

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	ESE	PA	ESE	PA	150
3	0	2	5	70	30	20	30	

Legends: L- Lecture; T- Tutorial/Teacher Guided Student Activity; P - Practical; C –Credit;
ESE-End Semester Examination; PA-Progressive Assessment

5. COURSE CONTENT DETAILS

Unit	Major Learning Outcomes (in Cognitive Domain)	Topics and Sub-topics
UNIT-I Construction Project and Organisation Management	1a. Describe concept of project management. 1b. Draw the flow chart of an organisation. 1c. Explain the role of different Construction team members. 1d. Describe the causes of project failure.	1.1 Construction Project management- importance, Functions, Scope. 1.2 Organisation-Types, Characteristics, Functions, principles. 1.3 Construction team-Roles, responsibilities and skills of construction team. 1.4 Stages in Construction. 1.5 Causes of Project failure.
UNIT-II Tendering and Accounting	2a. Explain various features of Contract document. 2b. Prepare a Tender document for the construction project. 2c. Explain various technical and accounting terms used in government organisations. 2d. Describe methods of execution of works in government organisations.	2.1 Contract-Introduction, requirement, types. 2.2 Contract documents and conditions of Contract, Contract agreement. 2.3 Pre-qualification of Contract- Importance. 2.4 Tender-Types, Terms and Conditions, issue procedure, opening, Scrutiny, Acceptance, Rejecting. 2.5 Prepare tender Notice. 2.6 Technical terms- Administrative approval, Technical Sanction, Issue rate, Competent Authority, Secured Advance, Mobilization Advance, Heads of accounts in government organization, Original and repair work, Earnest money deposit (EMD) and Security deposit (SD), 2.7 Accounting terms- Work Abstract, Cash book, Work resister, imprest, accounting for the materials,

		<p>Measurement book, Muster roll, types of bills and recording.</p> <p>2.8 Methods of getting work done in government organization.</p>
UNIT-III Construction Planning, Scheduling and Time Management	<p>3a. Describe various planning methods for construction works.</p> <p>3b. Prepare Construction schedule.</p> <p>3c. Draw CPM and PERT network for construction work.</p> <p>3d. Describe the features of construction planning software.</p>	<p>3.1 Project Planning-methods and factors affecting planning.</p> <p>3.2 Scheduling and types of Schedules.</p> <p>3.3 Critical path method-Important terms, Basic Rules, Advantages and disadvantages.</p> <p>3.4 Examples of CPM network..</p> <p>3.5 PERT analysis-Important terms, Advantages and Disadvantages</p> <p>3.6 Examples on PERT.</p> <p>3.7 Cost optimization.</p> <p>3.8 Introduction and importance of Primavera and MS Project for Construction Project Management.</p>
UNIT-IV Construction Resource Management	<p>4a. Describe features of material, labour and equipment management.</p> <p>4b. Prepare Job layout.</p> <p>4c. Proper material, labour and equipment schedule.</p>	<p>4.1 Material management-Purpose, Objective, material Scheduling, material handling, Storage, safety precautions, Economy Order Quantity, inspection and testing.</p> <p>4.2 Job Layout.</p> <p>4.3 Labour management-Labour Scheduling, Characteristics, Output of labours, Wages of Workers, Labour Incentives, Labour Welfare, Trade Unions, Trade union act-1926, Mini Wage act-1948, Contract labour act-1970, etc</p> <p>4.4 Equipment management- equipment Scheduling, Classification of various equipment, Factor affecting selection of construction Equipment, Owning & operating cost of equipment, Inspection & testing of equipment, Maintenance & repair of equipment.</p>

UNIT-V Human Resource development (HRD)& MIS	5a. Explain Supervisor's role in Construction work. 5b. Explain MIS with example.	5.1 Importance of HRD. 5.2 Supervisor's role as trainer & Motivator. 5.3 Techniques to deal human resources effectively. 5.4 Professional Ethics in Engineering. 5.5 Management Information System- Purpose, need, Types, Characteristics, Implementation and Applications.
UNIT-VI Safety Management	6a. Explain need of safety management in Construction. 6b. Describe Safety measures in Construction as per IS code.	6.1 Safety management-requirement, importance. 6.2 Causes of accidents and its type. 6.3 Safety precaution-Excavation work, Demolition, Erection. 6.4 Safety measures- Scaffolding, Ladder, Piling, Bituminous works.

6. SUGGESTED SPECIFICATION TABLE WITH HOURS&MARKS (Theory)

Unit	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
I	Introduction of Construction Project Management	6	04	04	02	10
II	Tendering and Accounting	10	02	06	08	16
III	Construction Planning, Scheduling and Time Management	10	04	06	06	16
IV	Construction Resource Management	6	04	04	04	12
V	Human Resource Development and MIS	6	02	04	04	10
VI	Safety Management	04	02	02	02	06
Total		42	18	26	26	70

Legends: R = Remember, U = Understand, A= Apply and above level (Bloom's revised taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.