Roll No. | | | | | | | | | | |

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E /B. Tech /B. Arch (Full Time) - END SEMESTER EXAMINATIONS, NOV/DEC 2024

CIVIL ENGINEERING
Semester-VII (Honors)

CE5037 CONSTRUCTION PROJECT MANAGEMENT THROUGH LEAN CONCEPTS

(Regulation 2019)

Time: 3hrs

Max.Marks: 100

CO 1 Explains the contemporary management techniques and the issues in present scenario.
CO 2 Apply the basics of lean management principles and their evolution from manufacturing industry to construction industry..
CO 3 Develops a better understanding of core concepts of lean construction tools and techniques and their importance in achieving better productivity.
CO 4 Apply lean techniques to achieve sustainability in construction projects.
CO 5 Apply leah construction techniques in design and modeling.

BL – Bloom's Taxonomy Levels
(L1 - Remembering, L2 - Understanding, L3 - Applying, L4 - Analysing, L5 - Evaluating, L6 - Creating)

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

Q. No	Questions	Marks	CO	BL
1	What is the importance of Construction Management?	2	CO 1	L1
2	What are the common financial issues leading to construction project failure?	2	CO 1	L1
3	What is the significance of defining work tasks in construction planning?	2	CO 2	L3
4	Differentiate between resource allocation and resource leveling.	2	CO 3	L3
5	Differentiate between CPM (Critical Path Method) and PERT (Program Evaluation and Review Technique).	2	CO 3	L1
6	What is a network diagram in the context of project management?	2	CO 3	L2
7	What is constraint analysis?	2	CO 4	L1
8	Explain Last Planner system.	2	CO 4	L2
9	How does implementation of lean impact on cost of the project?	2	CO 5	L1
10	What is lean in Design? Mention the four key concepts used.	2	CO 5	L2

PART- B (5 x 13 = 65 Marks)

Q. No	Questions	Marks	CO	BL
11 (a) (i)	Explain about Characteristics of a Construction Project.	13	CO 1	L1
	OR			
11 (b) (i)	Explain in Project Development and Life Cycles.	13	CO 1	L2
12 (a) (i)	Discuss the factors that must be considered when choosing a construction technology and method for a project.	13	CO 2	L2
	OR			
12 (b) (i)	Describe how precedence relationships among activities affect the scheduling of a construction project.	13	CO 2	L1
13 (a) (i)	Discuss various techniques for presenting project schedules and their importance in project management.	13	CO 3	L2
	OR			

13 (b) (i)	Discuss the key elements of a project monitoring and control system and their role in successful project execution. Describe the process of crashing a network and its impact on project costs and duration.	**6** **7**	CO 3	L1
14 (a) (i)	Explain in detail about the Last Planner system and Big Room Approach.	**13**	CO 4	L2
	OR			
14 (b) (i)	Explain the importance of a daily huddle. Explain the need for weekly planning meeting? Who are the key important Organization members required to be involved in daily huddle, weekly meetings, monthly meetings and in big room meetings?	**13**	CO 4	L2
15 (a) (i)	What is the significance of a lean design structure in construction projects?	**13**	CO 5	L2
	OR			
15 (b) (i)	Evaluate the potential of lean construction in enhancing the safety culture on a construction site.	**13**	CO 5	L2

PART- C (1 x 15 = 15 Marks)

(Q.No.16 is compulsory)

Q. No	Questions	Marks	CO	BL
16. (i)	Draw a flowchart on ways to implement lean in any construction site of your choice using the different tools and techniques.	**15**	CO 3	L3