

# CBCS SCHEME

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18CV51

## Fifth Semester B.E. Degree Examination, Dec.2023/Jan.2024 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, if required.

### Module-1

- 1 a. Discuss the characteristics of management. (06 Marks)
- b. Find the critical path and duration of the CPM project give in Fig.1(b). Durations are in days.

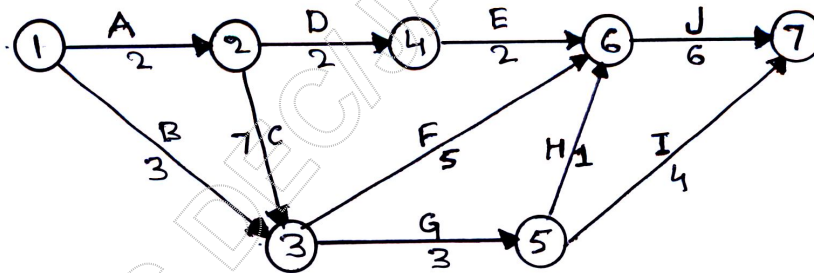


Fig.Q1(b)

(08 Marks)

- c. Explain in detail principles of organization. (06 Marks)

OR

- 2 a. Explain the strategic and tactical planning. (06 Marks)
- b. Define construction management. Explain the objectives of construction management. (08 Marks)
- c. Differentiate between CPM and PERT. (06 Marks)

### Module-2

- 3 a. List out various inventory control techniques adopted in material management and explain ABC analysis. (08 Marks)
- b. Explain :
  - i) Labour production rate or productivity
  - ii) Provisions of Minimum Wages Act 1948. (08 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 lifetime is Rs.25,000. Determine the depreciation and the book value for a period 4 using the straight line method of depreciation. (04 Marks)

**OR**

- 4 a. What are the important points to be considered for selection of construction equipment? (10 Marks)
- b. Determine the probable cost per hour for owning and operating a power shovel (crawler tractor mounted) for the following conditions :
- Engine, 160hp, diesel
- Crank capacity = 30 litres
- Time between oil charges = 100 hrs
- Operating factor = 0.6
- Useful life = 5 years
- Investment = 12% of pav
- Hours used per year = 2000
- Total initial cost = Rs. 5,47,060
- Estimated salvage value = Rs. 40,000
- Diesel = 80 rupees/litre,
- Lubricating oil = 100 rupees/liter. (08 Marks)
- c. Give any four advantages of material management. (02 Marks)

**Module-3**

- 5 a. What is ISO9000? Explain the benefits of having ISO9000 certification. (08 Marks)
- b. Describe the safety measures to be adopted during hot bituminous work to avoid accidents. (06 Marks)
- c. Define values, morals and ethics. List out six ethical principles applicable to construction industry. (06 Marks)

**OR**

- 6 a. What is whistle blowing? Explain in detail types of whistle blowing. (08 Marks)
- b. Describe safety insurance. Briefly explain Contractor's All Risk (CAR) policy. (06 Marks)
- c. Explain in detail costs of quality in construction. (06 Marks)

**Module-4**

- 7 a. What is engineering economics? Explain the principle of engineering economics. (08 Marks)
- b. The two machines A and B have the following costs with the money worth as 8% per year.

Particulars	A	B
First cost	Rs. 10,000	Rs. 25,000
Salvage value	Rs.1,100	Rs, 1,500
Uniform end of year expenditure	Rs. 3,000	Rs. 2,000
Irregular expenses at end of 1 <sup>st</sup> year	Rs. 1,000	—
Irregular expenses at end of 3 <sup>rd</sup> year	—	Rs. 2,500
Benefits from quality control (at end of year)	—	Rs. 600
Life	2 years	5 years

Compare the machines for the following bases :

- i) Present Worth
- ii) Equivalent Annual Cost Worth.

(12 Marks)

OR

- 8 a. Briefly describe problem solving and decision making. (08 Marks)
- b. Maintenance costs for a new bridge with an expected 50 year life was estimated to be Rs. 10,000 each year for the first five years followed by Rs. 1,00,000 expenditure in the 15<sup>th</sup> year and Rs. 1,00,000 expenditure in 30<sup>th</sup> year. If  $i = 10\%$  year, what is the equivalent uniform annual cost over the entire 50 year period? (06 Marks)
- c. Define the following terms related to engineering economics :  
 i) Salvage value  
 ii) Capitalized cost  
 iii) Time value of money. (06 Marks)

**Module-5**

- 9 a. Explain the functions of entrepreneur. (08 Marks)
- b. Define micro, small and medium enterprises. List and explain characteristics of MSME. (08 Marks)
- c. Describe the features of venture capital. (04 Marks)

OR

- 10 a. What is a business plan? Explain the different objectives of business plan. (08 Marks)
- b. Explain the scope and role of following agencies :  
 i) TECKSOK  
 ii) KSFC. (08 Marks)
- c. List the different state level and central government institutions to assist finance for entrepreneur. (04 Marks)

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