

B.Tech II Year II Semester (R15) Regular Examinations May/June 2017  
**MANUFACTURING TECHNOLOGY**  
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

**PART – A**  
(Compulsory Question)

\*\*\*\*\*

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Write the requirements of moulding sand.
  - (b) Differentiate the terms 'mould' and 'core'.
  - (c) List the merits and demerits of investment casting.
  - (d) Name any four types of casting defects.
  - (e) Give two basic types of AW electrodes.
  - (f) Write the types of flames in oxy-acetylene gas welding.
  - (g) List any four applications of TIG welding.
  - (h) Define brazing process.
  - (i) Write a short note on surface treatment process.
  - (j) Give the applications of surface treatment process.

**PART – B**  
(Answer all five units, 5 X 10 = 50 Marks)

**UNIT – I**

- 2 Define mould. Explain any two types of mould making process with a neat sketch.

**OR**

- 3 Explain the factors which govern the selection of a proper material for pattern making.

**UNIT – II**

- 4 Describe investment casting in detail.

**OR**

- 5 Elaborate cupola furnace with a neat sketch and list its merits.

**UNIT – III**

- 6 Illustrate plasma welding process with a neat sketch.

**OR**

- 7 Explain Oxy-Acetylene gas welding process with proper sketch and list its applications.

**UNIT – IV**

- 8 Describe laser welding with a neat sketch.

**OR**

- 9 List and explain the various types of welding defects.

**UNIT – V**

- 10 Explain any two types of surface treatment process.

**OR**

- 11 Illustrate diffusion coating process with proper justification.

\*\*\*\*\*