

5th Sem / Branch : Eltx. Power Eltx.
Sub.: Microcontrollers / Microcontrollers & Applications

M.M. : 100

Time : 3Hrs.

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 How many bytes of bit addressable memory is present in 8051 based microcontrollers? (CO1)
a) 8 bytes b) 32 bytes
c) 16 bytes d) 128 bytes
- Q.2 8 Input DAC has _____. (CO3)
a) 8 discrete voltage levels
b) 64 Discrete voltage levels
c) 124 discrete voltage levels
d) 256 discrete voltage levels
- Q.3 Auto reload mode is allowed in which mode of the timer? (CO3)
a) Mode 0 b) Mode 1
c) Mode 2 d) Mode 3
- Q.4 Which operator is the most important while assigning any instruction as register indirect instruction? (CO2)
a) \$ b) #
c) @ d) &

- Q.27 Explain Flag Register of 8051 micro controller. (CO1)
- Q.28 Write a short note on "Analog to Digital (ADC) interface." (CO3)
- Q.29 Explain the interfacing of the LCD with micro controller. (CO3)
- Q.30 What do you understand from High Level Language? Give examples. (CO1)
- Q.31 Explain Push and Pop instructions with example. (CO2)
- Q.32 What is the Von Neumann Architecture? (CO1)
- Q.33 Give the specifications of PIC Micro controller? (CO3)
- Q.34 Explain assembler directives. (CO3)
- Q.35 Write a short note on "Serial Port operation in 8051 Micro controller." (CO2)

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Write and explain any five instructions belonging to logical instruction of 8051. (CO2)
- Q.37 Draw the pin diagram of 8051. Explain each pin in detail. (CO1)
- Q.38 What is interrupt? Explain different interrupts used in 8051. (CO2)

- Q.5 Which of the following signal control the flow of data? (CO3)
- a) RTS b) DTR
 c) RTS & DTR d) None of the mentioned
- Q.6 LCALL instruction takes (CO3)
- a) 1 byte b) 2 bytes
 c) 3 bytes d) 4 bytes
- Q.7 What is the clock source for the timers? (CO1)
- a) Some external crystal applied to the micro controller for executing the timer
 b) From the crystal applied to the micro controller
 c) Through the software
 d) Through programming
- Q.8 Which of the following registers are not bit addressable? (CO2)
- a) SCON b) PCON
 c) A d) PSW
- Q.9 If we push data onto the stack then the stack pointer (CO3)
- a) Increases with every push
 b) Decreases with every push
 c) Increases & decreases with every push
 d) None of the mentioned
- Q.10 8051 is _____ bit microcontroller. (CO1)
- a) 4 b) 8
 c) 16 d) 32

SECTION-B

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

- Q.11 What is the full form of ALE? (CO1)
- Q.12 Define Program Counter. (CO1)
- Q.13 Write full form of PIC. (CO3)
- Q.14 Define Subroutine. (CO2)
- Q.15 What is the width of the Address bus in 8051? (CO1)
- Q.16 PIC microcontroller uses Harvard architecture. (CO1)
 (True/False)
- Q.17 Expand DAC. (CO3)
- Q.18 Expand PSW. (CO2)
- Q.19 Define operand. (CO1)
- Q.20 8051 Microcontroller has one serial port. (CO1)

SECTION-C

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

- Q.21 What are various SFR's of 8051? Give their details. (CO2)
- Q.22 Explain memory organization in 8051. (CO1)
- Q.23 Explain any five SFR is 8051 Micro controller? (CO2)
- Q.24 Write a short note on "Compiler operations". (CO2)
- Q.25 Write a short note on I/O port structure of 8051. (CO1)
- Q.26 Explain CISC. (CO1)