Subject: Operation Management   Course Code: MGMT 532
Full Marks: 60   Time: 3 Hours

Candidates are required to answer the questions in their own words as far as practicable.

Group A: Very Short Answer Questions (10 X 1=10 Marks)

Answer **ALL** questions.

Q1. State the functions of operations management.
Q2. Write the meaning of intermittent operations system with an example.
Q3. What do you mean by concurrent engineering?
Q4. What is the purpose of QFD in product development system?
Q5. Describe the process layout with example.
Q6. Shree Bakery has a plant for processing carrot cake. Last week the bakery produced only 6000 pounds of cake due to material delay, employee absence and other problems though it has effective weekly capacity of 7500 pounds of cake, what is efficiency?
Q7. What are the considerations of aggregate production planning?
Q8. Write the central idea of "Theory of Constraints".
Q9. Describe the meaning of periodic review system in inventory management.
Q10. What is ISO? Describe ISO 9001: 2000 series of standards.

Group B: Short Answer Questions (3 X 8 = 24 Marks)

Answer any **THREE** questions.

Q11. What do you mean operations management? How a company can achieve competitive advantages through operations? Explain. [4+4]
Q12. What is capacity? Discuss the process of capacity planning. [3+5]
Q13. The following information is provided to you for each of four elements performed in building the Aviator model, a basic universal remote control.

Elements	Observations (Hour)					Performance rating
	1	2	3	4	5	
A	4.67	6.52	5.0	3.23	4	120%
B	10.02	8.0	6.70	9.9	8.2	90%
C	5	5	6	6	7	100%
D	11.2	9.0	10.88	11.0	13.0	110%

  a. Calculate the normal time for each element. [3]
  b. If the company uses a 15 percent allowance factor based on time worked, calculate the standard time for each element. [3]
  c. Describe the importance of work measurement in operations management. [2]

Q14. Joe Henery's machine shop uses 25,000 brackets during the course of a year. These brackets are purchased from a supplier 90 miles away. The holding cost per bracket per year is Rs 1.5 and set up cost per order is Rs 18.75. The time required to take order is 2 days after placing the order.

a) Given this information, what would be the economic order quantity? [2]
b) What is the total inventory cost? [2]
c) What is the time between the orders? [2]
d) What is the reorder point? [2]

Q15. Total Quality Management (TQM) has become a driving force in many organizations in the business world today. Evaluate the benefits for a firm of adopting a Total Quality Management approach to quality assurance. Also discuss the obstacles of Total Quality Management. [4+4]

Group C: Long Answer Questions (2 x 13 = 26 Marks)

Answer any **TWO** Questions.

Q16. Identify five current trends in operations management and describe them. Operation strategy is means of operational excellence of the organization. In the line of this statement, discuss the strategy formulation process. [5+8]
Q17. What do you mean by facility location? Discuss the various factors affecting facility location. Explain the consequences of poor location decisions for a business with example. [2+6+5]
Q18. University Hospital has been concerned with the number of errors found in its billing statements to patients. An audit of 100 bills per week over the past 12 weeks revealed the following number of errors:

Week	Error
1	4
2	5
3	6
4	6
5	3
6	2
7	6
8	7
9	3
10	4
11	3
12	4

Use the data to obtain upper and lower control limits for number of defective items (np chart) in samples of 100 bills per week. Represent the twelve week samples result in the chart and state whether the process is in under control or not. [13]

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