# Subject : I.T. Elective-III d) Embedded System Interfacing & Embedded Communication System

Day : Friday     **S.D.E.** ‖‖‖‖‖‖‖‖‖ Time : 10.00 A.M. TO 1.00 P.M.

Date : 09/12/2016     **33544**     Max Marks : 80     Total Pages : 1

**N.B.:**

1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.

2) Answers to both the sections should be written in the **SAME** answer book.

3) Figures to the right indicate **FULL** marks.

## SECTION - I

Q.1 With the help of diagram, discuss Asynchronous serial communication in Embedded systems. **[10]**

Q.2 How does keyboard interfacing work in Embedded Communication System? Discuss in detail. **[10]**

Q.3 What are DAC techniques in Embedded System? Explain with examples DAC techniques in brief. **[10]**

Q.4 With the help of diagram, describe working and significance of USB communication. **[10]**

Q.5 Discuss in detail interrupt service routines used in Embedded Systems. **[10]**

Q.6 Illustrate in detail TCP / IP protocol stack with diagram. **[10]**

Q.7 Write short notes on **ANY TWO** of the following: **[10]**

a) Servo motor interfacing

b) Hardware Interrupts

c) Ethernet Connectivity

## SECTION - II

Q.8 What is system Integration? Explain the need and significance of the system integration. **[15]**

Q.9 Draw a Interfacing diagram for Keyboard with 8051 Microcontroller, write an Assembly Language program to interface Keyboard with 8051 microcontroller. **[15]**

Q.10 Draw Interfacing diagram for LED with 8051 Microcontroller, write an Assembly Language program to interface LED with 8051 microcontroller. **[15]**

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