

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-V Examination-Nov/Dec.-2011

Subject code: 152103**Date: 26/11/2011****Subject Name: Foundry Technology****Time: 2.30 pm -5.00 pm****Total marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Write definition of foundry. Write classification of foundry according to the type of work. List different sections of the foundry. **07**
- (b) Define the followings: **07**
(i) Core, (ii) Mould, (iii) Chill, (iv) Chaplet,
(v) Gating ratio, (vi) Riser, (vii) Pattern.
- Q.2** (a) List types of patterns and explain any two with neat sketches. **07**
- (b) What is core? Why it is necessary? List types of cores and explain core baking briefly. **07**
- OR**
- (b) What is pattern allowance? Why it is necessary? Explain different types of pattern allowances. **07**
- Q.3** (a) What is solidification of metal in casting? Explain briefly directional and progressive solidifications of casting. **07**
- (b) List the types of moulding sand. Explain properties of moulding sand. **07**
- OR**
- Q.3** (a) Explain the process of green sand moulding with diagrams wherever necessary. **07**
- (b) Why proper gating system is necessary for defect free casting? Explain different types of gating systems briefly. **07**
- Q.4** (a) Write short note on investment casting process. **07**
- (b) Draw a labeled diagram of cupola showing various zones and temperatures. **07**
- OR**
- Q.4** (a) Explain the sequence of operations of melting in a cupola furnace. **07**
- (b) Discuss Pressure Die-casting process. **07**
- Q.5** (a) Explain about the defects in green sand casting process. **07**
- (b) List and explain sand tests carried out in foundry. **07**
- OR**
- Q.5** (a) Explain shell moulding process. **07**
- (b) Write composition, properties and uses of important cast metals and alloys. **07**
