

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER – V EXAMINATION – SUMMER - 2017

Subject Code: 2650012

Date: 08/06/2017

Subject Name: Software Development for Embedded System (SD-ES)

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.

- Q.1** (a) What is Embedded System? Discuss design challenges of Embedded System. **07**
(b) Write Short note on IC Technology. **07**
- Q.2** (a) Draw basic architecture of Application-Specific Processor and Explain Datapath, Control Unit and Memory of it. **07**
(b) Explain Top-Down Design approach of Embedded System. **07**
- OR**
- (b) Explain Instruction Set and it's Addressing Modes. **07**
- Q.3** (a) Explain Timers and Counters with proper diagrams. **07**
(b) Write short note on UART and PWM. **07**
- OR**
- Q.3** (a) Draw internal structure of ROM and RAM. List all types of ROM and Explain any two ROMs. **07**
(b) What is cache memory? Explain any two cache mapping techniques. **07**
- Q.4** (a) Draw and Explain BUS structure and Explain Strobe and Handshake protocols. **07**
(b) What is Arbitration? List all arbitration methods and explain any one arbitration method. **07**
- OR**
- Q.4** (a) Write short note on Multi Level Bus Architecture. **07**
(b) Explain DMA with proper diagrams. **07**
- Q.5** (a) Explain Cross Compiler, Cross Assembler and Linker. **07**
(b) What is Host and Target System? Explain PROM Programmers and ROM Emulators. **07**
- OR**
- Q.5** (a) Explain Instruction Set Simulator with it's abilities. **07**
(b) List all useful laboratory tools and explain any three laboratory tools. **07**
