

Code: EE5T1

**III B.Tech - I Semester – Regular/ Supplementary Examinations
October 2017**

**INDUSTRIAL ORGANIZATION AND ENGINEERING
ECONOMICS
(ELECTRICAL & ELECTRONICS ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22 M

1.

- a) Briefly describe any four Fayol's principles of management.
- b) Write any four demerits of a line organization.
- c) What are the features of Joint Stock Company?
- d) Describe any two main barriers for entrepreneurs in India.
- e) Write the advantages of functional layout.
- f) What are the features of class 'A' items in ABC analysis.
- g) Define method study.
- h) What is law of demand?
- i) Distinguish between micro economics and macro economics.
- j) Write any four guidelines to draw a project network diagram.

k) Write the mathematical expressions for expected time and variance of an activity in PERT.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2.a) Explain Taylor's principles of scientific management. 8 M

b) What are the advantages and disadvantages of functional organization? Draw a typical organization chart of a functional organization in an industry. 8 M

3.a) What is the role and functions of an entrepreneur? 8 M

b) Explain the advantages and disadvantages of sole proprietorship. 8 M

4.a) Explain the concept of Six Sigma quality improvement program. 6 M

b) Amaravathi Electrical company uses 4000 capacitors per year in their final assembly of electrical fans. The purchase price is Rs. 50 per item. The ordering cost is Rs. 25 per order. The carrying cost per year is 10% of the inventory value. Find (i) The economic order quantity and (ii) The number of orders per year. 10 M

5.a) Describe any one time series or quantitative forecasting method with the help of an example. 8 M

b) Write short notes on: 8 M
(i) Iso-quants (ii) Break-even point

6.a) Consider the data of a 210 MW generator erection project as shown in the following table. Draw the network diagram and find the critical path for the project. 10 M

Activity	1-2	1-3	1-4	2-6	3-7	3-5	4-5	5-9	6-8	7-8	8-9
Activity time (Days)	2	2	1	4	5	8	3	5	1	4	3

b) Distinguish between CPM and PERT. 6 M