JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA
PGDM (B/C/SM)
SECOND TRIMESTER (Batch 2020-21)
END TERM EXAMINATIONS, February - 2021

Course Name	Operations Management	Course Code	OM-202	Type of Question paper
Max. Time	2 Hour	Max. Marks	40 Marks	Main Exam

INSTRUCTIONS: Answer all questions.

This is an Excel based question paper.   Exam Duration: 2 Hours

1. Determine the multifactor productivity for the combined input of labor and machine time using the given information. Also find out the single factor productivity.
   Units produced = 7040 units, Expenditure in labour, Materials, and Overhead is $1000, $520, and $2000, respectively.   **(5 * 2 = 10 Marks)**

2. A clothing manufacturer produces women's clothes at four locations in Mexico. Relative locations have been determined and shown below. The location of a central shipping point for bolts of cloth must now be determined. Weekly quantities to be shipped to each location are also provided in the table. Determine the coordinates of the   location   that   will   minimize   distribution   costs?
   (10 Marks)

Location	Coordinates (x,y)	Weekly quantity
A	5, 7	15
B	6, 9	20
C	3, 9	25
D	9, 4	30

3. A local distributor for a national tire company expects to sell approximately 9600 steel-belted radial tires of a certain size and tread design next year. Annual carrying cost is $16 per tire, and ordering cost is $75. The distributor operates 288 days a year.

(2.5 * 4 = 10 Marks)

a) Compute the EOQ? And what does it mean?

b) How many times per year does the store reorder?

c) What is the length of an order cycle?

d) What is the total annual cost (holding and carrying) if the EOQ quantity is ordered?

4. Processing times and due dates for six jobs waiting to be processed at a work center are given in the following table. Determine the sequence of jobs, the average flow time, average job lateness, and average number of jobs in the system based on the:

a) FCFS, SPT, and EDD rule.

b) Based on your analysis which is the best sequence?

(10 Marks)

Job	Processing Time (Days)	Due Date
A	2	7
B	8	16
C	4	4
D	10	17
E	5	15
F	12	18