No. of Printed Pages : 4
Roll No. .....

221543

4th Sem./ Instrumentation & Control

Subject :Microcontroller and Embedded System

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The 8051 Microcontroller is an_____ bit controller.

a) 4 b) 8

c) 12 d) 16

Q.2 8051 has_____ 16-bit counter/timers.

a) 1 b) 2

c) 3 d) 4

Q.3 Embedded systems are

a) Special purpose b) General purpose

c) Both A & B d) None

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Differentiate between microcontroller and microprocessor.

Q.24 Draw the pin diagram of 8051 and explain function of each pin.

Q.25 Write various applications of advance microcontroller in the field of instrumentation and control engineering.

.4 Which of the following is not an addressing mode of 8051?

a) Register

b) Register specific Instruction

c) Indexed addressing

d) Direct addressing

Q.5 A nibble has_____ bits.

a) 2 b) 8

c) 4 d) 12

Q.6 Stack pointer is a _____ bit register

a) 4 b) 16

c) 12 d) 8

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Write the full form of PIC.

Q.8 Define Microcontroller.

Q.9 Define Interrupt.

Q.10 Internal RAM of 8051 is 128 bytes (T/F)

Q.11 Expand ALU.

Q.12 Expand RAM.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain RTOS in detail.

Q.14 Explain in brief different addressing modes used in 8051.

Q.15 Write a short note on data pointer and program counter.

Q.16 Explain embedded system with the help of an example.

Q.17 Write five applications of 8051 microcontroller.

Q.18 Explain Stack & stack pointer.

Q.19 Explain different type of interrupts used in 8051.

Q.20 Write a short note on embedded operating system.

Q.21 Explain data transfer instruction used in 8051 microcontroller.

Q.22 Write a short note on flag and PSW.