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Fifth Semester B.E. Degree Examination, July/August 2022 Construction Management and Entrepreneurship

Time: 3 hrs.

Max. Marks: 100

- Note :** 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Use of Normal Distribution function table is permitted.

Module-1

- 1 a. What are the functions of Management? Explain any four of them. (08 Marks)
b. The activity data of a project is given in the table below :

Activity	Preceding Activity	Duration (Days)
A	-	10
B	-	9
C	A	9
D	A	8
E	B	7
F	B	11
G	D, E	5

Draw the Network diagram, identify and critical path and project duration using CPM.

(08 Marks)

- c. Discuss the characteristics of Autocratic Management Styles. (04 Marks)

OR

- 2 a. Below given table pertains to the list of activities and their time estimates of a Job.

Activity	Optimistic Time (Days)	Most likely time (Days)	Pessimistic Time (Days)
1 – 2	3	7	10
1 – 3	4	8	13
2 – 4	2	2	7
3 – 4	5	8	10

- i) Draw the Network and determine the critical path.
ii) What is the expected completion time with the probability of 85% (Take Probability factor (Z) = 1.038)? (10 Marks)
b. Discuss on types of Project plans. (06 Marks)
c. Explain the Grant chart with sketch. (04 Marks)

Module-2

- 3 a. What are the factors affecting the Labour output? (08 Marks)
b. Estimate the hourly production in bulk volume (LCM) of a backhoe with bucket capacity of 1.14m³ that is employed on excavation of a foundation , which is 3m deep in hard digging soil. The excavated earth is to be loaded in waiting dump trucks, placed at a swing angle of 75°. The expected performance efficiency is 81% with the following data.
i) Ideal output of loose soil in M³ (LCM) = 180 LCM.
ii) Equipment conversion factor operating at optimum depth = 0.80.
iii) Correction factors are : Soil factor per hard digging = 0.67 ;
Load factor for loading into vehicle = 0.80 ; Swing factor = 1.05. (08 Marks)
c. Discuss on Class of Labour. (04 Marks)



OR

- 4 a. Enumerate the classification of Construction equipment with sub class. (10 Marks)
b. What are the functions of Material Management? (05 Marks)
c. A Company has purchased an equipment whose first cost is Rs 1,50,000 with an estimated life of eight years. The estimated salvage value of the equipment at the end of life time is Rs 25,000. Determine the depreciation and the book value for period 4 using the Straight Line method of depreciation. (05 Marks)

Module-3

- 5 a. Define Quality and describe Quality Control and Quality Assurance in Construction. (08 Marks)
b. Explain the Total Quality Management process in Construction. (08 Marks)
c. Discuss on need of Engineering ethics. (04 Marks)

OR

- 6 a. What are the Safety procedures to be adopted during Excavation? (06 Marks)
b. Explain Safety through Legislation , Safety campaign and Insurances. (08 Marks)
c. Briefly write about : i) Gifts and bricks ii) Whistle blowing. (06 Marks)

Module-4

- 7 a. Explain the principles of Engineering Economics. (08 Marks)
b. An engineer has two bids for an excavator to be installed in a new building. The details of the bids for the excavator are as follows :

Bid	Engineer's Estimates		
	Initial cost (Rupees)	Service Life (Years)	Annual operation and Maintenance cost (Rupees)
Company X	10, 50, 000	15	60,000
Company Y	11, 00, 000	15	70,500

Determine which bid should be accepted , based on the Present Worth method of comparison assuming 18%, Interest rate , Compounded annually. (12 Marks)

OR

- 8 a. Define the following terms related to Engineering Economics : i) Present worth ii) Future worth iii) Marginal cost iv) Opportunity cost v) Capitalized cost. (10 Marks)
b. Determine the effective interest rate for a nominal annual rate of 6 percent that is compounded : i) Semi annually ii) Quarterly iii) Monthly iv) Daily. (10 Marks)

Module-5

- 9 a. Write briefly about four functions of an Entrepreneur. (04 Marks)
b. Summarize the role of MSME in Economic development. (08 Marks)
c. Discuss in detail about stages in Entrepreneurial process. (08 Marks)

OR

- 10 a. Write short note on Exporting. (04 Marks)
b. Discuss the different types of Feasibility study. (08 Marks)
c. Explain the scope and role of following agencies : i) KIADB ii) KSFC. (08 Marks)

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