

University of Pune
Department of Management Sciences (PUMBA)
204 : Operations Management

Max. Marks: 50

Time : 2 ½ Hours

-
- Note:** 1) Attempt 5 questions: Attempt any 4 out of 1st 6 questions.
2) Q. No. 7 is compulsory.
3) Each question carries 10 Marks:
-

1. Find EOQ using following data:

Yearly consumption – 40,000 units
Cost price – Rs. 40 Per Unit
Inventory carrying Cost – 20 % per Year
Ordering Cost – Rs. 400 Per Order

Find total cost for the same. What will be the change in the total cost if the customer decides to purchase 8,000 units per order?

2. Find the Number of Hacksaws Required Using Following Data:

2 Shifts of 8 Hrs. each With 25 Working Days And 90 % Utilization & 85 % Efficiency

PRODUCT	QTY / MONTH	TIME PER PC. (MINS.)
¼" WOOD	4000	10
½" WOOD	5000	20
¾" WOOD	4000	30
1" WOOD	8000	40
1 ½" WOOD	4000	60
2" WOOD	6000	80

3. During a Pilot study it was found that 10 machines out of 100 were working. If the company desires confidence level of 2 Sigma and accuracy level of + / - 6 %, calculate the number of observations to be made. The study is to be completed in 20 days of 8 Hours each. Calculate the time per round and time between the rounds. Also, schedule the first 5 rounds if the work starts at 9 A. M.
4. ABC Ltd. Has 3 workers W1, W2 & W3 who complete 25, 28 & 30 units of a product in 8 hours for which standard time given is 20 min per unit with standard piece rate of Rs. 30 per unit.

Calculate the total wages earned by each worker using Taylor's scheme if the incentive rate is 15 % and penalty rate is 10 %.

Also, calculate the workers wages by Halsey scheme.

5. What is TQM? Explain the components of TQM with suitable examples.
6. What is PPC? Explain the compulsory functions of PPC.
7. Write short notes on any 2 of the following:
- A. MPS
 - B. Mass Production
 - C. FPC
 - D. Q.C.
 - E. Productivity