ANURAG Engineering College
(An Autonomous Institution)
III B.Tech I Semester Supplementary Examinations, June/July - 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.	Explain requirement of tool materials.	CO1	L1	2M
2.	What are the main parts capstan and turret lathes?	CO1	L2	3M
3.	Differentiate Drilling Vs Boring operation.	CO2	L1	2M
4.	List the advantages of shapers.	CO2	L2	3M
5.	Define honing process.	CO3	L1	2M
6.	What is the difference between rough grinding and precision grinding?	CO3	L2	3M
7.	Define Taylor's principle.	CO4	L1	2M
8.	Discuss about the sine bar. Where is it used?	CO4	L1	3M
9.	What do you mean by alignment tests?	CO5	L1	2M
10.	Explain the Roughness profiles.	CO5	L2	3M

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

		Course Outcome	B.T Level	Marks
11. A)	Explain the construction of merchant force diagram with neat sketch.	CO1	L2	10M
	OR			
B)	Explain the principal features and working of automatic lathes with neat sketch.	CO1	L2	10M
12. A)	What is the planner? Illustrate and describe its working principle.	CO2	L2	10M
	OR			
B)	Explain various operations performed in drilling machine.	CO2	L3	10M
13. A)	Explain with neat sketch i) Centre less grinding ii) Internal grinding	CO3	L3	10M
	OR			
B)	Sketch and describe a vertical milling machine.	CO3	L3	10M
14. A)	Explain Hole basis system and shaft basis system.	CO4	L3	10M
	OR			
B)	Explain the principle of optical flat and auto collimator.	CO4	L3	10M
15. A)	What are the types and applications of CMM?	CO5	L3	10M
	OR			
B)	Describe the gear measurement with sketch.	CO5	L3	10M