

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***Seventh Semester**Mechanical Engineering***OIM353 - Production Planning and Control***Regulations - 2021**Duration : 3 Hrs**Maximum : 100 Marks***PART - A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	Explain the objectives of Production Planning and Control.	L2	1	2
2.	Outline why product standardization is important in production.	L2	1	2
3.	Classify the different techniques of work measurement.	L2	2	2
4.	List the tools used in time study.	L1	2	2
5.	Identify the pre-requisite information needed for process planning.	L1	3	2
6.	State the meaning of machine capacity.	L1	3	2
7.	Define perpetual loading.	L1	4	2
8.	Illustrate the working of the Kanban system in production control.	L2	4	2
9.	What is a two-bin system? Recall its advantages.	L1	5	2
10.	Explain the meaning of EOQ and its role in controlling inventory costs.	L2	5	2

PART - B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Illustrate how production planning and control functions contribute to efficient manufacturing.	L2	1	10
	ii Outline the steps involved in developing a new product and describe their importance.	L2	1	6
	Or			
	b i Describe the concept of Break-Even Analysis and demonstrate how it is used to determine profitability.	L2	1	10
	ii Explain the economic considerations involved in designing a new product.	L2	1	6
12.	a Describe the significance of method study in work simplification and summarize the steps involved in preparing a two-handed process chart for assembling a bolt and nut.	L4	2	16
	Or			
	b Examine the objectives of work study and describe briefly the steps in conducting a work study.	L4	2	16

13.	a	i	Discuss the importance of value analysis and summarize the procedural steps involved.	L2	3	10
		ii	Explain the concept of machine balancing and illustrate its effect on the number of machines required with an example.	L2	3	6
			Or			
	b		Explain the steps involved in the standard procedure for process planning also explain various types of process planning methods.	L2	3	16
14.	a		Construct a Gantt chart for a given set of project activities and timelines, and illustrate the different types of Gantt charts that can be applied in production scheduling.	L3	4	16
			Or			
	b		Demonstrate the implementation of MRP in a production system and explain how its characteristics and benefits improve inventory and production control.	L3	4	16
15.	a		Describe the procedure for classifying inventory items using ABC analysis and explain the benefits and limitations of this technique.	L2	5	16
			Or			
	b		Explain the concept of JIT. How does it help the manufacturing system to improve productivity?	L2	5	16