Name Reg. No. CHERUTHURUTA

# SEVENTH SEMESTER B.TECH. (ENGINEERING) DE EXAMINATION, JUNE 2013

ME/PTME 09 702—OPERATIONS MANAGEMENT

(2009 Scheme—Supplementary)

Time: Three Hours

Maximum: 70 Marks

#### Part A

## Answer all questions.

- I. (a) What are the causal methods in forecasting?
  - (b) What is MRP?
  - (c) What type of layout is suitable for project systems?
  - (d) What is operations strategy?
  - (e) What is design-out maintenance?

 $(5 \times 2 = 10 \text{ marks})$ 

#### Part B

### Answer any four questions.

- II. (a) Briefly explain cost consideration in product design and development.
  - (b) Briefly explain micromation study.
  - (c) Distinguish between aggregate planning and master scheduling.
  - (d) Describe the objectives of materials management.
  - (e) Write a note on reasons for equipment replacement.
  - (f) How can we find the optimum period for replacement.

 $(4 \times 5 = 20 \text{ marks})$ 

#### Part C

#### Answer all questions.

III. (a) Explain productivity measurement and factors affecting productivity.

Or

- (b) Explain various qualitative methods of forecasting.
- IV. (a) Discuss the variables and objectives of aggregative planning process.

Or

(b) What are the principles of material handling to be followed in industries? Discuss.

V. (a) What is inventory? Define re-order point, lead time, minimum level, maximum level.

Or

(b) Describe the method of storage of inventory and procedure for receipt and issue of materials from stores.

VI. (a) A project consists of 12 activities and their time estimate are shown below:

Activity	1-2	1 –3	1 – 4	1-7	2 – 4	2 –6	2 –7	3 –4	4 –5	5-6	3 – 7	6 - 7
Time in $\begin{bmatrix} t_o \\ t_m \end{bmatrix}$	4	3	5	2 *	6	3	5	3	2	1	2	1
	6	7	6	4	10	4	9	7	4	3	5	2
	10	12	9	6	20	7	15	12	5	6	8	6

- (i) Draw the network diagram.
- (ii) Determine the critical path.
- (iii) Calculate the activity floats.

Or

(b) Explain the shortest route method with an example.

 $(4 \times 10 = 40 \text{ marks})$