

CODE: 196142  
NOVEMBER 2020

TIME: 2Hrs  
MAX. MARKS : 50

*PART A*  
*Answer any TEN questions*

(10 x 2=20)

1. What do you mean by dummy activity?
2. Define critical path.
3. Define Inventory
4. Define lead time, reorder level.
5. Explain Kendal's notation for representing Queueing system
6. Write down Little's formula.
7. What is 2-person zero sum game?
8. Define saddle point.
9. What is no passing rule in a sequencing problem?
10. What is a sequencing problem?
11. Define independent float.
12. When a game is said to be strictly determinable?

*PART B*  
*Answer any TWO questions*

(2 x5=10)

13. Compute the earliest start, earliest finish latest start, and latest finish time of each activity of the project given below

Activity	1-2	1-3	2-4	2-5	3-4	4-5
Durartion (In days)	8	4	10	2	5	3

14. Discuss all the costs involved in inventory problems.
15. Derive the probability law for 'n' customers in the system (ie,  $P_n$ ) for  $(M|M|1):(\infty | FIFO)$  model.
16. For what value of  $\lambda$ , the game with the following payoff is strictly determinable.

*Player B*

$B_1 \quad B_2 \quad B_3$

$$\text{Player A} \begin{pmatrix} A_1 & \lambda & 6 & 2 \\ A_2 & -1 & \lambda & -7 \\ A_3 & -2 & 4 & \lambda \end{pmatrix}$$

17. There are five jobs, each of which is to be processed through two machines  $M_1, M_2$  in the order  $M_1 M_2$ . Processing hours are as follows:

Job	1	2	3	4	5
$M_1$	3	8	5	7	4
$M_2$	4	10	6	5	8

Determine the optimum sequence for the five jobs, and minimum total elapsed time. Find also the idle time of machines  $M_1$  and  $M_2$ .

