TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

January 2021

Full Marks: 60
Pass Marks: 27
Time: 1.5 Hrs.

BIM / Seventh Semester / MGT 205: Operations Management

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

Attempt any Six Questions: ***[6 × 10 = 60]***

1. Discuss how the productivity is gained in operations.
2. Operations strategy can be taken as competitive weapon. Explain.
3. Provide the concept of new product with its importance and discuss its development process.
4. What is location decision? Differentiate the factors affecting location selection for manufacturing and service operations.
5. Two products X and Y are produced using two small tools T1 and T2. Product X requires 10 hours on Tool T1 and no time on T2, product Y requires 2 hours on T1 and 6 hours on T2. 32 hours of time per week available on T1 and 60 hours on T2. Marginal profit of product X is Rs 40 and that of Y is Rs 100. What should be the weekly production mix to optimize profit?
6. "Maharjan & Co." has four salespersons, Anuj, Bikram, Chandra, and Dipesh available to four sales depots: Anamnagar, Basundhara, Chabhil, and Dhokatole. Each of sales person can handle any sales depots. Their service hours of each sales depots are given below:

	Anuj	Bikram	Chandra	Dipesh
Anamnagar	41	72	39	52
Basundhara	22	29	49	65
Chabhil	27	39	60	51
Dhokatole	45	50	48	52

How should the salespersons be allocated to appropriate sales depots so as to minimize the service time? Each salesperson must handle only one sales depot.

7. A company uses 96,000 units of an item annually. The ordering cost is 45 per order and carrying cost is 24 percent of the cost of item. If the cost of item is Rs. 1 per unit, determine the optimal order quantity, optimum number of orders per year and annual inventory cost. Assuming that the company operates 300days in a year and the average lead time is 10 days, calculate the re-order point and cycle time.
8. The following data shows the weight of an automobile part. Five samples of four items were taken on a random sample basis (at an interval of 1 hour each). Draw the mean control chart and find out if the production process is in control.

Sample	Weight of parts in ounces			
1	10	12	10	12
2	10	12	13	13
3	10	10	9	11
4	11	10	9	14
5	12	12	12	12