reconstruction of companies. **Business Management:** - Functions & Principles of Business Management, Planning, Organizing, controlling, Motivation and Interpersonal behaviour.

Unit-II

Business Environment:- Economic Environment of Business in India, Consumer Protection and Environmental protection, policy environment, New Industrial policy and its implementation ,liberalization, privatization and globalization, , foreign exchange management Act (FEMA), foreign capital investment in India, World Trade Organization (WTO), International monetary fund (IMF) **Cost and Management Accounting:** - Marginal costing & Break-even Analysis, Standard costing & Budgetary control, costing for decision making, Ratio Analysis, cash flow & Fund flow Analysis.

Unit-III

Business Statistics & Data Analysis:- Types of Data, Collection & Analysis, Sample-needs of sample Methods and Errors of Sample, Normal Distribution, Hypothesis Testing uses of Statistical Average. Correlation & Small Sample Tests, T-Test, F-Tests and Chi-square Tests. **Business Economics:** - Business Cycle Nature, Stages &Principles , Demand Analysis and Elasticity of Demand, Indifference Curve Analysis, Utility Analysis and Law of return., Profit Management, Measurement of profit, Risk & concept of Uncertainty.

Unit-IV

Income Tax & Tax Planning:- Basic concepts, Tax planning Concept, Definition, Importance, Computation of Income from various Heads, computation of Taxable Income of individual & firms, Types of Tax Assessment, Appeal & Revision Tax free Income. **Entrepreneurship:** - Definition of Entrepreneur and origin, Principles of Entrepreneurship, Innovation & Entrepreneurship, Role and achievements Nature and characteristics of Entrepreneur Development programme, Role of Government in Entrepreneurship development, Role of Entrepreneur in socio-Economic Growth.

Unit-V

Financial Management: - Capital Structure, Financial & Operating Leverages, Capital costing & capital Budgeting, Working Capital Management, Dividend Policy. **Indian Financial System:-** Money & Capital Market, functions of stock Exchange in India, Stock Holding Corporation of India, Mutual fund, SEBI, Credit Rating, Reserve Bank of India, NABARD & Rural Bank, Reforms of Banking Sector in India, NPA in Indian Banking System.

Reference Books :-

1. Accounting For Management, Jawahar Lal, Himalaya Publishing House Mumbai, 2012
2. Principles and Practice of Management, Prasad L.M. , Sultan Chand & Sons , 2015
3. Principles and Practice of Management, K. Aswathappa , Himalaya Publishing House Mumbai , 2008
4. Cost & Management Accounting, Maheshwari S.N. , Sultan Chand & Sons , 2014
5. Statistics for Business & Economics, R. P. Hooda ,Macmillon, Delhi , 2008
6. Mathematical Analysis for Economics, R. .G. D. Allen , Himalaya Publishing House Mumbai , 2008
7. Income Tax, Dr. S.P Goyal/ Dr. H.C Mehrotra , Sahitya Bhawan publication , 2016
8. Fundamentals of Entrepreneurship, Sanjay Gupta , SBPD Publications , 2015
9. Financial Management, Dr. S.P Gupta , SBPD Publications , 2016
10. The Indian Financial System and Financial Market Operation, Dr. Vasant Desai , Himalaya Publishing House Mumbai , 2012

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Management

Unit- I

Management Process & Organizational Behavior- Overview: Functions and Principles of management; Management Thought and Concepts; Management Decision Making Processes and Types. Understanding and managing Individual Behavior-personality, Perception, Values, Attitudes, Learning and Motivation; Group Dynamics and Team Work. Leadership: Organizational structure; Organizational design; OD Interventions & Change Management. Corporate social responsibility. **Strategic Management-** Overview of Strategic Management: Concept of Corporate Strategy; BCG Model; GE-9 Cell Model ; Value Chain Analysis; SWOT & TOWS Analysis; Porter's Generic Strategies; Competitor Analysis. Overview of Strategy Formulation and Implementation at Corporate and Business level. Strategic Control.

Unit- II

Managerial Economics- Basic Concepts of Demand and Supply; Demand Analysis; Production Function; Cost-Output Relations; market Structures; Pricing theories; Overview of macro-Economics; National Income Concepts; Budgeting. **Quantitative Techniques** Co-relation & Regression Analysis; Overview of Sampling: Sampling distributions; Tests of Hypothesis; Large and small samples. Univariate and Bivariate Data Analysis: t-test, z-test, Chi-square tests; ANOVA. **Overview of Operations Research:** Linear programming; Transportation model; Inventory control; PERT/CPM.

Unit- III

Human Resource management Overview of HRM: Concepts and Perspectives in HRM; HRM in Changing Environment, Overview of HR Planning: Objectives Process and Techniques; Job Analysis ; Recruitment and Selection, Induction; Training and Development; Performance Appraisal, Overview of Industrial Relations: Wage Policy and Determination; Trade Unions; Dispute Resolution and Grievance Management; Labour Welfare . **Finance-** Overview of Financial Accounting; Analysis of Balance Sheet Statement, Overview of Financial Management: Fund Flow Analysis; Management of Working Capital, Overview of Capital Budgeting: Capital Budgeting Decisions; Capital Structure and Cost of Capital. Long-term and Short-term Financing Instruments; Mergers and Acquisitions.

Unit- IV

Marketing Management: Overview of Marketing: Marketing Mix, Market Segmentation, Targeting and Positioning; Overview of Product Management; Product Mix Decisions; Product Life Cycle, New Product Development, Branding; Pricing Methods and Strategies. Overview of Promotional Management: Promotion Mix; Advertising; Personal selling, Issues in Branding, Market Development, advertising and Retailing on Internet.

Unit- V

Production Management: Overview of Production management: Demand Forecasting for Operations; Production Scheduling, Statistical Quality Control; Facility Location; Layout Planning. **Information System-** Overview of MIS: Application of Information Systems in management, System Analysis and Design. Overview of Database Management System; Overview of E-Commerce:

Reference Books:

1. Financial Management , Dr. S. P. Gupta, Sahitya Bhawan Publication, 2016
2. Human Resource Management, VSP Rao, Excel Books, 2nd Ed. , 2008.
3. Management Information System, Wasman S Jawadekar, Tata McGraw Hill, 4th ed., 2009
4. Managerial Economics, D.M. Mithani, Himalaya Publishing House, 6th Rev. Ed., 2013.
5. Marketing Management, S.A. Sherlekar , Himalaya Publishing House, 13th Rev. Ed. 2007.
6. Principles of Management, M. Govindrajana & S. Natrajan, Prentice-Hall of India Private Ltd., 2007.
7. Production & Operations Management, S. N. Chary , Tata McGraw Hill , 5th Ed. 2015.
8. Research Methodology, C.R. Kothari, Gaurav Garg, New Age International Publishers, 3rd Ed. 2014.
9. Statistical Methods, Dr. S. P. Gupta, Sulatan Chand & Sons, 37th Rev. Ed. , 2008.
10. Strategic Management, VSP Rao, V. Hari Krishna, Excel Books, 2003

(3) Discipline: Education & Physical Education

	Subject Name	Subject Code
(i)	Education	1
(ii)	Physical Education	2

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Education

Unit-I. Philosophical foundation of Education.

- Relationship of education & philosophy.
- Western schools of philosophy- Idealism, Naturalism, Pragmatism.
- Contributions of John Dewey, Vivekananda, Tagore & M.K. Gandhi to educational fields.

Unit-II Sociological foundation of Education.

- Relationship of education & Sociology.
- Sociology of Education & Educational sociology.
- Meaning and Factors influencing Social Change.

Unit-III. Psychological Foundation of Education.

- Educational psychology- concept, nature & scope.
- Meaning & Factors influencing Growth & Development.
- Theories of Learning- Pavlov's classical, Skinner's operant conditioning, Learning by Insight, Lewin's Field Theory.
- Learning & Motivation.
- Intelligence- it's meaning, theories & measurement.
- Personality- Type & trait theories, Measurement of personality.

Unit-IV. Methodology of Educational Research.

- Meaning, needs & scope of educational research.
- Fundamental, Applied & Action Research.
- Criteria & Sources for identifying the Research problem.
- Hypothesis- Meaning & types.
- Sampling- concept of population & sample, Various methods of sampling.
- Tools & Techniques- Observation, Interview, Questionnaire.

Unit-V Infernal Statistics.

- Inferential Statistics – Mean, Median, Mode, SD, 't' test, one way ANOVA, Chi-square.

Reference Books:

1. Advance Educational Psychology – Dr. P.K.Naik, Sharda Pustak Bhawan University Road, Allahabad.
2. Research Methodology – Dr. P.K.Naik, APH Publishing Corporation Ansari Road New Delhi.
3. Research Methodology – C.R. Kothari, New Age international limited publication.
4. शिक्षा के दार्शनिक एवं समाजशास्त्रीय सिद्धांत—चतुर्वेदी एवं स्वरूपसक्सेना, आरलाल बुक डिपो आगरा।
5. उदीयमान भारतीय समाज में शिक्षक—राम षग्ल पाण्डे, विनोद पुस्तक मंदिर मेन रोड आगरा।

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Physical Education

Unit –I:

Introduction to and definition, aim and objectives of Physical Education, Historical development of ancient and modern Olympic games, Physical Education in India. Individual differences, Heredity and Environment.

Unit –II:

Physiology of muscular activity, respiration and blood circulation, Bio-energetic, Athletic injuries and their management, Doping in sports. Sports nutrition and dietary manipulations and athletic diet, Obesity and their management.

Unit –III:

Joints and their movements, Plains and axis, Kinetics, Kinematics - linear and angular, Levers, Newton's law of linear and angular motion, Principles of equilibrium and force, Spin and elasticity, Mechanical analysis of various sports activities, Mechanical analysis of running, Jumping, Throwing.

Unit –IV:

Learning process – theories and laws of learning, Motivation, theories and dynamics of motivation in sports, Personality, its dimensions, theories, Personality and performance, Psychological factors affecting sports performance – stress, anxiety, and aggression.

Unit –V:

Aims, Objectives, characteristics and principles of sports training, Training load and periodization, Training methods and specific training programme for development of various motor qualities, Short term, long term training plans

Reference book:-

1. व्यायामक्रियाविज्ञान एवं खेलचिकित्सा शास्त्र, शर्माआर. के. फ्रेन्ड्स, पब्लिकेशननईदिल्ली।
2. Bio-mechanics and its Application in sports, Dr. Rajkumar Sharma .lulu Publication.(on line available)
3. शारीरिक के सिद्धान्त व इतिहासतोरमररमेषचन्द्र, अमितब्रदर्स ।
4. खेलट्रेनिंग के वैज्ञानिकसिद्धान्त,फ्रेन्ड्स, पब्लिकेशननईदिल्ली,!
5. Sports psychology

(4) Discipline: Arts

Subjects Name	Subject Code
(i) Hindi	01
(ii) English	02
(iii) Sanskrit	03
(iv) Geography	04
(v) Sociology	05
(vi) Economics	06
(vii) Political Science	07
(viii) History	08
(ix) Library & Information Science	09
(x) Social Work	10

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject –हिन्दी

- हिन्दी भाषा और उसका विकास**—अपभ्रंश और पुरानी हिन्दी का संबंध, काव्यभाषा के रूप में अवधी का उदय और विकास काव्यभाषा के रूप में ब्रजभाषा का उदय और विकास, साहित्यिक हिन्दी के रूप में खड़ी बोली का उदय और विकास, मानक हिन्दी का भाषा वैज्ञानिक विवरण, हिन्दी की बोलियों—वर्गीकरण तथा क्षेत्र, नागरी लिपि का विकास और उसका मानकीकरण।
हिन्दी भाषा प्रयोग के विविध रूप— बोली, मानकभाषा, संपर्क भाषा, राजभाषा और राष्ट्रभाषा, संचार माध्यम और हिन्दी।
- हिन्दी साहित्य का इतिहास** – हिन्दी साहित्य का इतिहास, दर्शन, हिन्दी साहित्य के इतिहास लेखन की पद्धतियाँ।
आदिकाल, मध्यकाल, हिन्दी संत काव्य, हिन्दी कृष्ण काव्य, हिन्दी राम काव्य, रीति काल, आधुनिक काल, द्विवेदीयुग, छायावाद, प्रगतिवाद, प्रयोगवाद।
- हिन्दी साहित्य की गद्य विधायें**—हिन्दी उपन्यास: प्रेमचन्द पूर्व उपन्यास, प्रेमचन्द और उनका युग, प्रेमचन्द के परवर्ती प्रमुख उपन्यसकार:—हजारीप्रसाद द्विवेदी, फणीश्वरनाथ रेणु, श्रीलाल शुक्ल, रांगेय राघव।
हिन्दी कहानी: बीसवीं सदी की हिन्दी कहानी और प्रमुख कहानी आंदोलन।
हिन्दी नाटक: हिन्दी नाटक और रंगमंच, विकास के चरण और प्रमुख नाट्यकृतियाँ: अंधेर नगरी, चंद्रगुप्त, अंधायुग, आधे-अधूरे, आठवाँ सर्ग, हिन्दी एकांकी।
हिन्दी निबंध: हिन्दी निबंध के प्रकार और प्रमुख निबंधकार— रामचंद्र शुक्ल, हजारीप्रसाद द्विवेदी, कुबेरनाथ राय, विद्यानिवास मिश्र, हरिशंकर परसाई।
हिन्दी की अन्य गद्य विधायें : रेखाचित्र, संस्मरण, यात्रा—साहित्य, आत्मकथा, जीवनी और रिपोर्टाज।
- काव्यशास्त्र और आलोचना** – भरत मुनि का रस और उसके प्रमुख व्याख्याकार।
रस के अवयव। साधारणीकरण। शब्दशक्तियाँ और ध्वनि का स्वरूप।
अलंकार – यमक, श्लेष, वक्रोक्ति, उपमा, रूपक, उत्प्रेक्षा, संदेह, भ्रांतिमान, अतिशयोक्ति, अन्योक्ति, समासोक्ति, अत्युक्ति, विशेषोक्ति, दृष्टांत, उदाहरण, प्रतिवस्तूपमा, निदर्शना, अर्थान्तरन्यास, विभावना, असंगति तथा विरोधाभास।
- भाषा विज्ञान** :—भाषा परिवर्तन के कारण, ध्वनि परिवर्तन के कारण व दिशाएं, अर्थ परिवर्तन के कारण व दिशाएं, हिन्दी भाषा का विकास। देवनागरी लिपि की विशेषताएँ, हिन्दी शब्द समूह।

संदर्भ ग्रंथ:—

- हिन्दी साहित्य का इतिहास – डॉ. नरेन्द्र
- संत काव्य – परशुराम चतुर्वेदी
- हिन्दी साहित्य का काव्यकाल – डॉ. हजारी प्रसाद द्विवेदी
- हिन्दी साहित्य की भूमिका – डॉ. हजारी प्रसाद द्विवेदी

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: English

Unit –I: I Literary Forms and Terms

- Poetry: Lyric, Ode, Sonnet, Elegy, Satire, Epic
- Prose: Its Nature
- Drama: Tragedy, Comedy, Farce, Melodrama, One Act Play, Masque etc.
- Catharsis, Hamartia, Negative Capability, objective Correlative, Satire, Image, Conceit etc.

II English Language teaching- Major trends in English Language teaching

- Approaches in English Language Teaching.
- Method of Teaching English.
- Technique of Teaching English.

Unit- II (a) William Shakespeare

General Questions on the writer and a critical study of the following works :

- Hamlet
- The Tempest

(b) Indian Literature

- Mulk Raj Anand – Untouchable
- Shashi Deshpande - That Long Silence

Unit –III: A critical study of the following poets with reference of the poems shown against each of their poetry.

- Milton : Sonnets
- Pope: Essay on Man
- Johnson: The Vanity of Human Wishes
- Wordsworth: Tintern Abbey, Immortality Ode
- Keats : Odes
- Tennyson: Ulysses

Unit– IV: The works of the following novelists with special reference.

- Dickens : Oliver Twist
- Thomas Hardy: Tess of the D'urbervilles
- Aristotle: Poetics
- Longinus : On the Sublime
- Dryden : Essay on Dramatic Poesie
- Arnold : The Study of poetry

Unit – V(a): A critical study of the 20th century writers and their works.

- E.M. Foster: A Passage to India
 - D.H. Lawrence: Son and Lovers
 - G.B. Shaw: Saint Joan
 - W.B. Yeats: Byzantium, The Second Coming, A Prayer to my Daughter
 - T.S. Eliot: The Waste Land
- #### **(b): American Literature**
- Emerson: The American Scholar
 - Thoreau: Civil Disobedience
 - Hawthorne: The Scarlet Letter
 - Eugene O' Neill: The Hairy Ape

Reference Books:

1. A History of English Literature, Arthur Compton Rickett London, T.C. & E.C. Jack; New York, Dodge publishing co.
2. American Literature, Meenakshi Raman, New Delhi: Atlantic Publishers.
3. English Language Literature, P.D. Wadgaunkar ,New Delhi Bahrai Publications .
4. A Glossary Liteary terms, M.H. Abrams McPeck Publishing.
5. English Grammar and Composition, Wren & Martin, S.Chand Publishing.

Dr. C.V. Raman University, Kota, Bilaspur (C.G.)

Subject: संस्कृत

1. वैदिकसाहित्य – देवताओं का परिचय—इन्द्र, अग्नि, विष्णु, रुद्र, उषस्, सवितृ, वरुण, वृहस्पति ।
विषयवस्तु— ऋग्वेद, यजुर्वेद, सामवेद, अथर्ववेद, ब्रह्मण, आरण्यक, उपनिषद्,
वेदाङ्गोंका सामान्य परिचय, निरुक्त, (प्रथम एवं द्वितीय अध्याय) वैदिक
एवंलौकिकसंस्कृतमेंअन्तर
2. व्याकरण एवंभाषाविज्ञान – सन्धि, समास, षड्भूत, धातुरूप, कृदन्त, तद्धित, कारक—सिद्धान्तकौमुदी
के अनुसार, भाषा की परिभाषा एवंप्रकार (परिवार मूलक एवंआकृति
मूलक)भाषाओंकावर्गीकरण, ध्वनिसंबंधीनियम ।
3. दर्शन – ईश्वरकृष्ण की सांख्यकारिका—पुरुष—स्वरूप, प्रकृति—स्वरूप, सृष्टिक्रम,
सदानन्दकावेदान्तसार—अज्ञान, पञ्चीकरण, अध्यारोप, जीवन मुक्ति,
केशवमिश्र की तर्कभाषाप्रमाण—प्रत्यक्ष, अनुमान: उपमान, शब्द ।
4. संस्कृतसाहित्य – निम्नलिखितग्रन्थोंकासामान्य अध्ययन—
पद्य – नैषधीय चरित, शिशुपालवध, रघुवंश, मेघदूत ।
गद्य – कादम्बरी, दशकुमारचरित, हर्षचरित, ।
नाटक – अभिज्ञानशाकुन्तल, उत्तररामचरित, वेणीसंहारः, मृच्छकटिक ।
5. नाट्यशास्त्र – भरत—नाट्यशास्त्र—प्रथमतथा द्वितीय अध्याय
दशरूपक –प्रथमप्रकाश
6. काव्यशास्त्र – काव्य प्रकाश—काव्य प्रयोजन, काव्यहेतुकाव्य लक्षण, काव्य भेद,
काव्यशक्ति, अभिहितान्वयवाद, अलंकार—अनुप्रास, उपमा, रूपक, उत्प्रेक्षा,
वक्रोक्ति, विभावना, श्लेष,
ध्वन्यालोक—प्रथमउद्योत

संदर्भग्रन्थसूची

1. वैदिकसाहित्य काइतिहास—आचार्यबलदेवउपाध्याय
2. निरुक्त—आचार्यविश्वेश्वर
3. लघुसिद्धान्तकौमुदी—गिरजादत्त त्रिपाठी
4. भाषाविज्ञान—डॉ. भोलानाथतिवारी
5. काव्य प्रकाश—आचार्यविश्वेश्वर
6. ध्वन्यालोक—आचार्यविश्वेश्वर
7. संस्कृतसाहित्य काइतिहास—आचार्यबलदेवउपाध्याय

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Geography

Unit – I

Geomorphology: Origin of the Earth – Theories regarding origin of the earth. Fundamental concepts, Endogenetic and Exogenetic forces; Denudation and weathering, Geosynclines, Continental Drift and plate tectonics, Concept of geomorphic cycle, Landforms associated with fluvial, glacial, arid, coastal and karst cycles.

Unit – II

History of Geographical Thoughts: General character of Geographic knowledge during the ancient period and medieval period, Foundations of Modern Geography. Recent trend in Geography (Remote sensing and Geographical Information System).

Unit – III

Climatology & Oceanography: Composition and structure of the atmosphere, Heat budget of the earth, Distribution of temperature, Atmospheric pressure and general circulation of winds. Ocean deposits, Coral reefs, Temperature and salinity of the oceans, Density of seawater, Tides and ocean currents.

Unit – IV

Population & Settlement Geography: Patterns of distribution, Growth and density of population in world and India, pattern and processes of migration. Site and Situation, types, sizes, Spacing, and internal morphology of rural and urban settlements, City-region, primate city, Rank-size rule.

Unit – V

Geography of India: Physiographic divisions, climate: its regional variations, vegetation types and vegetation regions; Major soil types, Irrigation and agriculture; Population distribution and growth; Settlement patterns; Mineral and power resources, major industries and industrial regions.

Reference Books -

1. Climatology & Oceanography:- D.S. Lal, Chaitanya Publication, Allahabad .
2. Geomorphology:- Savindra Singh, Prayag Publication, Allahabad
3. Agriculture Geography:- Singh & Dillon, Tata McGraw Hill Publication, New Delhi.
4. "Population Geography" R.C. Chandra, Kalyani Publication, New Delhi.
5. "Settlement Geography" :- R.Y. Singh, Rawat Publication, Jaipur.
6. "Bharat Ka Bhugol" :- R. C. Tiwari, Pravalika Publication, Allahabad.
7. "Evaluation of Geography Thought":- Majid Hussain, Rawat Publication Jaipur.

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Sociology

Unit – I

Nature of sociology – definition, basic, concept, communication, institution, culture, social structure, social group, civilization, Social institution, Marriage, family, education, religion socialization, theories of socialization

Unit – II

Social stratification meaning of social stratification forms of stratification- caste, class gender, social mobility social change, crime – juvenile delinquency, classification of crime and criminals, theories of punishment, prison, managements theories of crime probation, parole open prison anomie.

Unit– III

characteristics of rural society types of villages, rural leadership poverty, Untouchability Community development programing, Panchayatiraj gram revolution, Scope of urban sociology, its importance characteristics of urban society and changes types of cities, Components of town planning, town and city slams urban environmental problems.

Unit – IV

Structural – Radcliffe brown, Levi Straus functional, Durkheim, Malinowski parsons, interactionist social action Max Weber, Pareto Bulmer conflict-Karl Marx, Dahrendorf. Ngo-functionalism.

Unit –V

Meaning and nature of social research the scientific methods, the problem of the study of social phenomena objectivity and subjectivity fact value, quantitative methods- Survey, research design and its types. Techniques of data collection qualitative methods- statistics in social research Measures of central tendency mean median mode etc. literature review.

Reference books

1. Indian sociology- oommen, T.K and P.N Mukherjee, popular prakashan Bombay.
2. Social Background of indianNationalism,- Desai A.R. 1948, popular, Bombay.
3. Research methods in social sciences-somekh, B and Lewin, c., (eds), vistaar publication, new Delhi, 2005.
4. Themes and perspectives in Indian sociology- Dhanagare, D.n. 1993, Jaipur, rawat.
5. The structure of sociological theory- turner, jonatha H., 1995, Jaipur and New Delhi, Rawat publications.
6. Theory and ideology in Indian sociology- Singhi, N.K.1996, Rawat, Jaipur.
7. Methodology in social Research-Mukherjee,P.N.,Dilemma and perspectives, sage publications, New Delhi, 2000.
8. The Legacy of G.S. Ghurye A centennial Festschrift, - momin, A.R. 1996, Popular prakashan Bombay.

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Economics

Unit- I

Economic Systems – Capitalism, Socialism and mixed economy.

National Income – Concept and measurement

Consumer behaviour- Law of demand, Elasticity of demand, utility analysis and difference – curve techniques.

Unit –II

Producer's behaviour- Production Function, Laws of Returns, Returns to scale cost curves.

Price Theory – Price determination under different market condition, pricing of factors of production Keynesian and Modern theory of employment Banking objective and instruments of Central Banking, credit policies in a planned developing economy

Unit-III

Types and Principles of Taxation- Principles of Public expenditure, objective and instruments of budgetary and fiscal policy in a planned developing economy.

Unit –IV

International Trade- Theory and policy of International trade, determination of exchange rates, balance of payment

International Monetary Institution – I.B.R.D. and I.M.F. characteristics of under developed economy, human and natural resources, primary, secondary and tertiary sectors in India, mixed economy in India.

Unit-V

Agricultural development- Agricultural Policy, Land reforms, Green revolution and its aftermath.

Industrial development- Industrial Policy, Public and private sectors, Regional distribution of Industries in India. Pricing policies for agriculture and industrial outputs. Fiscal and monetary policy in India-objectives, recent budgetary trends, bank nationalization in India. Reserve Bank and monetary policy in India. Recent trends in India's foreign trade and balance of payments.

Indian Planning- objectives and strategies, planned growth and distributive justice eradication of poverty, problems of Indian planning.

Reference Books :

1. Economics - Pant J.C. and Agrawal, Sahitya Bhawan Publication, Agra.
2. Economics- Sinha V.C. and Sinha Pushpa, Sahitya Bhawan publication, Agra.
3. Economics- Maheshwari P.D. and Gupta Sheelchand, Kailas pustaksadan Bhopal.
4. Micro Economics- Bansal and Agrawal, Sahitya Bhawan Publication, Agra.
5. Modern Economic Theory- Ahuja H.L., S. Chand & Company. Ltd.
6. Micro Economics- Tyagi P.k., Sumit Interprises. New Delhi.
7. Public Economics- Maheshwari P.D. and Gupta Sheelchand, Kailas pustaksadan Bhopal.
8. Public Finance- Jain and Agrawal Purnima, Kailas PustakSadan, Bhopal.
9. Indian Economy- Rudrdatt and Sundaram, S. Chand and Co. Delhi.

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Political Science

Unit-I.

Main features of Ancient Indian political thought, Manu and Kautilya; Characteristics of ancient Greek Thought - Plato, Aristotle, General features of Medieval Political Thought - Machiavelli, Hobbes, Locke, Montesquieu, Rousseau, Bentham, J.S. Mill, T.H. Green, Hegel, Marx, Lenin and Mao-Tse-Tung, Laski

Unit- II.

Nature and scope of Political Science: as an independent discipline. Politics as a specific human behavior, Traditional Vs. Contemporary approaches to the study. Behaviouralism Systems Theory and other recent approaches, Post-behaviouralism, political analysis: Marxist approach to political analysis. The emergence and nature of the Modern State Sovereignty, The Monistic and Pluralistic thought of Sovereignty: Power and Authority, Nation- States System. Political Obligation-Resistance, Revolutions, Rights, Liberty, Equality, Justice. Theory of Democracy;

Unit- III.

Political Ideologies – Idealism, Individualism, Socialism, (Democratic and Fabian) Liberalism, and Marxism. Comparative Politics- Traditional and Structural Functional approach, concept of Political Socialisation, Political communication, Political Development. Party System and Political Procedure – party system, Pressure Groups, Representation and Election, Executive, Legislature, Judiciary, Bureaucracy.

Unit- IV.

Constitution of India – formation, Preamble, Fundamental Rights and Directive Principles of State Policy; Union Government-President, Parliament, Prime Minister and Cabinet; Parliament and Parliamentary Procedure; Supreme Court; Judicial Review and Judicial Activism; Indian Federalism, Centre-State Relations, Role of Governor, Panchayati Raj. The Functioning – Role of Class, Caste, Language, Region and Communalism in Indian Politics, Secularism, National Integration, Political Elites, Changing Composition, Political Parties and Political Participation, Planning and Developmental Administration, Socio- Economic changes and their impact on Indian Democracy. Constitutional Amendment. Impact of Information Technology on Administration. Scientific Management Theory :Taylor. Welfare State Approach. Budgeting and Performance Budgeting-Process

Unit- V.

Indian Foreign Policy. Determining Elements, Characteristics, Panchsheel. Relations with Neighbours ; Pakistan, China, Bangla Desh, Nepal, Sri Lanka & Afghanistan. Relations with Super Powers; SA, USSR/Russia. India and other Organisations- United Nations Organisation, Commonwealth, SAARC, Afro-Asian Solidarity, non-alignment movement, Disarmament, Human Rights, Environmental issues, North-South Dialogue, South-South Dialogue, Nuclear Policy, Liberalization and Globalisation. Estimation of Non-alignment and Relevance.

Reference Books –

- 1- भारतीय राजनीति और संविधान, सुभाष कश्यप, राजकमल प्रकाशन, नई दिल्ली।
- 2- भारतीय शासन एवं राजनीति ए. डॉ. बी. एल. फड़िया – विषाल प्रकाशन मुल्फर नगर।
- 3- Politics in India, R.Kothari, New Delhi, Orient Longman, 1970
- 4- आधुनिक राजनीतिक चिन्तन – डॉ. के. एस. सक्सेना, विषाल प्रकाशन मुल्फर नगर।
- 5- अन्तरराष्ट्रीय राजनीति, डॉ. पुखराज जैन, डॉ. बी. एल. फड़िया, साहित्य भवन आगरा।
- 6- Public Administration, Pukharaj Jain, Shahitya Bhawan Agra
- 7- राजनीतिक सिद्धान्त, डॉ. जे. श्यामसुन्दरम, डॉ. सीपी शर्मा, रामप्रसाद एंड संस
- 8- अन्तरराष्ट्रीय विधि एवं मानवाधिकार, हरीष कुमार खत्री, कैलाष पुस्तक सदन भोपाल।

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: History

Unit-I.

Sources of Ancient Indian History . Indus valley civilisation-origin, extent, Characteristic, features, main trade and contacts, causes of decline. Vedic civilisation – political, social and economic patterns, major religious ideas and rituals. Jainism and Buddhism sects. The age of the Mauryas- extent of administration, social and economic conditions. Ashoka's policy and reforms. The Indo-Greek conquests, consolidation and decline. The Gupta age: political and cultural aspects. Chalukya, Pallava and the Vardhan Empires. Emergence of the Rajput states-origin, polity and culture.

Unit-II.

India under the Sultans of Delhi: Indian society on the eve of Mahamud, Ghazni's invasions, Establishment of State politics and administrative principles under Mohammad bin Tughlaq and Firoz. The Lodis. Cultural development during the Sultanate- Bhakti Movement, Sufism, art & architecture, literature and the society. The Vijaynagar and the Bahamani Empires: Polity and culture.

Unit-III.

Profile of India in 1526 and Babar's invasion. Achievements of Babar, Humayun and Shershah Suri. National Monarchy under Akbar : New concept of monarchy. Akbar's religio-political out-look, his relations with the non-Muslims and administrative measures. Age of Jahangir and Shahjahan. Climax and disintegration of the Mughal Empire under Aurangzeb : Aurangzeb's religious policy, expansion of the Mughal Empire in Deccan, revolts against Aurangzeb, relations with the Marathas, disintegration of the Empire. Mughal Administration. Art, architecture and society under the Mughal Emperors.

Unit-IV.

Rise of the British power in Deccan and Bengal; Anglo- French struggle, relations with the Nawabs of Bengal. Anglo-Maratha relations: 1772 A.D. to 1818 A.D. The expansion and consolidation of British rule from 1789 to 1856: With special reference to Wellesley, Lord Hastings, William Bentinck and Dalhousie. Revolt of 1857: Causes, nature and consequences. Salient features of the new British policy under the Crown, Queen's Proclamation. Mayo's reforms, British liberalism under Ripon, Curzon's reforms. British economic policies: Trade, industry and agriculture.

Unit-V.

Socio-religious Movements- Brahma Samaj, Prarthana Samaj, Arya Samaj, Theosophical Society, Ram Krishna Mission. Indian National Movement-Genesis, establishment of the Indian National Congress, different phases of the Movement (1885-1919), 1919-1939 (Gandhian Phases) Intensification of the freedom struggle (1939-1947). Builders of Modern India: Raja Ram Mohan Roy, Rama Krishna, Dayanand Saraswati, Vivekanand, Tilak, Gokhale, Gandhi and Nehru. Indian constitutional developments- Acts of 1858, 1892, 1909, 1919 and 1935 .

Reference Book-

1. Political History of ancient India: - . H.C. Roychavdhary, Hyderabad Orient Lengmen Publication.
2. The Age of impartial unity: - . R.C. Majumdar , Vidya Bhawan Mumbai .
3. History of India: - Romilathapar ,Bangalor , Orient Blackswanpvt ltd.
4. Economic History of Medieval India, 1200-1500.Irfan Habib, New Delhi
5. History of Indian and Eastern Architecture. Forguson, London
6. Social, Cultural and Economic History of India, Chopra, Puri and Das
7. Sardesai- G. S : A New History of Maratha's –Vol I & III .
8. आधुनिकभारत का इतिहास एस.के. वर्मा ए.एस.बी.पी.डी. पब्लिसिंगहाउस आगरा
9. आधुनिकभारत का इतिहास जगन्नाथ प्रसाद मिश्रा, पटना

Dr. C. V. Raman University Bilaspur (C.G.)

Subject : Library And Information Science

Unit –I : Information Science

- Definition, Scope, Objectives, Genesis & Development.
- Information Science as a discipline and its relationship with other subject fields.
- Information Society and Information Transfer cycle.
- Information Industry- Generators, Providers and Intermediaries.

Unit –II : Management of Library

- Management - Meaning, definitions and objectives.
- School of Management thoughts.
- Collection Development.
- Functions and Principles of Scientific Management.
- Human Resource Management.
- Budgeting Techniques and Methods.
- Total Quality Management (TQM).

Unit –III : Information Sources and Services

- Sources of Information - Primary, Secondary and Tertiary.
- Types of Information Sources: Geographical Sources, Biographical Sources, Statistical Information Sources, Sources for current affairs. Non-Documentary Sources, Human Resources.
- Types of Services - Information Services Concepts, Definition and their needs, Reference and Information Services, Indexing and Abstracting Services, Current Awareness Services (CAS), Selective Dissemination of Information (SDI), Online Services, Reprographic Services, Document Delivery & Translation Service, Referral Services.

Unit –IV : Library Classification & Cataloguing

- Library Classification - Meaning, Definition, Objectives and need.
- Standard Schemes of Library Classification - Introduction, Features and applications - CC, DDC & UDC.
- Library Cataloguing - Meaning, Definition, Objectives and need.
- Canons & Principles.
- Library Cataloguing Codes - CCC and AACR - II.

Unit –V : Information Technology : Basics & Application

- Information Technology : Concept and need.
- Impact of Information Technology on Society.
- Library Automation and its need.
- Digital Libraries Vs Virtual Libraries.
- Software for Library Automation - KOHA & SOUL.
- Role of UGC in the growth and development of Library and Information Centers.

Reference Books:

1. Information Communication & Society, Sharma Arvind, ESS ESS Publications
2. Suchana Avam Sandarbha Seva Ke Naveen Aayaam, Tripathi S.M, ESS ESS Publications.
3. Library Classification, Kumar Krishna, ESS ESS Publications.
4. Suchana Sanchar Prodyogiki, Singh Shankar, ESS ESS Publications.
5. E-Suchana Srot Evam Sevayen, Arvind Kumar Sharma, ESSESS Publications.
6. Fundamentals of Cataloguing theory, Tripathi S. M. & Shoukeen N. S, Y. K. Publishers.
7. Fundamentals of Library Classification, Tripathi S. M. & Shoukeen N. S, Y. K. Publishers.

Dr. C.V. Raman University, Bilaspur (C.G.)

Subject: Social Work

Unit- I

Evolution of Social Work Profession: Impact of Social Reform Movements: Factors that influenced the emergence of method approach in Social Work Practice; Social Work profession and Human Rights.
Social Work Education: Content, Training, Supervision, Problems and Challenges.
Meaning and Characteristics of Society, Community, Social Group and Social Institution; Social Structure and Social Stratification; theories of Social change and Social Disorganisation.

Unit- II

Concept and Causative Factors of Indian Social Problems- Analysis. Intervention in Social Problems – Government and Voluntary Efforts at Micro- and Micro- levels. Role of the Social Workers in identifying social problems and development of appropriate strategies.

Unit-III

Study of Group Process- Group Dynamics, Member's behavior, leadership and Role of the Worker in various settings. Community organization as a Para-political process- Networking, conscientisation, planning and organizing, roles and strategies of social movements- types and role of NGOs.

Unit-IV

Social Policy- Concept and Scope, Distinction between Social and Economic Policies, Place of Ideology and Values. Concept of Social Justice- Its relationship with Social Legislation: Civil Rights; Human Rights; and Issues of Social Justice.

Unit-V

Global Efforts for human Development, Concept of Sustainable Development. Social Work and social Development. Problem of Social Development in India.

Suggested Readings:

- An introduction to Social Work- Beatly J. Piccard
- History and Philosophy of Social Work in India- Prof A.R.Wadia
- Social Group Work: Principles and Practice- H.B.Treker
- Community Organization- Dr.(Prof.) Banmala
- Organization of Social Welfare – A.S. Kohli & S.R. Sharma
- Social Problems in India- Ram Anuja
- Social Justice and Development of Weaker Section- Bindheswar Pathak

(5) Discipline: Information Technology

Subject Name

Subject Code

(i) Information Technology & Computer Application

01

Dr. C.V. Raman University Bilaspur(C.G.)
Subject:- Information Technology and Computer Application

Unit-I

Data, Information, definition of data structure, arrays, stack, queues, linked lists, heaps, hashing. **Tree:** tree and rooted tree, B trees and B+ trees, spanning trees. **Graph:** walks, paths, connected graphs, cycles and circuits.

Unit –II

OOP's concept, arrays, structure, union, string, pointers, data type, function, control statements, constructor, destructor, overloading, templates, Exception handling.

Unit-III

E-R diagrams, **Normalization-** 1NF, 2NF, 3NF, BCNF, 4NF, Data Definition Language(DDL), Data Manipulation Language(DML), Data Control Language(DCL), Database objects: views, indexes, sequences, data dictionary.

Unit-IV

OSI reference model, TCP/IP model, Transmission media: wired and wireless, switching, ISDN, ATM, switch, hub, router, repeater, gateway, cryptography. Routing algorithms, network security tools, congestion control.

System Development Life Cycle(SDLC), waterfall model, prototypes, spiral model, bottom up and top down models, software reengineering.

Unit-V

Types of operating system, virtual memory, paging, fragmentation, mutual exclusion, critical region, CPU scheduling, deadlock, Unix: File system, process management, shell, kernel, architecture, commands, meta characters.

Definitions, AI approach, Breadth first, depth first, A, A*, AO*, performance comparison of search techniques, expert systems, decision support system.

Reference Books:

1. Operating System Concept by A. Silberschatz, Peter B. Galvin and GargeGange , Wiley Publication.
2. Software Engineering by Roger S. Pressman, McGraw Hill International Edition.
3. Data Communications and Networking by Behrouz A. Forouzan, Tata McGraw Hill , 2nd Edition.
4. Database System Concepts by A. Silberschatz, H. F. Korth and S. Sudarshan, McGraw Hill International Edition, fifth Edition.
5. The Complete Reference, C++ by Herbert Schildt, McGraw Hill International Edition.
6. Data Structure by Seymour Lipschutz, Tata McGraw Hill Edition.
7. Artificial Intelligence by Elaine Rich, Kevin Knight and S. B. Nair, McGraw Hill Pvt. Ltd., 3rd edition.

(6) Discipline: Law

Subject Name

Subject Code

(i) Law

01

Dr. C.V. Raman University Bilaspur(C.G.)

Subject:-Law

Unit –I

Legal theory & jurisprudence

Meaning and Definition of Law .The Nature and Function of Law , The Purpose of Law — The Classification of Law — Equity, Law and Justice — Theory of Sovereignty., Sources of Law .Schools of Jurisprudence — Natural, Analytical, Historical, and Sociological Schools of Jurisprudence. Rights and Duties, Theories of Punishment. Concepts of Possession and Ownership.

Unit –II

Constitutional Law of India

Preamble, fundamental Rights and Duties, Directive Principal of state Policy, judiciary ,Executive, Union State Legislative Relation ,Emergency Provisions, Amendment of Constitution, Writ Jurisdiction.

Unit –III

Public International Law & Human Rights

Nature of International law and its relationship with Municipal Law, Source of International Law, Recognition of States and Governments, United Nations, Settlement of International Disputes, Concept Development of Human Rights in International & Indian Context.

Unit –IV

Law of Crime-& Family Law

Nature and definition of offence, General Exceptions, Common Intention and Common object, Criminal Attempt, Conspiracy and Abetment, Offence against Women. Concepts of Family Law. Sources of Family Law in India. Marriage , Maintenance & Guardianship under Hindu & Muslim Law.

Unit –V

Methodology of Legal Research.

Meaning, needs and scope of Legal research , Socio legal research, Doctrinal and non-Doctrinal, Relevance of empirical research, Induction and Deduction. Formulation of the Research problem,

Reference Books:

1. Jurisprudence :- Salmond , Universal Publishers 12th Edn. 1966.
2. Legal Theory and Jurisprudence :- V.D. Mahajan, Eastern Book Company Lucknow, 5thEdn.1977.
3. Indian Constitutional Law :- M.P. Jain, , Wadhwa & Co, Nagpur 2009.
4. Constitution of India :- V.N. Shukla , Eastern Book Company Lucknow 2010.
5. Indian Penal Code :- Ratan lal and Dhiraj Lal Wadhwa & Co, 2000
6. Family Law :- Paras Diwan , AllahabadLaw Agency Allahabad 2012
7. International Law and Human Rights :- H.O. Agarwal, Central Law Publications Allahabad 2010.
8. Legal education and research methodology :- Dr. Mona Purohit , Central Law Publications Allahabad 2010.



डॉ. सी.वी.रामन् विश्वविद्यालय

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