SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY
AUTONOMOUS
CIVIL ENGINEERING DEPARTMENT
VII SEM COURSE OUTCOMES (R16)

SUBJECT NAME	COURSE OUT COMES
Water Resources Engineering - II	**CO1**. Plan layout of diversion head works. **CO2**. Identify site selection for reservoirs and dams. **CO3**. Explain different forces acting on gravity dams. **CO4**. Carryout stability analysis of earth dams. **CO5**. Apply design principles of ogee spillways and energy dissipation works. **CO6**. Use design principles of canal structures like falls, regulators etc.
Remote Sensing And Gis Applications	**CO1**. Describe the basic principles of Remote Sensing and GIS techniques. **CO2**. Identify familiar with ground, air and satellite based sensor platforms. **CO3**. Interpret the aerial photographs and satellite imageries. **CO4**. List and create input spatial data for GIS application. **CO5**. Recognize the application of RS and GIS in Civil engineering. **CO6**. Classify RS and GIS concepts in Geomorphology, Forest, water resources engineering, Flood zone delineation mapping.
Estimation, Specifications & Contracts	**CO1**. Demonstrate the quantity calculations of different components of the buildings. **CO2**. Explain the rate analysis of different quantities of the buildings components. **CO3.** Determine the quantities of different works of roads and canals. **CO4**. Discuss and Learn various specifications and conditions of contractors. **CO5**. Compute and should be capable of finalizing the value of structures. **CO6**. Estimate in a position to find the cost of various building components.
Environmental Engineering	**CO1**. Define the sewerage systems. **CO2**. Determine characterization of Sewage. **CO3**. Develop appropriate appurtenances in the sewerage systems. **CO4**. Design suitable treatment flow for sewage treatment. **CO5**. identify the critical point of pollution in a river for a specific amount of pollutant disposal into the river. **CO6**. Observe Bio-solids (Sludge) management practices.

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V SEM COURSE OUTCOMES (R19)

SUBJECT NAME	COURSE OUT COMES
Structural Analysis-Ii	**CO1**.Determine support reactions, normal thrust and radial shear for three hinged and two hinged arches. **CO2**.Apply moment distribution method to continuous beams and portal frames. **CO3**.Solve continuous beams and portal frames using kani's method. **CO4**.Use lateral load analysis to building frames. **CO5**.Analyze cable structures and suspension bridges.
Design And Drawing Of Reinforced Concrete Structures	**CO1**.Work on different types of design philosophies **CO2**.Carryout analysis and design of flexural members and detailing **CO3**.Design structures subjected to shear, bond and torsion, design for serviceability. **CO4**.Design different type of compression members and footings. **CO5**.Design of different types of slabs and detailing.
Water Resources Engineering	**CO1**.Discuss the theories and principles governing the hydrologic processes. **CO2**.Estimate flood magnitude and carry out flood routing. **CO3**.Describe the design of diversion head works. **CO4**.Generalize planning of reservoirs and stability of the dams. **CO5**.Develop irrigation canals and canal network.
Geotechnical Engineering	**CO1**.Develop different methods of index properties of the soils and classify the soils. **CO2**.Compute different engineering properties of the soil such as compaction, permeability, consolidation and shear strength and determine them in the laboratory. **CO3**.Relate stress distribution in soils in day-to-day civil engineering practice. **CO4**.Estimate compressibility of soils **CO5**.Develop stress-strain behavior of different sands.
Transportation Engineering	**CO1**.Plan highway network for a given area. **CO2**. Determine Highway alignment and design highway geometrics. **CO3**. Illustrate Intersections and prepare traffic management plans. **CO4**. Judge suitability of pavement materials **CO5**. Design of flexible and rigid pavements and their maintenance.

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III SEM COURSE OUTCOMES (R20)

SUBJECT NAME	COURSE OUT COMES
Statistical Methods	**CO1**. Make use of the concepts of probability and their applications **CO2**. Apply discrete and continuous probability distributions **CO3**. Use the components of a classical hypotheses test **CO4**. Examine significance tests based on small and large sampling test **CO5.** Use correlation methods and principle of least squares.
Managerial Economics And Financial Analysis	**CO1.** Describe the importance of managerial economics and its utility in decision making. **CO2.**Generalize the meaning and usefulness of the production function and cost function in analyzing the firm's production activity. **CO3.** Comprehend the concept of Market structure, different types of Markets and pricing policies. **CO4.** Identify different forms of business organization and analyze their merits and demerits. **CO5**. Evaluate the investment proposals through techniques of capital budgeting and financial performance of the company through Financial Statements.
Strength Of Materials	**CO1**.Understand the basic materials behaviour under the influence of different external loading conditions and the support conditions. **CO2.**Know bending concepts and calculation of section modulus and for determination of stresses developed in the beams and deflections due to various loading conditions. **CO3**.Assess stresses across section of the thin and thick cylinders **CO4**.Calculate stresses in different engineering applications like shafts, springs, columns and struts subjected to different loading conditions **CO5**.Find Principal stresses developed in a member when it is subjected to stresses along different axes and design the sections.
Surveying And Geomatics	**CO1.**Understand the basic principles involved in linear and angular measurements. **CO2**.Identify to use various surveying instruments for Measure distances and bearings. **CO3**.Understand the concepts of levelling and location of contour. **CO4**.Measure horizontal and vertical angles using theodolite, Determine the distance and elevations of an object using tacheometric principles. **CO5.**Compute various data required for various methods of surveying for setting out of curves, Understand modern surveying methods, Calculate the area and volume of required boundaries.
Fluid Mechanics & Hydraulic Machines	**CO1**.Understand and apply concepts of fluid statics, kinematics and dynamics for solving various fluid flow problems. **CO2**.Analyze various losses in pipe flow problems and understand the measurement of flow. **CO3**.Understand the concept of hydrodynamic force of jets on stationary and moving flat, inclined and curved vanes. **CO4**.Explain the working and performance of various types of pumps and their characteristics. **CO5**.Know the working of various types of turbines and their characteristics.