

Reg. No:

--	--	--	--	--	--	--	--	--	--

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech III Year I Semester Supplementary Examinations August-2021**

**INDUSTRIAL ENGINEERING & MANAGEMENT**

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- 1 a State and explain the Douglas Mc-Gregor's Theory X and Theory Y. **6M**  
b Describe the Hertzberg's Two factor theory of motivation. **6M**

**OR**

- 2 a Write the definition of Management and Administration. **6M**  
b How accountability is important for an Organization. **6M**

**UNIT-II**

- 3 a What are the various computerized techniques used for plant layout. **8M**  
b What are the factors governing the plant location. Explain with any one specific industry. **4M**

**OR**

- 4 a What are the various data analyzing forms in plant layout? Explain them in detail. **7M**  
b Differentiate between process layout and product layout. **5M**

**UNIT-III**

- 5 a What are the typical questions used in operation analysis with respect to material shape, equipment, tool, and other aspects of the operation and elements of operation? **6M**  
b What is the purpose of string diagram and explain it with an example. **6M**

**OR**

- 6 a Describe the SIMO chart with an example. **6M**  
b What is therblig .List the table with details. **6M**

**UNIT-IV**

- 7 a Describe (i) Direct Inventories (ii) Indirect Inventories with suitable examples. **8M**  
b Describe the cost associated with the inventories. **4M**

**OR**

- 8 a Derive the formula for determining number of production runs and optimum lot size to be manufactured. **4M**  
b A company produces 4800 parts per day and cells them at approximately half of that rate. The setup cost is Rs. 1000 and carrying cost is Rs. 5 per unit. The annual demand is 480000 units. Find: (a) Optimal lot size b) Number of production runs that should be scheduled per year, c) Length of each production run. **8M**

**UNIT-V**

- 9 a Detail about X and R charts. **6M**  
b Explain in detail about P and C charts. **6M**

**OR**

- 10 a What are the major types of Acceptance Sampling? **5M**  
b Write in detail about Quality circles in TQM. **7M**

\*\*\* END \*\*\*