BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: BTECH/BHMCT **SEMESTER : V/VII**
BRANCH: EEE/MECH/CIVIL/HMCT **SESSION : MO/2024**

SUBJECT: PE309 PROJECT MANAGEMENT

TIME: 3 Hours **FULL MARKS: 50**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
***4*. Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

			CO	BL
Q.1(a)	What are the various project constraints? Discuss the inter-relationship among these constraints.	[5]	2	2
Q.1(b)	Differentiate among turnkey, brownfield and greenfield project with suitable examples.	[5]	1	2
Q.2(a)	Discuss about technical, managerial and commercial appraisal of a project.	[5]	2	3
Q.2(b)	Which organization structure is suitable for project-driven enterprises which take-up new projects from time to time. Describe the structure.	[5]	3	4
Q.3(a)	What do you mean by social costs? What are the main features of social cost-benefit analysis? Briefly explain them.	[5]	3	3
Q.3(b)	Write and briefly explain the four main environmental issues that are most likely to influence the activities of a project.	[5]	2	3
Q.4(a)	What is a Gantt Chart? Mention the advantages and disadvantages of it.	[5]	4	3
Q.4(b)	For the given data in the table, construct an activity-on-arc network and find the critical path and project completion time. Calculate the independent float of activity A and F.	[5]	4	4

Activity	Duration (Days)	Immediate Predecessor
A	2	--
B	4	--
C	5	A, B
D	3	B
E	6	C
F	3	C
G	8	D
H	2	D, F

			CO	BL
Q.5(a)	Discuss about the time-cost trade-off and explain the role of direct cost in finding the least-cost schedule of a project.	[5]	4	3
Q.5(b)	Construct a PERT network for the given data and find the mean and standard deviation of each path in the network.	[5]	5	4

Activity	t_o (Optimistic)	t_m (Most likely)	t_p (Pessimistic)	Immediate Predecessor
A	2	3	4	--
B	3	4	5	--
C	4	6	8	--
D	3	5	7	A
E	1	1	1	B
F	5	6	7	B
G	5	7	9	C, D, E

::::::26/11/2024::::::M