

Basavarajeswari Group of Institutions
BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT
(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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Third Semester B.E. Degree Examinations, September 2024

PRODUCTION TECHNOLOGY-I

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. What is casting? Explain the steps in casting with the flow process diagram.	10	(2 :1 : 1.4.1)
	b. Define pattern and discuss various pattern allowances.	10	(2 :1 : 1.4.1)
(OR)			
2.	a. With a neat sketch explain Jolting machine for mould preparation.	10	(2 :1 : 1.4.1)
	b. Sketch and explain the elements of gating system.	10	(2 :1 : 1.4.1)
<u>Module-2</u>			
3.	a. With a neat sketch explain working of coreless induction furnace.	10	(2 :2 : 1.4.1)
	b. With a neat sketch explain the working of cupola furnace.	10	(2 :2 : 1.4.1)
(OR)			
4.	a. With a neat sketch explain the working of centrifugal casting process.	10	(2 :2 : 1.4.1)
	b. With a neat sketch explain the working of gravity die casting process.	10	(2 :2 : 1.4.1)
<u>Module-3</u>			
5.	a. What is hot working and cold working process? Explain the variables affecting metal forming processes.	10	(2 :3 : 1.4.1)
	b. Explain with a neat sketch any two types of rolling mills.	10	(2 :3 : 1.4.1)
(OR)			
6.	a. Sketch and explain die and punch assembly operation also give the applications of sheet metal forming process.	10	(2 :3 : 1.4.1)
	b. With a neat sketch explain working of explosive forming process.	10	(2 :3 : 1.4.1)
<u>Module-4</u>			
7.	a. Explain with a neat sketch gas welding operation and its flames.	10	(2 :4 : 1.4.1)
	b. With a neat sketch explain working of atomic hydrogen welding process.	10	(2 :4 : 1.4.1)

Note: (RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI- Performance Indicator)

(OR)

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| 8. | a. With a neat sketch explain working of electron beam welding process. | 10 | (2 :4 : 1.4.1) |
| | b. With a neat sketch explain working of laser beam welding process. | 10 | (2 :4 : 1.4.1) |

Module-5

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| 9. | a. Write a short note on soldering and brazing process. | 10 | (2 :5: 1.4.1) |
| | b. List the methods of non-destructive testing and explain anyone with a sketch. | 10 | (2 :5 : 1.4.1) |

(OR)

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| 10 | a. List the different types and forging and welding tools. | 06 | (2 :5 : 1.4.1) |
| | b. Write the aim, tools required and procedure to make a mould cavity using single piece pattern with a neat figure. | 14 | (2 :5: 1.4.1) |

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