

2123

B.E. (Electronics and Communication Engineering)
Fifth Semester
EC-506: Advanced Microcontrollers and Applications

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) Small scale embedded systems
- b) Characteristics of RTOS
- c) Need of essential peripheral circuits
- d) Components of basic embedded development board
- e) Applications of Line follower robot

(5x2)

UNIT - I

- II. Explain the architecture of ARM Processor along with its applications. (10)
- III. Explain configuration of two 8- bit and one 16- bit timers and counters (10)
- IV. Explain the characteristics of Atmega8, Tmega8 and ATmega 328. Which one is most suitable for designing mobile embedded system applications? (10)

UNIT - II

- V. Explain the working of open source embedded development board using block diagram. (10)
- VI. Briefly explain the concept of input and output port of Embedded development board. Also write a program for Analog I/O Interfacing. (10)
- VII. Explain functional blocks of home automation using RF control. (10)

x-x-x