

**Model Question Paper-1 with effect from 2019-20 (CBCS Scheme)**

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**Fourth Semester B.E. Degree Examination**  
**Title Manufacturing process II**

**TIME: 03 Hours****Max. Marks: 100**

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

<b>Module -1</b>			<b>*Bloom's Taxonomy Level</b>	<b>Marks</b>
Q.01	a	In an orthogonal cutting process, the following data were obtained chip length obtained =96mm, uncut chip length=240mm, rake angle =20°. Depth of cut=0.6mm, horizontal force of cutting=2400N and vertical force of cutting =240N, calculate the following a) shear plane angle b) chip thickness c) friction angle d) resultant cutting force.	L3,CO1	08
	b	With neat sketches, explain the different types of chips produced during metal cutting process.	L2,CO1	06
	c	Explain types of rake angle with neat sketches.	L2,CO1	06
<b>OR</b>				
Q.02	a	Explain desirable characteristics of cutting tool materials. Explain how these are satisfied in the case HSS tool.	L1,CO1	08
	b	Briefly explain different types of cutting fluids	L1,CO1	06
	c	With neat sketch explain the zones of heat generation in metal cutting	L1,CO1	06
<b>Module-2</b>				
Q. 03	a	Explain the construction of capston lathe with neat diagram.	L2,CO1	10
	b	Explain different operations performed on lathe machine	L2,CO1	10
<b>OR</b>				
Q.04	a	Explain constructional features of shaping machine	L2,CO1	10
	b	Differentiate between shaper and planer machine	L2,CO1	05
	c	Explain crank and slotted link quick mechanism of used in shaper machine	L2,CO1	05
<b>Module-3</b>				
Q. 05	a	With a neat sketch explain horizontal spindle column and knee milling machine.	L2,CO2	10
	b	Explain various milling operations with schematic sketches	L2,CO2	10
<b>OR</b>				
Q. 06	a	Explain these methods of bonding in grinding a) vitrified bond b) silicate bond c) rubber bond	L2,CO2	12
	b	Explain constructional features of centerless grinding	L2,CO2	08
<b>Module-4</b>				

Q. 07	a	Explain a) gang drilling machine b) multiple spindle drilling machine	L1,CO1	10
	b	Explain operations performed on drilling machine	L1,CO1	10
<b>OR</b>				
Q. 08	a	With the help of neat sketch describe broach tool.	L2.CO3	08
	b	Explain lapping.	L2.CO3	06
	c	Explain honing.	L2.CO3	06
<b>Module-5</b>				
Q. 09	a	With a neat sketch explain working principle of plasma arc machining process and state its advantages	L2.CO4	10
	b	With a neat sketch explain working principle of electron beam machining and state its advantages	L2.CO4	10
<b>OR</b>				
Q. 10	a	With a neat sketch explain working principle of ultrasonic machining process and state its advantages	L2.CO4	10
	b	With a neat sketch explain working principle of laser beam machining and state its advantages	L2.CO4	10