ATKT Assignment
Operations Management BB 305

Time: 3 Hours   **(Max. Marks: 80)**
Note: Attempt any three questions from Section A. Each question carries 16 marks. Section B is compulsory and carries 16 marks

Section A

Q1. (a)What are the roles and responsibilities of production and operations manager? Write in brief.
    (b) Explain the concept of materials management in brief.

Q2. Explain the differences between-
  i.   Production and Service Operations
  ii.   Product and Process Layout
  iii.   Product design and Process design

Q3. Enumerate the key benefits that an organization derives by improving the quality of its products and services.

Q4. What is Statistical Process Control? Why is it important for manufacturing organizations?

Section B

Q. 5 A chain of stores trading in a host of retail goods for urban customers is planning to set up operations in one of the metro cities in the country, the exact location for the new outlet is to be decided. In order to do that, the company conducted a market survey and found five pockets of consumption in the metro. The distance co-ordinates of these five pockets from a reference point in the grid map pertaining to the city are as follows: Zone 1 (15, 22); Zone 2 (10.0, 40); Zone 3 (35, 15); Zone 4 (50.5) and Zone 5 (40, 35). The annual demand for the goods (in tonnes) in the five zones is 200, 130, 80, 170 and 120 respectively.
(a) What is the centre of gravity for setting up the operation in the city?
(b) If the cost of transporting the goods is Rs. 300 per tonne, what is the cost implication of locating the stress in the centre of gravity?

Q7. Complete the MRP chart on the basis of following information-
       Order quantity- 70
       Lead Time- 4 weeks
       Inventory in the beginning- 65
Weekly demand is given as follows-

Week	1	2	3	4	5	6	7	8	9	10	11	12
Demand	20	10	15	20	25	10	15	20	15	10	15	20

Given that a safety stock of 40 units has to be maintained at all times for this particular item.