DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES SUMMARY SHEET

5TH SEM

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C301. Structural Engineering	C301.1	**Recall** the importance of reinforced cement concrete**. (Level 1)**
	C301.2	**Demonstrate** about the various **design** philosophies used in structural engineering design.**(Level 2,6)**
	C301.3	**Analyze** and **design** singly and doubly reinforced sections using WSM. **(Level 4,6)**
	C301.4	**Analyze** and **design** singly and doubly reinforced sections using LSM. **(Level 4,6)**
	C301.5	**Design** elements such as slabs, columns, footing and staircases**. (Level 6)**

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Course	COURSE OUTCOMES	
C302 Hydrology &Water Resources Engineering	C302.1	**Explain** the hydrologic cycle and water budget equation and**Identify** the different forms of precipitation and their characteristics in India **(level 2, 1)**
	C302.2	**Explain** the evaporation process and its estimation methods and**Analyzing**theinterpret hydrographs and separate base flow from runoff hydrographs**(Level 2, 4)**
	C302.3	**Determine** the water requirements of different crops and**Evaluate** different irrigation methods and their suitability.**(level 3, 5)**
	C302.4	**Design** canal systems including alignment and estimation of design discharge and **Discuss** causes, effects, and remedial measures for water logging.**(level 6,2)**
	C302.5	**Compute** reservoir capacity using mass curve and demand curve methods and **Explain** the flood routing using graphical and trial and error methods(**level 3,2)**

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Course	COURSE OUTCOMES	
C303 Geotechnical Engineering	**C303.1**	**Define** different properties of soil **(level 1)**
	C303.2	**Analyze** permeability, compaction and effective stress **(level 4)**
	C303.3	**Analyze** consolidation of soil and shear strength. **(level 4)**
	C303.4	**Evaluate** the stability of slope of different types of soil **(level 6)**
	C303.5	**Discover** soil in field. **(level 3)**

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Course	COURSE OUTCOMES	
C 304 Transportation Engineering	**C304.1**	**Describe** Various terminologies of highway engineering and design geometric elements of highways and expressways.**(Level 1)**
	C304.2	**Illustrate** the traffic studies and the implement traffic regulation and control measures. **(Level 4)**
	C304.3	**Evaluate** the highway construction material and **design** rigid and flexible pavements as per IRC. **(Level 4,6)**
	C304.4	**Conversant** with various terminologies of railway Engineering. **(Level 2)**
	C304.5	Will **Design** the turnouts in railway. **(Level 4)**

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C305. Structural Analysis-II	**C305.1**	**Differentiate** and **analyze** the different kinds of structures- determinate and indeterminate. **(Level-4)**
	C305.2	**Apply** suitable method for given structure - rigid jointed or pin-jointed plane frames**. (Level-3)**
	C305.3	**Analyze** indeterminate beams and frame (sway and non-sway) using Moment distribution. **(Level-4)**
	C305.4	**Analyze** indeterminate beams and frame (sway and non-sway) using slope deflection method**. (Level-4)**
	C305.5	**Draw** influence line diagram for determinate and indeterminate beams using Muller Breslau. **(Level-3)**

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C306 Structural Analysis Lab	**C306.1**	**Identify** the principal of structural analysis. **(Level-1)**
	C306.2	**Use** SAP2000 software. **(Level-3)**
	C306.3	**Apply** suitable method for analysis of structures to evaluate displacements **(Level-3)**
	C306.4	**Apply** suitable method for analysis of structures to **evaluate** shear force and bending moment diagram. **(Level-3,6)**
	C306.5	Find out and **apply** suitable method for analysis of structures in MS-excel. **(Level-3)**

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Course	COURSE OUTCOMES	
C307 Transportation Engineering Lab	**C307.1**	Will **determine** the crushing strength value of aggregate. **(Level-6)**
	C307.2	**Study** of abrasion value of aggregate.**(Level-1)**
	C307.3	**List** the physical properties of bitumen for road construction.**(Level-1)**
	C307.4	**List** index properties of aggregate.**(Level-1)**
	C307.5	**Determine** flash and fire point of bitumen.**(Level-2)**

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Course	COURSE OUTCOMES	
C308 Geotechnical Engineering Lab	**C308.1**	**Examine** field density of soil using different methods. **(level 4)**
	C308.2	**Evaluate** the consistency limit of soil **(level 6)**
	C308.3	**Analyze** consolidation of soil and shear strength. **(level 4)**
	C308.4	**Analyze** permeability, compaction and effective stress **(level 4)**
	C308.5	**Estimate** moisture content of field soil. **(level 2)**