

**BT-5/D-21****45127****INDUSTRIAL ENGINEERING****Paper-ME-307N**

Time Allowed : 3 Hours]

[Maximum Marks : 75

**Note** : Attempt **five** questions in all. All questions carry equal marks.

1. (a) How does 'Micro-Motion Study' help to optimize the manufacturing time of a product? 8
- (b) Discuss various principles of Motion economy. 7
2. Write briefly on the following :
  - (a) Time Study Allowances. 5
  - (b) Performance Rating. 5
  - (c) Work Sampling. 5

**UNIT-II**

3. Make a forecast for the year 2022 for the given Data by time series analysis : 15

Year	Quarter	Sales (kg)
2019	1	186
	2	165
	3	175
	4	178
2020	1	198
	2	155
	3	160
	4	186
2021	1	215
	2	170
	3	175
	4	199

4. Write briefly on the following : 7,8  
(a) Scheduling. (b) Types of Dispatching systems.
5. Write briefly on the following : 7,8  
(a) Classical Organization theory.  
(b) Line Organization.
6. (a) What is Inventory? Discuss ABC analysis. 7  
(b) A Company uses 12,500 castings per month. Each casting costs ₹600 and inventory carrying cost is 11% while ordering cost is ₹520 per order. Calculate EOQ, number of orders per year, order interval and reorder point if lead time is 6 days. 8
7. Write briefly on the following :  
(a) Importance of Value Engineering. 7  
(b) JIT : concept and relevance. 8
8. Discuss the concept, importance and various steps involved in Time Management. 15

