

2004 OPERATIONS MANAGEMENT Supplementary

Time: 180 minutes

Max marks: 100

1. Explain the five major decisions in Operations Management. (5 marks)
2. Describe the various stages in a product life cycle. (5 marks)
3. The consumption of rice for dinner in a hostel appears to depend on the number of students staying on that day. Forecast the consumption for day 11.

Day	1	2	3	4	5	6	7	8	9	10
No of students	69	65	51	67	51	50	54	56	65	50
Consumption (kg)	22	19	15	19	19	16	18	18	22	15

(10 marks)

4. Sketch a process chart and explain its use. (5 marks)
5. The assembly of a telephone base requires the following steps:

Task	Description	Time (s)	Predecessor
A	Keep casing on fixture	5	-
B	Keep PCB on casing	5	A
C	Place screws on PCB	10	B
D	Tighten screws on PCB	15	C
E	Fix leads on PCB	10	B
F	Solder leads	20	E
G	Keep cover on casing	5	C,F
H	Place screws on casing	10	G
I	Tighten screws on casing	15	H

Design a layout for the assembly operation if a production rate of 72 sets per hour is desired. (10 marks)

6. Explain what do you mean by Master Production Schedule. (5 marks)
7. The conduct of a short term course requires the following activities

Activity	Description	Predecessor	Time (days)
A	Decide on title	-	2
B	Decide on topics	A	5
C	Design brochure	B	5
D	Print brochure	D	10
E	Send brochure to industries	D	10
F	Identify faculty	B	5
G	Obtain course material from faculty	F	15
H	Print course material	G	10
I	Industries study brochure	E	20
J	Industries sponsor participants	I	10
K	Arrange venue	-	5

In how many days from today can we hold the course at the earliest? (10 marks)

8. The monthly requirement of rice at a hotel is 3500kg. The holding cost of 1kg of rice for one year is Rs2.00. Rice is purchased from the city market and brought to the Hotel in a lorry in batches of 10000kg. Determine the total inventory cost of purchasing and holding inventory per year if the cost of purchasing one lot is Rs2000.00. (5 marks)

9. What are the eight dimensions of quality? Give examples for each. (5 marks)

10. Explain the key concepts of Total Quality Management. (5 marks)

11. A workshop would call the customer one week after the service was performed, to find out whether the customer was satisfied. After one year of data collection, the Manager grouped the complaints into the following categories:

Sl No	Complaint	Frequency
1	Unfriendly atmosphere	15
2	Long wait for service	25
3	Price too high	5
4	Incorrect bill	10
5	Need to return to correct problem	45
6	Did not deliver on time	20

Draw a Pareto chart for the data.

(10 marks)

12. Students are coming late to the class. Develop a Cause and Effect diagram for this problem with at least ten causes.

(5 marks)

13. What are Taylor's principles of scientific management?

(5 marks)

14. Explain the various incentive plans

(5 marks)

15. Write short notes on any two: a) Grid Method of warehouse location b) Quality Costs c) Robust Design d) Enterprise Resource Planning

(2X5=10 marks)