

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester-B.TECH-4th

Subject-Watershed Hydrology

Total marks in End Semester Exam-100

Minimum No. of Class Test:02

Branch-Agricultural Engineering

Course Code- B094411(094)

L:2 T:1 P:0

Credits-3

Course Objectives:

- To be familiar with Hydrologic cycle, Precipitation-forms and Weather systems for precipitation
- To be familiar with analysis of rainfall
- To be familiar with Geomorphology of watersheds
- To be familiar with Stream flow and Floods and their management.

UNIT I :	Introduction, Hydrologic cycle, Precipitation-forms, Weather systems for precipitation, Characteristics of precipitation in India; Rainfall measurement, rain gauge network, optimum number; Representation of rainfall data-Mass curve, hyetograph, Moving average curve etc; Mean precipitation over an area-Different methods.
UNIT II :	Frequency analysis of point rainfall, Calculation of rainfall return period and probability, plotting position; Estimation of missing data, test for consistency of rainfall records; Double mass curve technique; Abstractions from precipitation-interception; Depression storage; infiltration; evaporation; evapo-transpiration – estimation and measurement; Reservoir evaporation-methods of reduction, Infiltration indices.
UNIT III :	Geomorphology of watersheds – stream number, stream length, stream area, stream slope and Horton’s laws; Runoff – factors affecting, measurement; Runoff characteristics of streams, estimation of peak runoff rate and volume; Rational method, Cook’s method, SCS Curve number method.
UNIT IV :	Stream flow- measurement of stage and velocity, rating curve, extension of rating curve; Hydrograph; components, Factors affecting the shape of hydrograph, base flow separation, unit hydrograph theory-Assumptions, applications, derivation of unit hydrographs, unit hydrograph of different durations, dimensionless unit hydrograph, distribution hydrograph, synthetic unit hydrograph, uses and limitations of unit hydrograph.
UNIT V :	Floods-Terms and definitions, Head water flood control – methods, retards and their location; flood routing – graphical methods of reservoir flood routing; Channel routing- Muskingum method; Hydrology of dry land areas – drought and its classification; introduction to watershed management and planning.

Text books:

1. Chow , V.T.(1964). Hand Book of Applied Hydrology. Mc. Graw Hill, New York.
2. Linsley, R.K. Kohler, M.A., and Paulhus, J.L.H. (1984). Hydrology for Engineers.McGraw Hill Pub.Co.Japan.

Reference books:

1. Raghunath, H.M.(2006). Hydrology-Principles, Analysis and design.New age International (P) Ltd.
2. Singh, V.P.(1992). Elementary Hydrology.Prentice Hall India.
3. Subrahmanya, K.(1987) . Engineering Hydrology.Tata McGraw Hill Pub.Co. New Delhi.

Course Outcome:

After studying the contents of the syllabus in detail the students will be able to

1. Apply knowledge to design water shed structures.
2. Demonstrate creativeness in designing new systems, components and processes in the field of engineering in general and agricultural engineering in particular.
3. Identify, analyse, and solve engineering problems useful to the society.
4. Work effectively with engineering and science teams as well as with multidisciplinary designs.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester-B.TECH-4th

Subject-Soil and Water Conservation Structures

Total marks in End Semester Exam-100

Minimum No. of Class Test:02

Branch-Agricultural Engineering

Course Code- B094412(094)

L:3 T:1 P:0

Credits-4

Course Objectives:

- To be familiar with soil and water conservation techniques, reasons for Soil erosion its causes, types and agents
- To learn methods of soil erosion and control and water conservation
- To learn about the design of conservation structures and spillways

UNIT I	Soil erosion – causes, types and agents of soil erosion; water erosion – forms of water erosion, mechanics of erosion; Effect of slope, slope length, soil, vegetation, topographical features and rainfall on erosion, gullies and their classification, stages of gully development; soil loss estimation – universal soil loss equation and modified soil loss equation, determination of their various parameters.
UNIT II	erosion control measures agronomic measures – contour cropping, strip cropping mulching; mechanical measures – terraces – level and graded broad base terraces and their design, bench terraces and their design, layout procedure, terrace planning, bunds – contour bunds, graded bunds and their design; gully and ravine reclamation – principles of gully control – vegetative and temporary structures; control measures for stream bank and coastal erosion.
UNIT III	Landslides-factors causing it, land slips, Measures for control; Sedimentation-sedimentation in reservoirs and streams; Estimation and measurement, sediment delivery ratio, trap efficiency; Land use capability classification; Grassed waterways and their design; Introduction to water harvesting techniques; introduction to stream water quality and pollution. Use of Geotextiles in soil and water conservation. Wind erosion – factors affecting wind erosion, mechanics of wind erosion, soil loss estimation, wind erosion control measures – vegetative, mechanical measures, wind breaks and shelterbelts, sand dunes stabilization.
UNIT IV	Classification of conservation structures, functional requirements of soil erosion control structures; flow in open channels-types of flow, state of flow, regimes of flow, energy and momentum principles, specific energy and specific force, flow transitions due to hump and width variations; hydraulic jump and its application, type of hydraulic jump, energy dissipation due to jump, jump efficiency, relative loss of energy; straight drop spillway – general description, functional use, advantages and disadvantages, structural parts and functions; components of spillway, hydrologic and hydraulic design, free board and wave free board, aeration of weirs, concept of free and submerged flow.
UNIT V	Structural design of a drop spillway-loads on headwall, variables affecting equivalent fluid pressure, determination of saturation line for different flow conditions, seepage under the structure, equivalent fluid pressure, triangular load diagram for various flow conditions, creep line theory, uplift pressure estimation, safety against sliding, overturning, crushing and tension; chute spillway-general description and its components, hydraulic design, energy dissipaters, design criteria of a SAF stilling basin and its limitations, drop inlet spillway-general description, functional use, design criteria; design of diversions; small earth embankments-their types and design principles, farm ponds, percolation ponds, check dams and reservoirs. Environmental impact assessment.

Text books:

1. Chow, V.T. (1957). Open Channel Hydraulics. McGraw Hill.
2. Dhruvanarayana, V.V.(1993). Soil and Water Conservation Research in India. ICAR, New Delhi

Reference books:

1. Schwab, G.O. Frevert, R.K., Edminister T.w., and Barnes, K.K. (1993). Soil and water conservation engineering. John Wiley and sons.
2. Singh, G. (1985). Manual of Soil and water conservation Practice in India. Central Soil and water conservation Research and training institute, Dehradun.

Course Outcome:

After studying the contents of the syllabus in detail the students will be able to

1. Apply knowledge to design soil and water conservation structures.
2. Acquire knowledge and hands-on competence related to various aspects of soil and water conservation.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester-B.TECH-4th

Subject-Crop Process Drying Storage Engineering

Total marks in End Semester Exam-100

Minimum No. of Class Test:02

Branch-Agricultural Engineering

Course Code- B094413(094)

L:3 T:1 P:0

Credits-4

Course Objectives:

- To be familiar with agricultural crop processing and preservation
- To learn methods of mixing and screening
- To learn about crop drying and moisture control processes
- To learn about methods of storage and causes of spoilage

UNIT I:	Scope and importance of food processing, post harvest losses, principles and methods of food processing.Processing of farm crops; cereals, pulses, oil seeds, fruits and vegetables and their products for food and feed. Processing of animal products, minimal processing, Principle of size reduction, grain shape, size reduction machines; crushers, grinders, cutting machines etc. – operation, efficiency and power requirement – Rittinger’s , Kick’s and Bond’s equation, fineness modulus.
UNIT II:	Theory of mixing, types of mixtures for dry and paste materials, rate of mixing and power requirement, mixing index. Theory of separation, size and unsized separation, types of separators, size of screens, sieve analysis, capacity and effectiveness of screens, pneumatic separation.
UNIT III:	Microwave and Dielectric heating. Extrusion processing, Scope & importance of material handling devices, study of different types of material handling systems; belt, chain and screw conveyor, bucket elevator, pneumatic conveying, gravity conveyor- design consideration, capacity and power requirement.
UNIT IV:	Moisture content and methods for determination, importance of EMC and methods of its determination, EMC curve and EMC model, principle of drying, theory of diffusion, mechanism of drying-falling rate, constant rate, thin layer, deep bed and their analysis, critical moisture content, drying models, calculation of drying air temperature and air flow rate, air pressure within the grain bed, Shred’s and Hukill’s curve, different methods of drying including puff drying, foam mat drying, freeze drying, etc. Study of different types of dryers- performance, energy utilization pattern and efficiency, study of drying and dehydration of agricultural products.
UNIT V:	Types and causes of spoilage in storage, conditions for storage of perishable products, functional requirements of storage, control of temperature and relative humidities inside storage, calculation of refrigeration load; modified atmospheric storage and control of its environment, air movement inside the storage, storage of grains: destructive agents, respiration of grains, moisture and temperature changes in stored grains; conditioning of environment inside storage through different methods, warehouse- design and control of environment. Storage condition for various fruits and vegetables under cold and CA storage system.Economic, aspects of storage.

Text books:

1. Carl. W.Hall. (1980).Crop drying.AVI Publishing Co. Inc.
2. Chakravarty, A. (1995). Post Harvest technology of Cereals, Pulses and Oil Seeds. Oxford and IBH Pub.Co. Calcutta.

Reference books:

1. 1. Multon, J.L. (1989). Preservation and Storage of Grains, Seeds and their By-Products: Cereals, oil Seeds, Pulses and Animal Feed. CBS Publishing and Distributions, Delhi
2. 2.Ooraikul, B and Stiles, M.E. (1992).Modified atmosphere Packaging of Food. Ellis HorwoodPublication,New York.

Course Outcome:

After studying the contents of the syllabus in detail the students will be able to

1. Practically Apply the knowledge to design processes and systems for Crop Process, Drying and Storage
2. Acquire knowledge and hands-on competence related to various aspects of Crop Process, Drying and Storage.
3. Demonstrate creativeness in designing new systems, components and processes in the field of engineering in general and Agricultural engineering in particular.
4. Identify, and solve engineering problems useful to the society

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester-B.TECH-4th

Subject-Engineering Thermodynamics
Total marks in End Semester Exam-100
Minimum No. of Class Test:02

Branch-Agricultural Engineering

Course Code- B094415(094)

L:3 T:1 P:0

Credits-4

Course Objectives:

- To understand the applications of engineering thermodynamics in real life situations
- To perform gas power cycle analysis
- To analyze reciprocating air compressors
- To perform vapour power cycle analysis
- To analyze steam condenser, cooling pond and cooling towers.
- To analyze thermodynamic system with compressible fluid.

UNIT- I	Second law of thermodynamics: Limitations of the First Law – Thermal Reservoir, Heat Engine, Heat pump, Parameters of performance, Second Law of Thermodynamics, Kelvin-Planck and Clausius Statements and their Equivalence, PMM of Second kind, reversibility and irreversibility, causes of irreversibility, Carnot cycle, Carnot theorem, Absolute thermodynamic temperature scale.
UNIT-II	Entropy: Clausius theorem, the property of entropy, the inequality of Clausius, Entropy principle and its applications, Entropy change during different thermodynamic processes.
UNIT- III	a) Equation of state: Ideal gas equation of state, deviation of Real gas from ideal gas, van der waal's equation of state, correction for the intermolecular attractions, correction for finite size of molecules, evaluation of constants a and b, virial expansions, limitations of the van der Wall's equation, Reduced coordinates, compressibility factor, the law of corresponding states as per van der Wall's principle. b) Mixture of perfect gases: Mass Fraction, Mole fraction, Dalton's Law of additive pressure, Amagat-Leduc of additive volumes, Properties of mixture of ideal non reactive gases –gas constant, molecular weight, specific heat, internal energy, enthalpy and entropy.
UNIT-IV	Properties of Pure substances: Thermodynamic properties of pure substances in solid, liquid and vapour phases, Phase Transformations, dryness fraction, Triple point, critical state, p-v, p-T, T-s, h-s diagrams, P-V-T surfaces,– Properties and processes in ideal vapour, use of steam tables and Mollier's diagram in determination of steam properties, energy interaction and entropy calculations.
UNIT-V	Boilers: Classification of boiler, difference between water tube and fire tube boiler, construction and working of Cochran fire tube boiler, construction and working of Babcock Wilcox water tube boiler, High pressure boiler- advantages, construction and working of Lamont boiler, function of various boiler mounting and accessories, Draught-definition and classification. Performance of Boiler: Evaporation rate, equivalent evaporation, factor of evaporation, Boiler efficiency, Boiler trial, heat balance sheet of boiler. Studies based on Agriculture Engineering Applications.

Text Books:

1. Thermodynamics- An Engineering Approach – Cengel & Boles – McGraw Hill, Delhi
2. Engineering Thermodynamics – P.K. Nag – TMH Publishers

Reference Books:

1. Fundamental of engineering thermodynamics- R.Yadav ,CPH, Allahabad
2. Thermal Science & Engineering – D.S. Kumar – S.K. Kataria & Sons
3. Fundamental of Thermodynamic- Claus Borgnakke, Richard E. Sonntag, Wiley,Delhi
4. An Introduction to Thermodynamics-Y.V.C.Rao ,University Prass, Hyderabad
5. Thermodynamics & Thermal Engineering – J. Selwin Rajadurai – New Age International Publishers
6. Thermodynamics – C.P. Arora – TMH , Delhi
7. Thermodynamics – S.C. Gupta – Pearson Education,Delhi

Course Outcome:

After studying the contents of the syllabus in detail the students will be able to

1. Apply knowledge of classical thermodynamics for formulating and solving engineering problems.
2. Acquire knowledge and hands-on competence in applying the concepts of thermal sciences in the design and development of mechanical systems.
3. Demonstrate creativeness in designing new systems components and processes in the field of engineering in general and agricultural engineering in particular.
4. Identify, analysis, and solve mechanical engineering problems useful to the society.
5. Work effectively with engineering and science teams as well as with multidisciplinary designs.
6. Skillfully use modern engineering tools and techniques for mechanical engineering design, analysis and application.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester-B.TECH-4th

Subject-Soil Mechanics

Total marks in End Semester Exam-100

Minimum No. of Class Test:02

Branch-Agricultural Engineering

Course Code- B094415(020)

L:2 T:0 P:0

Credits-2

Course Objectives:

- To provide basic knowledge about Geotechnical Engineering, soil formation, index properties of soil, physical and engineering properties of soil.
- To know about the types of soil according their classification, classification system, field identification, study of effective stress, capillary seepage force, etc.
- How to measure the compaction and permeability of soil by lab experiments theoretically uses of Darcy law. Two dimensions flow and develop flow net and characteristics.
- To know about stresses due to applied load a soil mass, consolidation and their factor one dimensional consolidation as per Terzaghi theory
- To find shear strength in soil with the help of Mohr circle. How shear strength can be determine in laboratory, soil exploration.

UNIT I:	Introduction: Introduction to Geotechnical Engineering; Unique nature of soil; Soil formation and soil types, inter relationship of soil, soil mechanics and geotechnical engineering, aim and scope of soil mechanics. Index Properties of Soil Basic definitions; phase relations; physical and engineering properties of soil, soil grain and properties coarse and fine grained soils, Stoke's law, method of fine grained analysis.
UNIT II:	Soil Classification and Effective Stress: Indian standard soil classification system, Purpose of soil Classification, Different System of soil Classification, Field Identification, Principal of Effective Stress and Related Phenomena, Types of soil moisture, principal of effective stress; capillarity; seepage force and quicksand condition;
UNIT III:	Compaction, Permeability and Seepage Analysis of Soil: Clay mineralogy, soil structure, compaction theory, laboratory compaction tests, method of compaction control, permeability, one dimensional flow, permeability of soil, Darcy's law, laboratory methods of determination, pumping out tests for field determination of permeability, seepage through soils, two-dimension flow problems, confined flow and unconfined flow, flow net and their characteristics, exit gradient and failure due to piping, criteria for design of filters.
UNIT IV:	Stresses due to Applied Loads and Consolidation: Stresses due to applied Loads, Boussinesq equation of vertical pressure under concentrated loads, rectangularly loaded area, circular Loaded Area Newmart's Chart, Westergaard's equation, compressibility, effects of soil type, stress history and effective stress on compressibility, consolidation, factors affecting consolidation and compressibility parameters. Normally consolidated and over consolidated soils, different forms of primary consolidation equation – transient flow condition, Terzaghi theory of one-dimensional consolidation and time rate of consolidation.
UNIT V:	Shear Strength and Soil Exploration: Introduction, stress at a point and Mohr's stress circle; Mohr- Columb Failure criterion: Laboratory tests for shear strength determination; shear strength parameters; UU, CU and CD tests and their relevance to field problems; Shear strength characteristics of normally consolidated and reconsolidated clays; Shear strength Characteristics of sands, Soil Exploration, Various Method of field Exploration, Undisturbed Soil Sampling equipments and Field test (Static and Dynamic Penetration Test, PLT), cyclic plate load test and modern electronic test of site characterization.

Text Books:

1. Soil Mechanics and Foundations – B.C. Punmia, A. K. Jain, A. K. Jain (Laxmi Publication)
2. Soil Engineering in Theory and Practice (Vol-II) – Alam Singh (Asia Publishing House)

Reference Books:

1. Soil Mechanics and Foundation Engineering – S.N. Murthy (Dhanpat Rai Publications)
2. Basic and Applied Soil Mechanics – GopalRanjan and Rao A.S.R. (New Age International)
3. Design Aids in Soil Mechanics and Foundation Engineering – S.R. Kaniraj (Tata McGraw Hill)
4. Geotechnical Engineering Principles and Practice – D. P. Coduto (Prentice Hall of India)
5. Soil Mechanics and Foundation Engineering – Garg S.K. (Khanna Publishers)
6. Soil Mechanics and Foundation Engineering – Purushothama Raj (Pearson Education)
7. Text Book of Geotechnical Engineering – I. H. Khan (PHI Learning)
8. Foundation Engineering – R. B. Peck, W. E. Hanson, and T. H. Thornburn (John Wiley)
9. Foundation Design and Construction – M. J. Tomlinson (Pearson Education)

Course Outcome:

After studying the contents of the syllabus in detail the students will be able to

1. Apply knowledge of soil mechanics for various civil structure designs.
2. Acquire knowledge and hands-on competence in applying the concepts of soil mechanics in the design and development of mechanical systems.
3. Demonstrate creativeness in designing new systems components and processes in the field of engineering in general and agricultural engineering in particular.
4. Identify, analysis, and solve mechanical engineering problems useful to the society.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester-B.TECH-4th
Subject-Soil Mechanics Lab
Total marks in End Semester Exam-40

Branch-Agricultural Engineering
Course Code- B094421(020)
L:0 T:0 P:02 Credits-1

List of Experiments: (At least Ten experiments are to be performed by each student)

1. Determination of water content and specific gravity of soil.
2. Determination of field density of soil by core cutter and sand replacement method.
3. Grain size analysis-sieving (Dry sieve analysis) and hydrometer method.
4. Determination of liquid limit by Casagrand'e method.
5. Determination of liquid limit by cone penetrometer and plastic limit.
6. Determination of shrinkage limit.
7. Determination of permeability by constant head and variable head method.
8. Determination of compaction properties by standard proctor test.
9. Determination of shear parameters by Direct shear test.
10. Determination of unconfined compressive strength of soil.
11. Determination of shear parameters by Triaxial test.
12. Determination of consolidation properties of soils.
13. Verification of Bernoulli's theorem.
14. Determination of coefficient of discharge of venturimeter and orifice meter.
15. Determination of coefficient of friction in pipeline.
16. Determination of coefficient of discharge for rectangular and triangular notch.
17. Determination of coefficient of discharge, coefficient of velocity and coefficient of contraction for flow through orifice.
18. Measurement of force exerted by water-jets on flat and hemispherical vanes.
19. Determination of metacentric height.
20. Determination of efficiency of hydraulic ram.
21. Performance evaluation of Pelton and Francis turbine.
22. Velocity distribution in open channels and determination of Manning's coefficient of rugosity.

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester-B.TECH-4th
Subject-Agricultural Topography Lab
Total marks in End Semester Exam-40

Branch-Agricultural Engineering
Course Code- B094422(094)
L:0 T:0 P:2 Credits-1

List of Experiments: (At least Ten experiments are to be performed by each student)

1. Chain survey of an area & preparation of map.
2. Compass survey of an area & plotting of compass survey
3. To determine the elevation of a point with respect to reference elevation by Fly Leveling
4. Contouring and its plotting.
5. Measurement of horizontal angle by repetition method.
6. Measurement of horizontal angle by reiteration method.
7. To determine the height of object when base is accessible
8. To determine the height of tower when base is inaccessible and instrument stations are in same vertical plane.
9. To find out the position of points by the Plane Table Radiation and Intersection method.
10. Determination of location of a point with the help of Two point problem.
11. Determination of location of a point with the help of Three point problem.
12. Setting out of curve by ordinates or offsets from long chord
13. Setting out of curve by successive bisection of arcs.
14. Setting out of curve by offsets from chords produced .
15. Setting out of curve by two theodolite method.
16. Setting out of curve by Rankine's method.

Equipment/Machines/Instruments/Tools/Software Required:

- Metric Chain (30 m)
- Tape (15m, 30 m)
- Ranging Rod (2 m, 3m)
- Plumb bob
- Arrows
- Theodolite
- Leveling Staff (Folding and Non-folding)
- Wooden Pegs
- Plain Table Accessories (Drawing Board – 70 x 60 x 1.5 cm, Spirit Level, Trough Compass, Tripod Stand, Alidade,
- Plumb bob for centering)
- Offset Rod
- Optical Square
- Cross Staff

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Semester-B.TECH-4th

Subject-Crop Process Drying Storage Engineering Lab

Total marks in End Semester Exam-40

Branch-Agricultural Engineering

Course Code- B094424(094)

L:0 T:0 P:2

Credits-1

List of Experiments: (At least Ten experiments are to be performed by each student)

1. Preparation of flow and layout charts of a food processing plant.
2. Determination of fineness modulus and uniformity index.
3. Performance evaluation of hammer mill.
4. Performance evaluation of attrition mill.
5. Study of cleaning equipment.
6. Separation behavior in pneumatic separation.
7. Study of grading equipment.
8. Evaluation of performance of indented cylinder separator.
9. Performance evaluation of screen pre-cleaner.
10. Determination of mixing index and study of mixers.
11. Study of conveying equipments.
12. Performance evaluation of belt conveyor.
13. Performance evaluation of bucket elevator.
14. Performance evaluation of screw conveyor.
15. Study of mechanics of bulk solids affecting cleaning.
16. Study of mechanics of drying of grains.
17. Measurement of moisture content during drying and aeration.
18. Measurement of relative humidity during drying and aeration using different techniques.
19. Measurement of air velocity during drying and aeration.
20. Problems using psychometric chart.
21. Drying characteristic and determination of drying constant.
22. Determination of EMC and ERH.
23. Study of various types of dryers.
24. Design of dryer

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

Name of program: **Bachelor of Technology**

Branch: **Common to All Branches**

Semester: **IV**

Subject: **Indian Culture and Constitution of India**

Code: B000406(046)

Total Theory Periods: **2/Week**

Total Tutorial Periods: **NIL**

Assignments: **Two (Minimum)**

Total Marks in ESE: **NIL**

Marks in TA: **10**

Objective: The Constitution is the supreme law and it helps to maintain **integrity** in the society and to promote unity among the citizens to build a great nation. The main objective of the Indian Constitution is to promote harmony throughout the nation.

Course Objectives

Upon completion of this course, the student shall be able

- To understand Meaning and concepts of Traditional and Modern of Culture
 - To understand Sources of the Study of Indian Culture
 - To Enable the student to understand the history and importance of constitution
 - To understand philosophy of fundamental rights and duties
 - To understand the powers and functions of executive, legislature and judiciary
 - To understand the powers and functions of state government
 - To understand the recent trends in Indian constitutional and election commission of India.
- To understand the central and state relation, financial and administrative.

UNIT-I

Meaning and concepts of Culture: Traditional and Modern concepts of Culture-Notions of Culture in textual tradition, anthropological, archaeological and sociological understanding of the term culture. Elements of Culture, concept of Indianness and value system. Relation between culture and civilization. Historiography and approaches to the study of Indian Culture– Stereotypes, Objectivity and Bias, Imperialist, Nationalist, Marxist and Subaltern. Heritage of India and world's debt to Indian Culture.

UNIT-II

Sources of the Study of Indian Culture: Archaeological: cultural remains, Monuments, Numismatics, Epigraphy; Literary sources and Oral traditions; Foreign Accounts; Archival sources.

UNIT-III

History of Indian Constitution Constitutional History, Preamble salient features, citizenship, Method of Amendment and Recent Amendments. **Rights and Duties** Fundamental Rights and Directive Principles of State Policy. Fundamental Duties. Difference between Fundamental Rights and Directive Principles of State Policy

Union Government a) President-powers and functions. Vice president powers and functions, Prime Minister and council of ministers powers and functions. b) Parliament- Loksabha, Rajyasabha- composition powers and functions.

c) Judiciary (Supreme Court) composition powers and functions Judicial Activism

UNIT-IV

State Government a) Governor: powers and functions b) Chief minister: powers and functions c) State Legislative Assembly and Legislative Council- composition powers and functions. d) High Court : composition powers and functions

UNIT-V

Recent Trends in Indian Constitutional a) Basic structure of Indian Constitution. b) Electoral Reforms c) Panchayati Raj system in India.

Books of Reference

1. **Dr. P. K. Agrawal** Indian Culture, Art and Heritage,
2. **P. Raghunadha Rao** Indian Heritage and Culture
3. M.V.Pylee, An Introduction to the Constitution of India, New Delhi, Vikas, 2005.
4. Subhash C. Kashyap, Our Constitution: An Introduction to India's Constitution and constitutional Law, New Delhi, National Book Trust, 2000.
5. Durga Das Basu, Introduction to the Constitution of India, New Delhi, Prentice Hall of India, 2001.
6. D.C. Gupta, Indian Government and Politics, VIII Edition, New Delhi, Vikas, 1994.
7. V.D. Mahajan, Constitutional Development and National Movement in India, New Delhi, S. Chand and Co., latest edition.