R18/R15

ANURAG Engineering College
(An Autonomous Institution)
III B.Tech I Semester Regular/Supplementary Examinations, Dec-2023/Jan-2024
MACHINE TOOLS & METROLOGY
(MECHANICAL ENGINEERING)

Time: 3 Hours   **Max.Marks:75**

Section – A (Short Answer type questions)   (25 Marks)
Answer All Questions

		Course Outcome	B.T Level	Marks
1.	Discuss the variables affecting tool life.	CO1	L1	2M
2.	How a build up edge is formed?	CO1	L2	3M
3.	Define counter sinking and boring operation.	CO2	L1	2M
4.	List the advantages of Planar machine.	CO2	L2	3M
5.	Define Lapping process.	CO3	L1	2M
6.	What are the factors to be considered while selecting a milling cutter?	CO3	L2	3M
7.	What are types of fits?	CO4	L1	2M
8.	Discuss about the Bevel protractor. Where it is used?	CO4	L1	3M
9.	Describe the importance of surface roughness.	CO5	L1	2M
10.	What is Coordinate measuring machine?	CO5	L2	3M

Section B (Essay Questions)
Answer all questions, each question carries equal marks.   (5 X 10M = 50M)

11. A)	What are the desirable Characteristics of cutting material? Describe them in brief.	CO1	L2	10M
	OR			
B)	How lathe is specified, explain briefly the operations that are performed on a lathe.	CO1	L2	10M
12. A)	With the help of neat sketch explain the radial drilling machine.	CO2	L2	10M
	OR			
B)	Describe the operation of quick return motion in mechanical Shaper.	CO2	L3	10M
13. A)	Differentiate between up milling and down milling and explain their applications	CO3	L3	10M
	OR			
B)	What are special types of grinding machine explain two in detail.	CO3	L3	10M
14. A)	Explain the Taylor's principle applied in limits.	CO4	L3	10M
	OR			
B)	Describe the measuring method by using sine bar.	CO4	L3	10M
15. A)	Explain the machine tool alignment test on drilling machine.	CO5	L2	10M
	OR			
B)	Describe the screw thread measurement with sketch.	CO5	L3	10M