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Question Paper Code: 94703

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2024

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. Discontinuous chips are formed during machining of CO1- U
(a) Brittle metals (b) Ductile metals (c) Hard metals (d) Soft metals
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 cutting tool in a milling machine is mounted on CO1- U
 (a) Spindle (b) Arbor (c) Column (d) Knee
9. Grinding wheel is normally used for CO1- U
 (a) bulk removal (b) minimum removal
 (c) surface finishing (d) none of the above
10. Honing is an operation primarily used for finishing CO1- U
 (a) Flat surface (b) Cylindrical surface (c) Hole (d) Irregular surface

PART – B (5 x 2= 10 Marks)

11. List the various types of chips produced during metal cutting CO1- U
12. Name the various operations can be performed in a lathe CO1- U
13. Name any four work holding devices used in planning machine 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) Discuss the various types of chips produced during metal machining process. CO1- U (16)
 Or
 (b) Explain the geometry of a single point tool with suitable sketches CO1- U (16)
17. (a) Explain the turret indexing mechanism used in capstan and turret lathe with neat sketch CO1- U (16)
 Or
 (b) Sketch and briefly describe the constructional features of Swiss type automatic screw machine. CO1- U (16)
18. (a) Explain with neat sketch crank and slotted link mechanism used in a shaper. CO1- U (16)
 Or
 (b) Describe with neat sketch automatic feed mechanism used in slotter. CO1- U (16)

19. (a) Describe the horizontal knee type milling machine with CO2- U (16)
suitable sketch

Or

(b) Explain different types of milling cutters with neat CO2- U (16)
diagrams.

20. (a) Explain the working principle of surface grinding machine CO2- U (16)
with their types.

Or

(b) Explain the working principle of Centre less grinding with a CO2- U (16)
neat sketch

