

Total No. of Questions : 08

Seat No:

M. E. (Mechanical) Design Engineering

**ELECTIVE – I**

(ME 2I M4 - Project Management; ME 2I M8 - Technology Transfer;

ME II M11- Environmental Pollution and Control)

2013-Course (502205)

Time: 3 Hours.

Max. Marks: 50

**Instructions:**

1. Answer Q.1 or Q.2, Q.3 or Q.4 and Q.5 or Q.6
2. Q.7 and Q.8 are compulsory
3. Figures to the right indicate full marks.

- Q. 1**
- a) Briefly explain the types of contract in project management (5)
  - b) Explain the problems faced by project manager during implementation (3)
  - c) Describe the importance of performance monitoring in project management. (2)

**OR**

- Q. 2**
- a) Make a Gantt chart for your preparation of energy manager/energy auditor examination. Split into to as many components as possible. (5)
  - b) Explain (i) Reverse Engineering, (ii) Franchise as Channels of Technology Flow (3)
  - c) What is a Joint Venture? Explain with example. (2)

- Q. 3**
- a) Classify the research and development? Explain the role of each with suitable example in stages of technology development? (5)
  - b) Discuss the role and importance of R&D in product development. (3)
  - c) Write a note on Foreign Direct Investment (FDI). Give suitable examples. (2)

**OR**

- Q. 4**
- a) Explain steps in procurement life cycle in modern businesses . (5)
  - b) Define activity, event and network (2)
  - c) What are the aspects you would look for the technical design of the project? (3)

- Q. 5**
- a) Define a project with suitable example. What are basic elements of project management What are the hurdles faced in the implementation of a project (5)
  - b) Explain any 3 channels of technology flow. (3)
  - c) Define Invention and Innovation with examples. (2)

**OR**

- Q. 6**
- a) Discuss the stages in the process of technological innovation with block diagram. (5)
  - b) Compare the three popular scheduling tools (1) Gantt chart (2) PERT, and (3) CPM (3)

c) Why the work breakdown structures called "the backbone of project plan"? (2)

Q. 7 a) What do you understand by land pollution? Discuss different factors affecting the land pollution. State its effect. (5)

b) Explain following terms in detail: (5)

i) Global Warming

ii) Noise Pollution

Q. 8s a) What are the challenges in commercializing the research Results (5)

.b) Explain the various stages involved in new product development process (5)