

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, March/April 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>
Module-1			
1.	a. Sketch and explain the production processes classified based on force applied.	10	(2:1:1.6.1)
	b. Explain shrinkage and distortion allowances provided on patterns.	10	(2:1:1.6.1)
OR			
2.	a. Explain the steps involved in making casting with neat sketches.	10	(2:1:1.6.1)
	b. Sketch and explain the investment moulding process steps.	10	(2:1:1.6.1)
Module-2			
3.	a. With a neat sketch explain working of coreless induction furnace. Mention its advantages.	10	(2:2:1.6.1)
	b. With a neat sketch explain the zones of cupola furnace.	10	(2:2:1.6.1)
OR			
4.	a. With a neat sketch explain the working of centrifuging casting process. Mention its advantages and disadvantages.	10	(2:2:1.6.1)
	b. Explain the continuous casting process with a neat sketch. Mention its advantages.	10	(2:2:1.6.1)
Module-3			
5.	a. Define forging. Sketch and explain any two forging operations.	10	(2:3:1.6.1)
	b. Explain with a neat sketch (i) wire drawing and (ii) tube drawing operations.	10	(2:3:1.6.1)
OR			
6.	a. With neat sketches, explain (i) Compound die (ii) Progressive die.	10	(2:3:1.6.1)
	b. With a neat sketch explain the working of electro-hydraulic forming.	10	(2:3:1.6.1)
Module-4			
7.	a. Sketch and explain the TIG welding processes. Mention its applications.	10	(2:4:1.6.1)

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

- b.** With a neat sketch explain working of atomic hydrogen welding process. **10** (2:4:1.6.1)
Mention its applications.

OR

- 8. a.** With a neat sketch explain the working of Thermit welding process. **10** (2:4:1.6.1)
b. With a neat sketch explain working of laser beam welding. Mention its advantages and disadvantages. **10** (2:4:1.6.1)

Module-5

- 9. a.** Explain the metallurgical effects of (i) Residual stresses (ii) HAZ (iii) shrinkage and distortion (iv) thermal effects (v) structure of weld **10** (2:5:1.6.1)
b. Define permeability. Sketch and explain how to determine permeability number of sand. **10** (2:5:1.6.1)

OR

- 10 a.** Sketch and explain Magnetic particle inspection technique. **10** (2:5:1.6.1)
b. Explain the step-by-step procedure to obtain butt and lap joints using arc welding process. **10** (2:5:1.6.1)

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