GIET UNIVERSITY, GUNUPUR – 765022

M. B. A(Second Semester) Examinations, August – 2021

MB 207 – Operations Management

Time: 2 hrs   Maximum: 50 Marks

(The figures in the right hand margin indicate marks.)
PART – A (2 × 10 = 20 Marks)

		CO#	PO#
Q.1.	Answer *ALL* questions		
a.	Distinguish between manufacturing and service operations.	CO1	PO1
b.	What is forecasting? Why is it necessary in production function?	CO4	PO2
c.	Write the symbols used in process chart.	CO2	PO2
d.	Define aggregate planning.	CO3	PO6
e.	What is project management?	CO2	PO6
f.	Differentiate between activity and event.	CO2	PO2
g.	What are the single and multi facility location decisions?	CO2	PO7
h.	What is re-ordering point?	CO3	PO5
i.	Define SQC.	CO5	PO2
j.	What is TQM? Write the general principles used in TQM.	CO5	PO5

PART – B(6×5=30 Marks)

Answer *ANY FIVE* the questions

		Marks	CO#	PO#
2.	Mention the responsibilities of a production manager. Explain how a production manager amalgamates the 5 P's, namely, product, plant, process, programme and people.	6	CO1	PO4
3.	What do you mean by facility location? Explain the various methods to evaluate the location decision methods.	6	CO2	PO7
4.	Draw PERT network diagram for the data given below and	6	CO2	PO6

   a) Compute the expected time for each activity.
   b) Find the expected duration of the project.
   c) Compute the standard deviation of the critical path.
   d) Compute the probability of completing the project in 35 weeks or less.

Activity	ImmediatePreceding activity	Estimated duration (Weeks)		
		Optimistic	*Most likely*	*Pessimistic*
A	-	4	7	13
B	A	6	9	11
C	A	5	7	9
D	B	3	5	7
E	C	7	8	10
F	D	2	3	5
G	E	6	7	8
H	F,G	2	3	4

5. Define the term aggregate plan and list out the advantages and disadvantages of level, chase and match strategies. 6 CO4 PO5

6. A ready-made garment manufacture has to process seven items through two stages of production, viz, cutting and sewing. The times taken for each of these items at the different stages are given below in appropriate units. 6 CO3 PO2

Item No	1	2	3	4	5	6	7
Processing time cutting (hrs)	5	7	3	4	6	7	12
Processing time sewing (hrs)	2	6	7	5	9	5	8

Find an order in which these items are to be processed through these stages so as to minimize the total processing time.

7. Define the term quality control. State the objectives, functions and advantages of quality control. 6 CO5 PO4

8. A company manufactures and packs a product in 1 kg cans using automatic filling equipment. It takes 5 cans in every two hours and measures the filling up in each of the cans. The following observations are available for 8 samples. 6 CO5 PO2

Sample No		1	2	3	4	5	6	7	8
Measurement of tins in grams	1	1001	1002	1000	998	999	996	995	998
	2	999	998	1001	998	999	1000	998	996
	3	995	1002	1003	1001	1002	999	1004	1002
	4	1000	1001	1000	1001	1001	996	1000	999
	5	990	996	990	1002	995	1000	1005	990

Construct control chart for Mean and Range. Use $A_2 = 0.577$, $D_3 = 0$, $D_4 = 2.115$.

--- End of Paper ---