

Branch: Instrumentation & Control

Semester: 4th

Subject Name: Microcontroller & Embedded Systems

Time Allowed : 3 Hrs.

MM:100

Section –A

Note: Multiple Choice questions. All questions are compulsory.**10x1=10**

- Q.1 Memory size of 8051.
a. 3KB b. 64KB
c. 128 byte d. 256KB
- Q.2 8051 has how many 16 bit registers.
a. 2 b. 3
c. 1 d. 0
- Q.3 An embedded system is a combination
a. Software b. Hardware
c. Both a & b d. Devices
- Q.4 8051 is microcontroller
a. 4-bit b. 8-bit
c. 16-bit d. All of the above
- Q.5 The address register for storing the 8-bit address can be
a. R1 of selected bank of Register b. Stack Pointer
c. All of the mentioned d. Ro of selected band of Register
- Q.6 Number of Pins present in 8051.
a. 20 b. 30
c. 40 d. 80
- Q.7 To exchanged digits, which instruction is used
a. XCH b. XCHPA
c. XCHD d. XRL
- Q.8 Register that is used to holds the memory address of the next instruction to be executed is
a. Program memory b. Program Counter
c. Control Unit d. Instruction decoder
- Q.9 ADC is used for?
a. Addition of two 16-bit numbers b. Automatic Digital Control
c. Analog to Digital Conversion d. None of the above
- Q.10 Which of the following Instruction affect the Flag of the status Register?
a. AND b. INC
c. OR d. All of the mentioned

Section-B

Note: Objective type questions. All questions are compulsory.**10x1=10**

- Q.11 What is MOV instruction?
- Q.12 What is stack pointer?
- Q.13 Addressing mode.
- Q.14 Register.
- Q.15 Stack
- Q.16 What is Interrupt?
- Q.17 Clock
- Q.18 Define Embedded system?
- Q.19 What is Compiler?
- Q.20 Define microcontroller.

Section –C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen questions.**12x5=60**

- Q.21 List the application of embedded system.
- Q.22 Define addressing mode in brief.
- Q.23 Write a short note on program computer and stack pointer.
- Q.24 Write a short note loop instruction.
- Q.25 What are microcontroller and their applications?
- Q.26 What are the various intercepts of 8051?
- Q.27 Explain the function of A and B PU register.
- Q.28 Write a short note on PIC microcontroller.

- Q.29 Explain memory organization of 8051.
- Q.30 Define immediate and register addressing mode of 8051.
- Q.31 Compare the role of assembler and compiler.
- Q.32 Write a short note on arithmetic instruction.
- Q.33 What are the hardware unit in a system?
- Q.34 Give the brief idea about AVR.
- Q.35 What are application of Advanced microcontroller in the I & C.

Section-D

Note: Long answer questions. Attempt any two questions out of three questions.

2x10=20

- Q.36 Define embedded system and explain various applications of embedded system.
- Q.37 Explain pin diagram of 8051 micro-controller in detail.
- Q.38 Differentiate between microprocessor & microcontroller.