SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
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CONTINUOUS ASSESSMENT TEST - II

Program : B.E. Mech/Mechatro/Auto/Aero **Max : 30 Marks**
Course : Resource Management Techniques **Time : 1.00PM**
Course code : SPR1307 **Sem :VI**
Batch : 2018-2022 **Date :06 .05.2021**

Part-A **Answer ALL the questions** **(5×2=10)**

Q.No	Questions	CO (L)
1.	What is a sequencing problem?	3(1)
2.	Define the following a) Elapsed Time b) Idle Time	3(2)
3.	What are the three main phases of a project	3(2)
4.	What is Economic order quantity?	4(2)
5.	What are the types of Inventories?	4(1)

Part-B **Answer ALL the questions** **(2×10=20)**

Q.No	Questions	CO (L)
6.	Find the sequence that minimizes the total elapsed time required to complete the following tasks on machine M1 & M2. Also find the optimum sequence and idle time of each machine.	3(4)

Job	A	B	C	D	E	F	G
M1	3	8	7	4	9	8	7
M2	4	3	2	5	1	4	3
M3	6	7	5	11	5	6	12

(OR)

7.	Calculate the total float, free float and independent float for the project whose activities are given below:	3(4)

Activity	0-1	1-2	1-3	2-4	2-5	3-4	3-6	4-7	5-7	6-7
Duration In weeks	3	8	12	6	3	3	8	5	3	8

Determine: a) Draw Network diagram b) Find Earliest start and finish & Latest start and finish c) Critical path of the project
d) Maximum duration of the project

8.	A contractor has to supply 10000 parts per month to an automobile manufacturer. He finds that when he starts a production run he can produce 25000 parts per month. The cost of holding is Rs.2 per year and set up cost is Rs.180 per year. Determine a) Economic Order Quantity b) Time between two consecutive order c) No of orders d) Minimum Average cost e) Maximum Inventory f) Manufacturing Time.	4(4)
(OR)		
9.	The demand for an item in a company is 18000 units per year and the company can produce the item at a rate of 3000 units per month. The cost of set up is Rs. 500 per month and the holding cost is Rs.15 paise per month and cost of shortage is Rs.20 per month. Determine a) Economic Order Quantity b) Time between two consecutive order c) No of orders d) Minimum Average cost e) Maximum Inventory f) Manufacturing Time g) No of Shortage.	4(4)