

# BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

USN 

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Course Code 

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Third Semester B.E. Degree Examinations, March/April 2023

## 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>
<b>MODULE – 1</b>			
1.	a. Define pattern and discuss various pattern allowances.	10	(2 :1: 1.6.1)
	b. Give the complete classification of manufacturing process and give examples for each process.	06	(2 :1: 1.6.1)
	c. Write a short note on importance of binders and additives in sand moulding.	04	(2 :1: 1.6.1)
<b>OR</b>			
2.	a. Explain Jolting machine for mould preparation with a neat sketch.	10	(2 :1: 1.6.1)
	b. Discuss CO <sub>2</sub> moulding technique with a neat sketch.	10	(2 :1: 1.6.1)
<b>MODULE – 2</b>			
3.	a. With a neat sketch explain gas fired pit furnace.	06	(2 :2: 1.6.1)
	b. With a neat sketch explain working of coreless induction furnace.	06	(2 :2: 1.6.1)
	c. With a neat sketch explain the working of cupola furnace.	08	(2 :2: 1.6.1)
<b>OR</b>			
4.	a. With a neat sketch explain the working of centrifugal casting process.	10	(2 :2: 1.6.1)
	b. Discuss the casting defects, their causes and remedies.	10	(2 :2: 1.6.1)
<b>MODULE – 3</b>			
5.	a. Explain with a neat sketch the different types of rolling mills.	10	(2 :3: 1.6.1)
	b. Explain with a neat sketch (a) wire drawing and (b) tube drawing operation.	10	(2 :3: 1.6.1)
<b>OR</b>			
6.	a. With neat sketches explain the (a) Compound die and (b) Progressive die.	10	(2 :3: 1.6.1)
	b. With a neat sketch explain working of electro-magnetic forming.	10	(2 :3: 1.6.1)
<b>MODULE – 4</b>			
7.	a. What is gas welding? Explain with a neat sketch gas welding operation and different flame characteristics.	10	(2 :4: 1.6.1)
	b. With a neat sketch explain working of atomic hydrogen welding process.	10	(2 :4: 1.6.1)
<b>OR</b>			
8.	a. With a neat sketch explain working of laser beam welding process.	10	(2 :4: 1.6.1)
	b. With a neat sketch explain working of thermit welding process.	10	(2 :4: 1.6.1)

**MODULE – 5**

9. a. Differentiate between soldering, brazing and welding processes. **08** (2 :5: 1.6.1)  
b. List the different types of casting and welding inspection methods. **12** (2 :5: 1.6.1)  
Explain any two methods.

**OR**

10. a. Explain the arc welding process with a neat sketch. Mention its applications. **08** (2 :5: 1.6.1)  
b. Explain with sketches the Butt joint and lap joint operations of arc welding process. **12** (2 :5: 1.6.1)

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