Reg. No.												

Question Paper Code	12379

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023

Third Semester

Mechanical and Automation Engineering

20MUPC301 - BASIC MANUFACTURING PROCESSES

(Regulations 2020)

Duration: 3 Hours Max. Marks: 100

PART-A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	Classify the types of moulding machines.	*2,K2,CO1*
2.	Differentiate brazing with soldering.	*2,K2,CO1*
3.	List down the various rolling processes.	*2,K1,CO2*
4.	Describe the working principle of tube drawing.	*2,K1,CO2*
5.	List the factors affecting the machinability.	*2,K1,CO3*
6.	What are the common methods used for taper turning on a lathe?	*2,K1,CO3*
7.	Compare down milling with up milling.	*2,K2,CO4*
8.	List down the various gear-finishing process.	*2,K1,CO4*
9.	What are the specifications of the grinding wheel?	*2,K1,CO5*
10.	How does centerless grinding differ from cylindrical grinding?	*2,K1,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	Classify the different types of pattern allowances and explain them in detail.	*13,K2,CO1*
		OR	
	b)	List and explain any six causes of welding defects and mention the causes and remedies.	*13,K2,CO1*
12.	a)	Outline the various forging operations with neat sketches.	*13,K2,CO2*
		OR	
	b)	Enumerate the types of extrusion processes and explain them with neat sketches.	*13,K2,CO2*
13.	a)	Explain the construction and working principle of centre lathe with a neat sketch.	*13,K2,CO3*
		OR	

b) Discuss the various types of chips produced during metal cutting process with its advantages & disadvantages. And explain the factors affecting the tool life. *13,K2,CO3*

14. a) Classify the types of milling cutters and explain them with neat sketches. *13,K2,CO4*

OR

b) Explain the working and construction of vertical milling machine, with its advantages, disadvantages and applications. *13,K2,CO4*

15. a) With neat sketch explain the working mechanism of cylindrical grinding and list its advantages and applications. *13,K2,CO5*

OR

b) Explain the working principle and various methods of outside diameter grinding, inside diameter grinding and plunge grinding, with a neat sketch. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Compare MIG and TIG. Also, explain the working of gas tungsten arc welding with a neat diagram. *15,K2,CO6*

OR

b) List and explain the various cutting tools materials used in machining process. *15,K2,CO6*