GIET UNIVERSITY, GUNUPUR – 765022

M. Tech. (Third Semester) Examinations, December – 2022

MOEMD3024 / MOEMT3024 / MOETE3024

Cost Management of Engineering Projects

(Machine Design , Manufacturing Technology, HPTE)

Time: 3 hrs   Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A   **(2 x 10 = 20 Marks)**

Q1. Answer all questions

		CO#	Blooms Level
a.	How Project Management is different from General Management?	1	2
b.	What is Technical Feasibility Study?	3	3
c.	Define the terms 'Event' and 'Activity' in a network.	3	4
d.	What is seed capital?	2	5
e.	What is NPV?	4	2
f.	What is fixed and variable cost?	2	2
g.	Describe product organisation.	2	2
h.	Describe Resource Allocation.	2	4
i.	Write the three major forms of organisational structures?	1	6
j.	Explain turnkey project	3	2

PART – B   **(10 x 5 = 50 Marks)**

Answer *ANY FIVE* questions

		Marks	CO#	Blooms Level
2. a.	Describe 'Modified matrix structure'.	5	1	2
b.	'A Project manager frequently comes across resource constraints' – Explain.	5	1	2
3.a.	What is control system? What are the requirements of a good control system?	5	2	3
b.	Explain briefly the service dimensions.	5	2	2
4.a.	What is capital budgeting? Why is it significant for a firm?	4	1	3
b.	Project X costs Rs 2,50,000 now and is expected to generate year-end cash inflows of Rs 90,000; Rs 80,000; Rs 70,000; Rs 60,000 and Rs 50,000 in years 1 through 5. Find the net present value for Project X if the opportunity cost of the capital will be assumed to be 10%.	6	2	3
5.a.	What are the different sources of project finance? Give a brief account of each of them.	5	1	1
b.	What is meant by 'Unsecured loan? What are the precautions that lending institutions normally take when a project cost is to be met partly by way of unsecured loan?	5	2	5
6. a.	What are the three time estimates used in PERT? What is the relationship between the three time estimates and the 'expected time'?	2	3	3
b.	The three time estimates of a project are given below.	8	3	3

Activity		(1–2)	(1–3)	(2–4)	(3–4)	(4–5)	(3–5)
Time (Days)	Optimistic Time (t_o)	4	7	6	2	6	7
	Most likely time (t_m)	6	11	15	5	10	16
	Pessimistic time (t_p)	14	15	18	8	14	19

Arrive at the critical path and the expected project completion time. What is the probability that the project will be completed in 35 days?

7.a. What are the various factors to be considered in technical appraisal? 6 3 1

b. Explain briefly the various phases of a project life cycle. 4 1 1

8. a. A company manufacturing plant and equipment for chemical processing is in the process of quoting a tender called by a Public Sector Undertaking. Delivery date once promised is crucial and penalty clause is applicable. Project manager has listed down the activities in the project as under: 10 2 4

Activity	Preceeding Activity	Duration (Weeks)
A	-	3
B	-	4
C	A	5
D	A	6
E	C	7
F	D	8
G	B	9
H	E,F,G	3

i) Find out the delivery week from the data of acceptance of quotation
ii) Find out the total float, free float and independent float for each of the activities.

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