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Question Paper Code	13883
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B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2025

Third Semester

Mechanical and Automation Engineering

20MUPC301 - BASIC MANUFACTURING PROCESSES

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

	Marks	K- Level	CO
1. Blow holes in casting are caused by (a) excessive moisture (b) low permeability (c) excessive fine grains (d) all of the above	1	K1	CO1
2. What is the length of the arc generally? (a) 1mm – 2mm (b) 2mm – 3mm (c) 3mm – 4mm (d) 4mm – 5mm	1	K1	CO1
3. In which of the following processes, life of dies is less? (a) Hot forging (b) Cold forging (c) Drop forging (d) Open die forging	1	K1	CO2
4. In the tube drawing and wire drawing, the nature of force applied on the material is (a) compressive (b) tensile (c) shear (d) torsional	1	K1	CO2
5. In orthogonal cutting, the cutting edge of the tool is: (a) Perpendicular to the cutting direction (b) Parallel to the cutting direction (c) At a 45-degree angle to the cutting direction (d) None of the above	1	K1	CO3
6. Which of the following tool materials has the highest hardness? (a) High-speed steel (HSS) (b) Carbide (c) Ceramic (d) Cubic Boron Nitride (CBN)	1	K1	CO3
7. Which taper turning method involves setting the compound rest to the desired angle? (a) Tailstock offset method (b) Taper attachment method (c) Form tool method (d) Compound rest method	1	K1	CO4
8. Which of the following attachments is used for cutting internal and external threads on a lathe? (a) Taper attachment (b) Threading dial (c) Grinding attachment (d) Milling attachment	1	K1	CO4
9. In gear milling, the number of teeth on the gear is determined by: (a) The diameter of the gear blank (b) The feed rate of the cutter (c) The rotational speed of the cutter (d) The indexing mechanism of the milling machine	1	K1	CO5
10. The grade of a grinding wheel depends upon (a) the hardness of the material being ground (b) speed of wheel and work (c) condition of grinding machine (d) all of these	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11. Classify the different types of patterns.	2	K2	CO1
12. Define the role flux in welding operation.	2	K1	CO1
13. Define hot working of metals.	2	K1	CO2
14. List the functions of Back-up rollers in rolling operation.	2	K1	CO2
15. What are the factors affect the cutting force in metal cutting?	2	K1	CO3
16. State Taylor's equation for tool life.	2	K1	CO3
17. Difference between a capstan lathe and a turret lathe.	2	K2	CO4
18. Why the tailstock is offset method used in taper turning?	2	K1	CO4

