A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 94703

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2022

Fourth Semester

Mechanical Engineering

19UME403 - Manufacturing Technology

(Regulations 2019)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Tool wear increases due to _____ CO1- U

   (a) cutting speed (b)feed (c) depth of cut (d) none of the above

2. Purpose of cutting fluid is to reduce _____ CO1- U

   (a) wear (b) friction (c) heat (d) all the above

3. The type of turret indexing mechanism is CO1- U

   (a) Ratchet and pawl (b) Geneva (c) Cam mechanism (d) Rack and Pinion

4. Work piece is hold in CO1- U

   (a) Chuck (b) Tail stock (c) Carriage (d) Head stock

5. The operation performed on a shaper is CO1- U

   (a)Machining horizontal surface (b) Machining vertical surface

   (c) Machining angular surface (d) All of these

6. The main purpose of a boring operation, as compared to drilling, is to CO1- U

   (a) Drill a hole (b) Finish the drilled hole

   (c) Correct the hole (d) Enlarge the existing hole

7. In a plain milling machine, the table can be moved CO1- U

   (a) Longitudinally (b) Crosswise (c) Vertically (d) All of these

8. The operation of making a cone-shaped enlargement of the end of a hole is known as CO1- U

(a) Counter-sinking (b) Counter-boring (c) Trepanning (d) Spot facing

9. Grinding wheel is normally used for CO1- U

(a) bulk removal (b) minimum removal

(c) surface finishing (d) none of the above

10. Among the conventional machining processes, the most inefficient process is CO1- U

(a) Turning (b) Grinding (c) Drilling (d) Milling

PART – B (5 x 2= 10 Marks)

11. List out the factors affecting the tool life CO1- U

12. Name the various operations can be performed in a lathe CO1- U

13. List out the advantages of hydraulic drive shaper. CO1- U

14. Explain milling machine CO1- U

15. Discuss Wheel glazing and wheel loading? CO1- U

PART – C (5 x 16= 80 Marks)

16. (a) What are the requirements of cutting tool and write briefly about different cutting tool materials used in metal cutting CO1- U (16)

Or

(b) Explain the geometry of a single point tool with suitable sketches CO1- U (16)

17. (a) State the differences between capstan and turret lathes. Draw and explain the bar feeding mechanism CO1- U (16)

Or

(b) Sketch and briefly describe the constructional features of Swiss type automatic screw machine. CO1- U (16)

18. (a) Describe with neat sketch automatic feed mechanism used in slotter. CO1- U (16)

Or

(b) Sketch and explain the working principle of radial drilling machine CO1- U (16)

19.	(a)	Explain gear hobbing process with a neat sketch.	CO2- U	(16)
		Or		
	(b)	Explain different types of milling cutters with neat diagrams.	CO2- U	(16)
20.	(a)	Explain the working principle of surface grinding machine with their types.	CO2- U	(16)
		Or		
	(b)	Explain the working principle of LBM with neat sketch.	CO2- U	(16)