

**B.Tech. – VIEP – MECHANICAL ENGINEERING  
(BTMEVI)**

**Term-End Examination**

00943

**June, 2018**

**BIME-009 : PRODUCTION TECHNOLOGY – I**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Answer any **five** questions. All questions carry equal marks.*

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1. (a) Discuss the types and properties of moulding sands. What are the ingredients of a moulding sand mix ? 7
- (b) Enlist the various types of casting techniques. Explain semi-centrifugal casting with a neat sketch. 7
2. (a) What metals are generally used for making patterns ? What are the factors to consider for selection of a pattern ? 7
- (b) Explain the process of resistance spot welding with the help of neat sketches. How is heat balance obtained in this process ? 7

3. (a) Discuss the process of thermal cutting of metals and alloys. 7
- (b) Why is press forging preferred over hammer forging process ? List the advantages of forging of metals. 7
4. (a) What are the common forging defects ? State their causes and remedies. 7
- (b) Distinguish between Soldering and Brazing. 7
5. (a) Describe rolling mills. Discuss briefly the factors affecting the rolling process. 7
- (b) Explain the impact extrusion process and give its applications. 7
6. (a) Discuss the different types of bending operations with diagrams. 7
- (b) What are the different methods available for tube drawing ? Explain any one in detail. 7
7. (a) Explain the working of mechanical high velocity forming with a neat sketch. 7
- (b) Describe the types of plastics. Explain any one plastic moulding process with the help of a neat diagram. 7

8. Write short notes on any *four* of the following :  $4 \times 3 \frac{1}{2} = 14$

- (a) Explosive Forming
  - (b) Blanking
  - (c) Spinning
  - (d) Deep Forming
  - (e) Radiant Energy Welding
  - (f) Fettling and Finishing of Castings
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