

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-V (OLD) - EXAMINATION – SUMMER 2017**

**Subject Code: 152501**

**Date: 10/05/2017**

**Subject Name: Casting Technology**

**Time: 02:30 PM to 05:00 PM**

**Total Marks: 70**

**Instructions:**

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

- Q.1** (a) Classify patterns? Explain them in brief. **07**  
(b) Which types of materials are used for manufacturing of various patterns? **07**
- Q.2** (a) Classify furnaces. Explain electric arc furnace with principle and working. **07**  
(b) Classify molding machines and explain function of any one in detail. **07**
- OR**
- (b) Classify molding sand. Explain each of them in brief. **07**
- Q.3** (a) What is the function of core? Explain various types of cores in brief. **07**  
(b) Explain molding sand properties. Also explain testing of molding sand. **07**
- OR**
- Q.3** (a) Classify molding methods and explain two methods. **07**  
(b) What is heat treatment? Differentiate annealing and normalizing. **07**
- Q.4** (a) What is a pouring cup? Why it is required? Explain various types of pouring cups. **07**  
(b) Explain elements of gating system with neat sketch. **07**
- OR**
- Q.4** (a) State reasons of defects in casting. Explain more severe casting defects. **07**  
(b) Explain directional solidification. How it occurs? **07**
- Q.5** (a) Classify foundries. Explain any two of them in brief. **07**  
(b) What is fettling? How and why it is carried out? What are its benefits? **07**
- OR**
- Q.5** (a) What is a shell? Explain shell molding process in detail. **07**  
(b) Classify centrifugal casting and explain any two. **07**

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