

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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Fifth Semester B.E. Degree Examinations, September / October 2024

PRODUCTION TECHNOLOGY-II

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions choosing ONE full Question from each Module.
2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO:PI)</u>
<u>Module-1</u>			
1.	a. With neat sketch explain orthogonal and oblique cutting.	10	(2 :1 : 1.3.1)
	b. Give detailed classification of cutting tools.	10	(2 :1 : 1.3.1)
OR			
2.	a. Derive the Merchant circle diagram for orthogonal cutting.	10	(2 :1 : 1.3.1)
	b. Explain with neat sketch the mechanism of chip formation.	10	(2 :1 : 1.3.1)
<u>Module-2</u>			
3.	a. Sketch and label important parts of lathe machine.	10	(2 :2 : 1.3.1)
	b. Explain any five types of operations performed on lathe with simple	10	(2 :2 : 1.3.1)
OR			
4.	a. Explain up milling and down milling operation with sketches.	08	(2 :2 : 1.3.1)
	b. Give the differences between drilling, boring and reaming operations.	12	(2 :2 : 1.3.1)
<u>Module-3</u>			
5.	a. Explain the different types of tool wear.	10	(2 :3 : 1.3.1)
	b. What are the different types of cutting fluids and how are they applied in various machining processes?	10	(2 :3 : 1.3.1)
OR			
6.	a. What are the key economic factors influencing machining processes, and how do they impact overall manufacturing costs and efficiency? Explain.	10	(2 :3 : 1.3.1)
	b. What strategies can manufacturers employ to optimize the choice of cutting speed, feed rate, and tool life in machining processes for achieving minimum costs and production time? Explain.	10	(2 :3 : 1.3.1)
<u>Module-4</u>			
7.	a. With a neat sketch explain Abrasive Flow Machining (AFM) process.	10	(2 :4 : 1.3.1)
	b. Write a short note on Honing, Lapping and Polishing operations.	10	(2 :4 : 1.3.1)
OR			
8.	a. With a neat sketch, explain Electroplating process.	10	(2 :4 : 1.3.1)
	b. With a neat sketch, explain Galvanizing process	10	(2 :4 : 1.3.1)
<u>Module-5</u>			
9.	a. Discuss the importance of jigs and fixtures.	10	(2 :5 : 1.3.1)
	b. Discuss the essential features of jigs and fixtures.	10	(2 :5 : 1.3.1)
OR			
10	a. Explain the concept of 3D printing.	10	(2 :5 : 1.3.1)
	b. Give the basic concept of underlying CNC machining with its applications.	10	(2 :5 : 1.3.1)

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