

**B. TECH. SEM - III (PRODUCTION ENGG.) (2014 COURSE) (CBCS)**  
**: WINTER - 2017**  
**SUBJECT : WELDING & FOUNDRY TECHNOLOGY**

Day : Friday  
Date : 12/01/2018

Time : 10.00 AM TO 01.00 PM  
Max. Marks : 60

**W-2017-2051**

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Assume suitable data if necessary.

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**Q.1 a)** What equipment's are required for MIG welding? Explain them in detail. [05]

**b)** Compare TIG and MIG welding process. [05]

**OR**

**Q.1** With the aid of sketches, describe GTAW and GMAW in detail. [10]

**Q.2 a)** What are the variables in resistance welding? How resistance welding differ from Arc Welding? [05]

**b)** Describe projection welding with neat sketch. [05]

**OR**

**Q.2** What is spot welding? Discuss stages in making a spot weld, spot weldable metals and spot welding equipment in detail. [10]

**Q.3** What are the defects in welding? Discuss them with suitable sketches. [10]

**OR**

**Q.3** Write a note on welding inspection and welding symbols. [10]

**Q.4 a)** What are the sections of a foundry? Discuss foundry layout. [05]

**b)** Describe colour codes used in pattern making. [05]

**OR**

**Q.4 a)** What are the functions of a pattern? How pattern differ from casting? [05]

**b)** Discuss types of molding sand. [05]

**Q.5 a)** What are the factors for selection of remelting furnace? [05]

**b)** Discuss inspection and testing of casting. [05]

**OR**

**Q.5** Describe with suitable sketch Cupola Furnace, also state its merits, demerits and applications. [10]

**Q.6** Explain shell mold casting and investment casting in brief. [10]

**OR**

**Q.6 a)** How hot chamber die casting is different from cold chamber die casting? [05]

**b)** Write a note on Aluminium alloy foundry practice. [05]

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