ME civil sem II (Const. manag) PTDC.
project Appraisal planning & Scheduling. 1916108

ws Apr 08 557

Con. 3548–08. (FURTHER REVISED COURSE) BB–5260

(4 Hours) [Total Marks : 100

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Assume **suitable** data if **necessary** stating them **clearly**.
(4) Draw suitable sketch where **necessary**.

1. (a) What is project management ? Explain steps involved in project management. 10
(b) Explain the importance of demand analysis and important issues. For the products from a project. 10

2. (a) Explain quality control measures that should be adopted in case of residential building project. 10
(b) Explain merits and demerits of at least two organizational setups that are adopted in Civil Engineering construction projects. 10

3. (a) What are the steps involved in project appraisal ? 5
(b) Explain the various considerations for a preparing a project rating index. 5
(c) What do you mean by internal rate of return ? Calculate the internal rate of return from the following cash flows : 10

Sr. No.	Year	Cash flow (Rs.)
1	0	(1,00,000)
2	1	30,000
3	2	30,000
4	3	40,000
5	4	45,000

4. It is proposed to construct a small residential bunglow having carpet area 1500 sq. ft. The cost of civil works is estimated at Rs. 30 lakhs and project duration is 12 months (including monsoon). The Civil works consists of around 22–27 activities in general. The plot area is 4000 sq. ft. Prepare :
(a) Complete job layout 6
(b) Bar chart for the above project, and 7
(c) Work Break down structure. 7

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M.E(C) II PDC Cost myt Project Appraisal Money & Scheduling. 19/6/08

5. Table shows details of a small construction project. Incentive of Rs. 3,000/- per day for completion of work before 56 days upto a maximum of four days and Fine of Rs. 3,000/- per day beyond 56th day. Prepare time scaled network for normal duration, calculate project duration, critical path. **20**

Sr. No.	Activity	Predecessor	Days				(Rs. Th.)		Crew Size
			Time Estimates				Cost Estimates		
			t_o	t_m	t_p	Crash	Normal	Crashed	
1	K	Start	12	15	18	11	11	17	4
	L	Start	7	10	13	10	6	6	2
	M	K	15	20	25	18	7	13	1
	N	K	8	10	12	7	13	17	5
	P	L	13	16	19	15	10	13	2
	R	L	9	12	15	9	7	9	5
	S	M	8	10	12	8	4	7	2
	T	M	6	8	10	8	1	1	1
	V	N, P	17	20	23	17	3	6	6
	X	R	6	10	14	8	9	11	3
	Y	S	13	16	19	15	6	8	4
	Z	T	15	18	21	15	4	7	2

Prepare, Table showing all floats and time schedule.

6. (a) Carry out step by step crashing to obtain the optimum cost for the project mentioned in **Q. 5.** **15**
   (b) Prepare weekly cash flow diagram. **5**

7. (a) Carry out resource levelling for the data mentioned in **Q. 5.** **12**
   (b) With reference to **Q. 5** data, determine. **8**
      (i) The probability of completion of work in all crashed duration, in 58 days, and two days later than optimum duration.
