

Printed Pages : 3



ECH-043

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 151757

Roll No.

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B. Tech.(SEM. VII) (ODD SEM.) THEORY
EXAMINATION, 2014-15**PROJECT ENGINEERING AND MANAGEMENT**

Time : 3 Hours]

[Total Marks : 100

- 1 Attempt any four parts : **5×4=20**
- Discuss about plant location and plant layout.
 - Explain start up and shut downs of the project.
 - List the general design considerations pertaining to safety factors in project engineering.
 - Write short notes on bid comparisons.
 - Describe ethics and contracts.
 - Elaborate engineering design and drafting.
- 2 Attempt any two parts : **10×2=20**
- Explain about contract versus commodity buying with an example.
 - Mention types of reimbursement and discuss the factors in selecting the contractor.
 - Write short notes on :
 - Technical writing
 - Lump-sum contract form

- 3** Attempt any two parts : **10×2=20**
- a) Give the detailed factors to be considered in selecting process instruments.
 - b) Explain the engineering design details of heat exchangers.
 - c) Discuss safety and plant design.

- 4** Attempt any two parts : **10×2=20**
- a) Elaborate about underground facilities in a plant and electrical conduit.
 - b) Explain about erection of elevated reinforced concrete structures and structural steel.
 - c) Discuss in detail about insulation, buildings and final stage of construction.

- 5** Attempt any two parts : **10×2=20**
- a) Consider the following problem involving activities from A to J :

Activity	Predecessor	Duration (months)
A	-	2
B	A	6
C	A	4
D	A	4
E	D	2
F	D	2
G	E	4
H	F,G	2
I	C,H	4
J	B	2

- i) Construct the CPM network
- ii) Determine the critical path.

- b) Discuss in detail about latest start time and latest finish time
 - c) Write a short notes on :
 - i) Precedence diagramming
 - ii) PERT.
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