

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

August 2024 Semester End Main Examinations

Programme: B.E.

Semester: IV

Branch: Mechanical Engineering

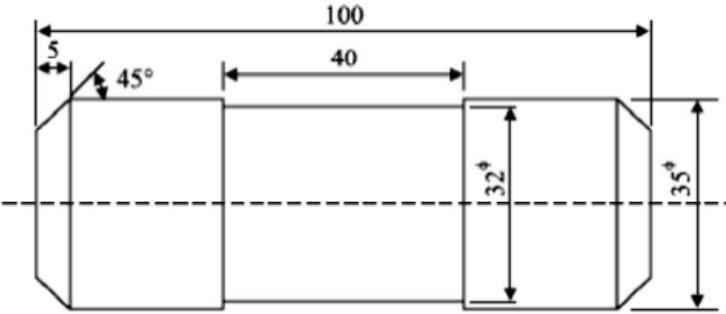
Duration: 3 hrs.

Course Code: 23ME4PCMFT

Max Marks: 100

Course: Manufacturing Technology

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

			UNIT - I	CO	PO	Marks
1	a)	Explain the single point cutting tool nomenclatures with a sketch.	<i>CO1</i>	<i>PO 1</i>	10	
	b)	List and explain the effect of cutting parameters on tool life.	<i>CO1</i>	<i>PO 1</i>	05	
	c)	List and explain the properties of cutting fluids.	<i>CO1</i>	<i>PO 1</i>	05	
OR						
2	a)	A mild steel bar 100 mm long and 38 mm in diameter is turned to 35 mm dia. And was again turned to a diameter of 32 mm over a length of 40 mm as shown in the Fig. 1. The bar was machined at both the ends to give a chamfer of $45^\circ \times 5$ mm after facing. Calculate the machining time. Assume cutting speed of 60 m/min and feed 0.4 mm/rev. The depth of cut is not to exceed 3 mm in any operation.	<i>CO2</i>	<i>PO 1</i>	10	
						
Fig. 1.						
	b)	What are the 3 differences between a shaper and a planer	<i>CO1</i>	<i>PO 1</i>	3	
	c)	Explain the principle parts of a shaping machine with a sketch.	<i>CO1</i>	<i>PO 1</i>	7	
			UNIT - II			
3	a)	Explain the nomenclature of a standard drill bit with sketch.	<i>CO1</i>	<i>PO 1</i>	10	
	b)	Explain the working of a vertical milling machine with sketch.	<i>CO1</i>	<i>PO 1</i>	10	

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
Revealing of identification, appeal to evaluator will be treated as malpractice.

UNIT - III					
4	a)	Discuss the classification of metal forming processes based on stress employed.	<i>CO3</i>	<i>PO1</i>	10
	b)	What are the differences between hot and cold working.	<i>CO3</i>	<i>PO1</i>	10
OR					
5	a)	Describe some common forging defects and their causes	<i>CO3</i>	<i>PO1</i>	10
	b)	Describe the process of rolling. Illustrate your answer with a suitable explanatory sketch.	<i>CO3</i>	<i>PO1</i>	10
UNIT - IV					
6	a)	Explain the difference between direct and indirect extrusion processes with the help of explanatory sketches.	<i>CO3</i>	<i>PO1</i>	10
	b)	Describe the tube-drawing process.	<i>CO3</i>	<i>PO1</i>	10
UNIT - V					
7	a)	Write a brief note on “bending” of sheet metal. What kind of machines are used for this process?	<i>CO2</i>	<i>PO1</i>	10
	b)	List and explain types of drilling jigs	<i>CO2</i>	<i>PO1</i>	10

B.M.S.C.E. - EVEN SEM 2023/24