

B.TECH SEM – VII (2007 COURSE) (COMPUTER ENGG.) :
WINTER - 2017

SUBJECT: Elective-I i) EMBEDDED SYSTEM

Day: **Monday**
Date: **22/01/2018**

Time: **02.30 PM TO 05.30 PM**
Max. Marks: **80**

W-2017-2566

N.B.:

- 1) **Q. No. 1** and **Q. No. 5** are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the section should be written in **SEPARATE** answer book.
- 4) Assume suitable data if necessary.

SECTION-I

- Q.1** a) Classify Embedded Systems and briefly discuss about the design challenges in designing Embedded Systems. (08)
- b) Discuss the following types of System Bus (06)
1)PCI 2) PCIX 3)ISA
- Q.2** a) Explain how the concept of Multi-objective Optimization is implemented in Embedded System. (07)
- b) Discuss the levels of abstraction in Embedded System. (06)
- Q.3** a) What is meant by timer? Explain with example. (07)
- b) Elaborate significance of interfacing with an appropriate example. (06)
- Q.4** a) Discuss various Software Testing Methodologies, which are used in Embedded System. (07)
- b) Describe the steps to build the Software for traffic control process. (06)

SECTION- II

- Q.5** a) How is Group multicast & Peer-to-Peer concept implemented in Embedded System. (08)
- b) What is Real time scheduling? List the characteristics and features of real time scheduling. (06)
- Q.6** a) Explain the advantages of Verilog in implementation of embedded systems (07)
- b) Explain the architecture of DSP processor. (06)
- Q.7** a) Design 8-bit Shift Register using VHDL modeling. (07)
- b) What are the different data types available in Verilog. (06)
- Q.8** a) Discuss in brief about various RTOS services. (07)
- b) Describe the Scheduling methods for RTOS (06)