

Industrial Engineering (ME-307E)

Time: Three Hours

Maximum Marks: 100

Note: - Attempt any FIVE questions.

1. (a). What is "Method Study" ? What are its objectives? How will you determine the areas that require method study application in an industry ? (11)
(b). Discuss the principles of motion economy. How these are related to "Design of Tools and Equipment"? (9)
2. (a). Define Standard Time of an Operation. List its various uses. Discuss the various allowances which are taken into account while calculating Standard Time. (11)
(b). Distinguish between standardization and simplification. Outline the different techniques of work measurement. (9)
3. (a). What are the objectives of an Organization ? Discuss the importance and principles of Organization. (12)
(b). Compare line and staff organizations. Discuss their suitability. (8)
4. (a). Discuss briefly the functions of Production Planning and Control. Differentiate between loading and scheduling. (11)
(b). Compare and discuss the functioning of centralized and decentralized dispatching in a toy manufacturing plant. (9)
5. (a) What is the importance of Sales Forecasting ?
Explain the following:
(i) Method of Least Squares
(ii) Moving Average Method (10)
(b) A firm producing paints, plans to use simple exponential smoothing to forecast weekly demand and has collected data for 15 weeks as shown below:

Week No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Actual Demand	30	35	20	15	10	10	15	20	30	35	30	10	12	20	30

Using the 15 week moving average, determine the exponential smoothing forecast for the 16th week. (10)

6. (a). What are the objectives of Inventory Control ? What type of cost has to be considered in controlling inventory. (8)
(b) What is Economic Lot Size? Develop for economic lot size when there is zero lead time. (12)
7. (a). "Value engineering is a powerful cost reduction tool". Justify. (10)
(b). Define standardization specialization, simplification and diversification. Discuss the factors which affect simplification and diversification. (10)
8. Write notes on any THREE of the following:-
(i) Wages and Incentives
(ii) Supply Chain Management
(iii) JIT
(iv) MRP. (20)