

Reg.No.:

--	--	--	--	--	--	--	--	--	--

Question Paper Code:94703

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2021

Fourth Semester

Mechanical Engineering

19UME403–MANUFACTURING TECHNOLOGY

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

PART A-(10x2= 20Marks)

(Answer any Ten of the following questions)

1. Why nose radius is important? CO1-U
2. What are the factors affecting tool life? CO1-U
3. Apply tool life equation to find the tool life 'T' for the material Ceramic with 'C' value 475, 'n' value 0.22 and the cutting speed 308.7m/min. CO1-U
4. Differentiate between saddle type turret lathe and ram type turret lathe CO2-U
5. List the various types of work holding devices used in lathe CO2-U
6. Differentiate between parallel action and progressive action multi spindle automatic lathes? CO2-U
7. Distinguish the differences between a shaper and planner CO3-U
8. What are advantages of broaching CO3- U
9. Write down any four operations performed by a shaper. CO3- U
10. Name any four gear finishing methods CO4- U
11. What are the advantages of honing process? CO4- U
12. What is meant by up-milling and down milling? CO4- U
13. What is the purpose of dressing and tuning of grinding wheel? CO5- U
14. What are the specifications of grinding wheel? CO5- U
15. What s the principle of Water Jet Machining CO5- U

PART– B(5x16=80 Marks)

16. (a) Discuss the various types of chips produced during metal machining process. CO1-U (16)

or

- (b) Write briefly about tool wear and tool life. CO1-U (16)

17. (a) State the differences between capstan and turret lathes. Draw and explain the bar feeding mechanism CO2-U (16)
- or
- (b) Explain with neat sketch the various types of turning a taper in a lathe CO2-U (16)
18. (a) Explain the nomenclature of twist drill with suitable sketches CO3-U (16)
- or
- (b) Explain with neat sketch crank and slotted link mechanism used in a shaper. CO3-U (16)
19. (a) Explain different types of milling cutters with neat diagrams. CO4-U (16)
- or
- (b) Explain the various milling operations with a neat sketches CO4-U (16)
20. (a) Explain the working principle of Centreless grinding with a neat sketch CO5-U (16)
- or
- (b) Explain the working principle of surface grinding machine with their types CO5-U (16)