

**(DEC 424 B)**

**B. Tech. DEGREE EXAMINATION, MAY - 2015**

**(Examination at the end of Final Year)**

**ELECTRONICS AND COMMUNICATIONS**

**Paper - IV : Microcontroller and Embedded Systems**

**Time : 3 Hours**

**Maximum Marks : 75**

**Answer Question No. 1 compulsory**

**(15)**

**Answer ONE question from each unit**

**(4 x 15 = 60)**

- 1) a) What is the difference between Microprocessor and microcontroller?
- b) Write the PSW in 8051.
- c) Write the Interrupts in 8051.
- d) Draw the internal memory organization of 8051.
- e) What is an Embedded system?
- f) What is Mutex?
- g) What is Event Register?

**Unit - I**

- 2) a) Draw the Pin diagram of 8051.
- b) List out the features of 8051.

OR

- c) Explain the Memory organization of 8031.
- d) With example, Explain instruction set of 8051.

**Unit - II**

- 3) a) Write advantages of Microcontrollers.
- b) Discuss input and output device interface.

OR

- c) Explain USB.
- d) Explain Parallel Communication Standards.

**Unit – III**

- 4) a) With help of a schematic diagram of explain the relationship between OS, computers hardware, system hardware in an Embedded system.
- b) Discuss OS Security.

OR

- c) Explain Scheduling Algorithm.
- d) Discuss Event Register and Memory Management.

**Unit – IV**

- 5) a) Discuss the issues involved in Designing ES.
- b) Explain a case study- Automatic Vending Machine.

OR

- c) Explain the Concept of device drives.
- d) Explain the working Smart Card.

**κβκβ**