

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VII CIVIL : WINTER- 2022
SUBJECT : CONSTRUCTION MANAGEMENT

Day : Thursday

Time : 02:30 PM-05:30 PM

Date : 15-12-2022

W-13623-2022

Max. Marks : 60

N. B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.
- 4) Use of non-programmable calculator is **ALLOWED**.
- 5) Assume suitable data, if necessary.

- Q. 1** a) What are the objectives of construction management? (05)
- b) Discuss planning and leadership as a functions of construction management with suitable example. (05)

OR

- Q. 1** a) What is CIDC? Discuss its objectives in detail. (05)
- b) Discuss the nature of construction industry. (05)

- Q. 2** Determine the NPV and benefit cost ratio for following cash flow (10)
- Initial Investment - 1350000
- Benefits per year for 5 years Rs. 400000/-
- Rate of Interest - 10 % and 12 %

OR

- Q. 2** a) Discuss feasibility of project with respect to technical and financial analysis. (05)
- b) What is NPV, benefit cost ratio and internal rate of return give their formulae? (05)
- Q. 3** Solve the following assignment model problem by using Hungarian method: (10)

Jobs	Machines				
	A	B	C	D	E
I	4	11	4	9	3
II	8	10	9	8	3
III	6	8	7	5	3
IV	6	4	9	5	3
V	7	5	11	7	3

OR

P. T. O.

- Q. 3** Solve the following Transportation model problem by Vogels approximation method: (10)

Site	Store				Supply
	A	B	C	D	
I	20	12	16	16	80
II	18	15	11	10	52
III	20	14	12	9	33
IV	15	40	35	45	30
Demand	70	40	40	50	

- Q. 4 a)** Discuss the application of artificial intelligence in construction industry. (05)
b) Explain the analogy of biological neuron. (05)

OR

- Q. 4 a)** What are the application of ANN in construction management? (05)
b) What is the working principle of artificial neuron? (05)

- Q. 5** Discuss the salient features of Minimum Wages Act and Provident Fund Act. (10)

OR

- Q. 5** Give the salient features of Workmens Compensation Act and Child Labour Act. (10)

- Q. 6 a)** Prepare a site layout for construction of a bridge across a river having span of 200 m. (05)
b) What is safety? Discuss its importance on construction site of tunnel. (05)

OR

- Q. 6 a)** Draw a site layout for the construction of an engineering college building. (05)
b) Discuss the role of contractor in safety management. (05)

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