

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026***Sixth Semester**Computer Science & Engineering***OIE351 - INTRODUCTION TO INDUSTRIAL ENGINEERING***(Common To BE-CSE / BTECH-AIDS / BTECH-IT)**Regulations - 2021***Duration : 3 Hrs****Maximum : 100
Marks****PART – A(ANSWER ALL QUESTIONS) (Marks 10*2=20)**

Q.No	Questions	BTL	CO	Marks
1.	Mention any two pioneers in the field of Industrial Engineering.	L1	1	2
2.	How would you implement a training program to improve productivity in a manufacturing plant?	L3	1	2
3.	Define plant location.	L1	2	2
4.	List any two-line balancing techniques.	L1	2	2
5.	What is Time Study?	L2	3	2
6.	Why are work postures important for productivity?	L4	3	2
7.	Distinguish between control limits and specification limits.	L4	4	2
8.	What is an Operating Characteristic (OC) curve?	L2	4	2
9.	Give one example each of qualitative and quantitative forecasting methods.	L1	5	2
10.	What do you understand by Process planning?	L2	5	2

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

Q.No	Questions	BLT	CO	Marks
11. a	i How has Industrial Engineering evolved and what are its pivotal historical milestones?	L3	1	8
	ii Describe the primary roles and responsibilities of an Industrial Engineer in a manufacturing setup?	L2	1	8
	Or			
b	i How does productivity measurement vary between service sectors and manufacturing sectors?	L3	1	8
	ii Explain the Input-Output Model of a production system with a diagram.	L2	1	8
12. a	An automobile manufacturing company plans to relocate its plant. As an industrial engineer, analyze and suggest the best plant location considering all influencing factors.	L5	2	16
	Or			
b	Develop a systematic plant layout design for a medium scale manufacturing unit, including space for raw material, processing, and storage.	L5	2	16
13. a	i Describe the complete Method Study procedure with a neat diagram.	L2	3	10
	ii Discuss any two areas where ergonomics can be applied in a work system.	L2	3	6
	Or			
b	i Describe anthropometric measures and the procedure to incorporate them into design.	L2	3	10
	ii Discuss the advantages and disadvantages of sitting and standing work postures with ergonomic justification.	L2	3	6

14.	a	Explain the concepts and fundamentals of Statistical Quality Control with suitable examples. Also explain the construction and interpretation of X and R charts with neat sketch.	L2	4	16	
Or						
	b	Explain the concept of a double sampling plan and compare it with a single sampling plan with neat sketches.	L2	4	16	
15.	a	i	Classify and explain the different types of production systems with examples.	L2	5	8
		ii	Derive the formula for Economic Batch Quantity and explain its components.	L3	5	8
Or						
	b	i	Describe various types of production schedules and their significance.	L2	5	8
		ii	Assess the effectiveness of dispatching in optimizing production workflow. What improvements would you recommend?	L3	5	8