

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***Fourth Semester**Mechanical Engineering***ME3493 - Manufacturing Technology***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>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	What is tool signature?	L1	1	2
2.	How do you classify tool wear?	L2	1	2
3.	Write down the names of any four lathe accessories.	L2	2	2
4.	What is Swiss type automat?	L2	2	2
5.	List the gear generating process.	L1	3	2
6.	Define the metal removal rate.	L1	3	2
7.	List the various types of NC machines?	L1	4	2
8.	What are the canned cycles?	L2	4	2
9.	List out the features of G code and M code.	L2	5	2
10.	Define polar coordinate.	L1	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 Explain the properties of cutting tool materials, essential requirements and classification of tool materials. Or	L2	1	16
	b Explain Merchant circle diagram and derive the relation.	L2	1	16
12.	a Explain the specification of a lathe and various attachments used on a centre lathe. Or	L2	2	16
	b Explain the working principle of turret lathe and Geneva mechanism of turret lathe.	L2	2	16
13.	a Describe with neat sketch the drive mechanisms used in shaper. Or	L2	3	16
	b Explain the principle of operation of gear hobbing, gear shaving, gear shaping, gear finishing and gear forming.	L2	3	16

14.	a	Discuss about the closed loop system and open loop system with a neat sketch and with suitable example.	L3	4	16
		Or			
	b	Discuss about the constructional features of CNC machine tools.	L3	4	16
15.	a	Explain the various steps to be followed while developing CNC part program and also explain about linear and circular interpolation.	L3	5	16
		Or			
	b	Describe the spindle drives, feed drives, slide ways used in CNC machines.	L3	5	16