Register No : ____________________

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Seventh Semester

Mechanical Engineering

OIM353 - Production Planning and Control

Regulations - 2021

Duration : 3 Hrs | *Maximum Marks: 100*

*PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

Q.No	Questions	BLT	CO	Marks
1.	Classify the types of production system.	RE	1	2
2.	What are the 4M's in planning?	RE	1	2
3.	What is predetermined motion time studies?	UN	2	2
4.	How rest pauses improve productivity?	UN	2	2
5.	Differentiate between process planning and product planning.	UN	3	2
6.	Distinguish between value analysis and value engineering.	UN	3	2
7.	List the rules for priority sequencing.	RE	4	2
8.	What do you mean by line-of-balance?	RE	4	2
9.	When do you use ABC analysis?	RE	5	2
10.	Identify any four objectives of inventory control.	RE	5	2

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)*

Q.No		Questions	BLT	CO	Marks
11.	a	Explain the phases of production planning and control.	UN	1	13
		Or			
	b	Explain the procedural steps in product design and product development.	UN	1	13
12.	a	Explain the procedural steps involved in conducting method study with suitable example	UN	2	13
		Or			
	b	Explain with suitable examples of various recording techniques used in method study.	UN	2	13
13.	a	Classify CAPP and explain each type in detail with flow chart.	AP	3	13
		Or			
	b	Explain how the stock control of batch production is performed by following consideration (i) Without buffer stock (ii) With buffer stock	AP	3	13

14.	a	Discuss the concept, inputs, characteristics, working, outputs and benefits of MRP?	AP	4	13
		Or			
	b	Explain the various charts used in LOB.	AP	4	13
15.	a	Explain in detail, the fixed -order quantity inventory model? Also list the merits, demerits and sustainability of this model.	UN	5	13
		Or			
	b	Explain the concept of JIT. How does it help the manufacturing system to improve productivity?	UN	5	13

*PART – C (Marks 1*15 = 15)*

Q.No		*Questions*	*BLT*	*CO*	*Marks*
16.	a	A manufacture industry of annual fixed cost of Rs. 60,000 and variable cost is 60% of the selling price of a product. The selling price of the product is Rs. 50/units. Find the breakeven point, and profit would be result from a volume of 4000 units?	AN	1	15
		Or			
	b	Determine the total completion time, average completion time and average lateness of the jobs using first comes first serve, earlier due date, last come first serve, and slack time remaining.	AN	4	15

Job Sequence	Due Date in Days	Processing Time in Days
A	6	8
B	5	6
C	8	7
D	7	9
E	4	6
F	5	5