Roll No: | | | | | | | | | | | | |

BTECH
(SEM V) THEORY EXAMINATION 2024-25
QUANTITY ESTIMATION AND CONSTRUCTION MANAGEMENT

TIME: 3 HRS   M.MARKS: 70

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

1.   Attempt *all* questions in brief.   2 x 07 = 14

Q no.	Question	CO	Level
a.	Define centerline method in quantity estimation.	1	K1
b.	List the main advantage of the centerline method.	1	K1
c.	State the key legal aspects of construction contracts.	2	K1
d.	Define detailed specifications.	2	K1
e.	Differentiate between planning and scheduling.	3	K2
f.	List the types of hoisting equipment.	4	K1
g.	Define Project monitoring.	5	K1

SECTION B

2.   Attempt any *three* of the following: 07 x 3 = 21

a.	Compare the centerline method with the long and short wall method. Highlight the situations where the centerline method is more suitable.	1	K2
b.	Explain briefly the procedure of pre-qualification of contractors. State its advantages and drawbacks.	2	K2
c.	Describe the phases of a construction project cycle in detail. Explain the activities and deliverables associated with each phase.	3	K2
d.	Illustrate the following: i. Hoisting Equipments ii. Conveying Equipment iii. Hauling Equipments iv. Excavating Equipments	4	K3
e.	Explain various methods of economic comparison used in project cost management.	5	K2

SECTION C

3.   Attempt any *one* part of the following: 07 x 1 = 07

a.	Discuss the various types of estimates used in building construction. How do these estimates differ in purpose and preparation?	1	K2
b.	Explain the main items of work calculated in estimation of buildings.	1	K2

4.   Attempt any *one* part of the following: 07 x 1 = 07

a.	Illustrate the information which should customarily appear in an advertisement for tenders.	2	K3
b.	Classify the labour safety and welfare laws? Explain them.	2	K3

5.   Attempt any *one* part of the following: 07 x 1 = 07

a.	Draw a bar chart and compute the total duration of the project from the data given below:	3	K3

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	Task 1: 6 days Task 2: 3 days Task 3: 7 days Task 4: 2 days Task 5: 4 days Task 1 and 4 will be started together. Task 2 will start after completion of task 3 and task 3 will take place after task 1. Task 5 will be taken up only after completion of task 3.		
b.	Classify float in a network. Explain its significance and how it can be calculated in a PERT/CPM network.	3	K3

6. **Attempt any *one* part of the following:**   **07 x 1 = 07**

a.	Compare the advantages and disadvantages of owning construction equipment versus hiring it. Discuss the factors that influence this decision in construction projects.	4	K2
b.	Explain various types of Concrete Production Equipment.	4	K2

7. **Attempt any *one* part of the following:**   **07 x 1 = 07**

a.	Discuss the methods for calculating the lifecycle cost of construction equipment.	5	K2
b.	Explain break even cost analysis with its advantages and limitations.	5	K2