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18CV51

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 Construction Management and Entrepreneurship

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Discuss the ideal characteristics that a Management should exhibit. (07 Marks)
- b. Briefly explain the key steps involved in Construction planning. (06 Marks)
- c. What are the principles based on which organizational structure has to be framed? (07 Marks)

OR

- 2 a. What is Work break down structure? Mention its significance in Construction project. (06 Marks)
- b. Discuss suitability, advantages and disadvantages of Autocratic and Democratic style of Management (06 Marks)
- c. Draw the network diagram and identify critical path using CPM for the following activity data :

| Activity | 1-2 | 2-3 | 2-4 | 3-5 | 3-6 | 4-5 | 4-7 | 5-8 | 6-8 | 7-8 |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Duration (Days) | 5 | 2 | 6 | 4 | 4 | 2 | 3 | 7 | 8 | 2 |

(08 Marks)

Module-2

- 3 a. What is the purpose of having material management system in construction? (04 Marks)
- b. Enumerate the factors to be considered for selection of construction equipments. (07 Marks)
- c. Explain different class of labour employed in construction project. (09 Marks)

OR

- 4 a. What are the factors influencing Inventory Management? (05 Marks)
- b. Estimate the hourly production of a Shovel with bucket capacity of 0.96m³ and cycle time of 30 seconds. Shovel is used to excavate hard soil in an open area. Excavated earth is to be loaded in waiting dump truck, positioned at 60°. Equipment is utilized for 50 minutes in one hour. (07 Marks)
- c. List the factors affecting labour productivity. Briefly discuss any three factors. (08 Marks)

Module-3

- 5 a. Define Engineering Ethics. Mention the duties of Engineers, with respect to ethical practices. (06 Marks)
- b. Discuss the importance of Inspection in Construction. (08 Marks)
- c. Highlight the common causes of accident in Construction site. (06 Marks)

OR

- 6 a. Explain the safety measures to be adopted for excavation. (06 Marks)
- b. With reference to profession practice, discuss i) Conflict of Interest ii) Gifts and Bribes. (06 Marks)
- c. Explain the concept of Total Quality Management. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

**Module-4**

- 7 a. Define the following terms : i) Principal Amount ii) Rate of Interest
iii) Interest Amount iv) Interest Period. (04 Marks)
- b. Discuss the principles of Engineering Economics. (06 Marks)
- c. There are two alternatives for purchasing a concrete mixer and details are as follows. Choose best alternative using PW method @ 10% rate of interest. (10 Marks)

| Parameter | Alternative - 1 | Alternative - 2 |
|--|-----------------|-----------------|
| Purchase cost (Rs) | 3,00,000/- | 2,00,000/- |
| Annual Operating and Maintenance cost (Rs) | 20,000/- | 35,000/- |
| Expected Salvage value (Rs) | 1,25,000/- | 70,000/- |
| Useful life (years) | 05 | 05 |

OR

- 8 a. Briefly explain the concept of Minimum Cost Analysis. (06 Marks)
- b. A Construction Company is planning to invest Rs 8,00,000/- for purchase of construction equipment with useful life of 10 years. Equipment is expected to generate net annual profit of Rs 1,40,000/- with expected salvage value of Rs 2,00,000/-. Compute the Rate of Return and comment on the investment if Company's MARR is 10%. (06 Marks)
- c. Initial cost of an infrastructure project, expected to serve perpetually is Rs 1,50,00,000/-. Annual maintenance cost is Rs 8,00,000/- Renovation cost at end of every 15 years is Rs 18,00,000/-. Find the capitalized cost at an interest rate of 8% per year. (08 Marks)

Module-5

- 9 a. Enumerate services offered by TECSOK. (06 Marks)
- b. Discuss the characteristics of MSME's. (06 Marks)
- c. Explain different concept of Entrepreneurship. (08 Marks)

OR

- 10 a. List the benefits for investors and host country in Direct Foreign Investment. (04 Marks)
- b. Briefly discuss challenges in International Entrepreneurship. (08 Marks)
- c. What are the different sources of Finance for Entrepreneur? Explain. (08 Marks)

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