

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII • EXAMINATION – SUMMER • 2015**

**Subject code: 170805**

**Date:06/05/2015**

**Subject Name: Embedded Systems And Applications**

**Time: 02.30pm-05.00pm**

**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) Comparison of Harvard & Van Neumann Architecture and also compare RISC & CISC Architecture of processor in detail. 07
- (b) Explain the block diagram of Embedded system. Give the classification of Embedded system. 07
- 
- Q.2 (a) Give the classification of programming language. Compare Assembly language with High Level programming language. 07
- (b) Explain advanced I/O Serial high speed buses- ISA, PCI 07
- OR**
- (b) Explain types of serial communication. Explain any one of them in detail. 07
- Q.3 (a) Explain CAN and USB buses in detail. 07
- (b) Explain serial communication device HDLC in detail 07
- OR**
- Q.3 (a) Discuss the advantages and disadvantages of C++ in an embedded system. 07
- (b) Explain the timer and counter devices. 07
- Q.4 (a) Explain motor speed control embedded system in detail 07
- (b) What is RTOS? Explain hardware and software RTOS in detail. 07
- OR**
- Q.4 (a) Discuss power constraints in Embedded system. 07
- (b) Explain hardware and software partitioning in Embedded system. 07
- Q.5 (a) Explain multiple function calls in cyclic order in the main function pointers. 07
- (b) Write a short note on Compiler and Cross Compiler. 07
- OR**
- Q.5 (a) Discuss System on Chip in Embedded system. 07
- (b) What are the differences between macros and functions in C programming 07

\*\*\*\*\*