

- Q.26 Write short note on stack. How and where it is implemented|?
- Q.27 Show schematic of keyboard interfacing with 8051.
- Q.28 Explain the architecture of micro-controller 8051.
- Q.29 Write short note on evolution of microprocessor.
- Q.30 Describe the memory mapped IO devices.
- Q.31 Explain Edge triggered and level triggered interrupts.
- Q.32 Write short note on EPROMs.
- Q.33 What is the difference between maskable and non-maskable interrupts?
- Q.34 What is multiplexed bus in any microcontroller?
- Q.35 Give basic idea of ROM, PROM and EPROM.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Give brief idea of machine language and assembly language of 8085 microprocessor. Define machine mnemonic codes. Define logic group and machine control group.
- Q.37 Write a program in assembly language for BCD Counters.
- Q.38 Write short notes on
- 8257
 - 8051 interrupts

No. of Printed Pages : 4
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122452

5th Sem / Branch : Mechatronics Sub.: Embedded Systems

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Which of the following is not a vectored interrupt?
- TRAP
 - INTR
 - RST7.5
 - RST3
- Q.2 When the micro-controller executes some arithmetic operations, then the flag bits of which register is affected?
- PSW
 - SP
 - DPTR
 - PC
- Q.3 A machine language instruction format consists of
- Operation code field
 - Operation code field & operand field
 - Operand field
 - None of the mentioned
- Q.4 RAM stands for
- Read access memory
 - Random access memory
 - Read application memory
 - None of these

- Q.5 How many bytes of bit addressable memory is present in 8051 based microcontrollers?
 a) 8 bytes b) 32 bytes
 c) 16 bytes d) 128 bytes
- Q.6 How many registers of DMA controller has?
 a) 6 b) 7
 c) 3 d) 2
- Q.7 Which operator is the most important while assigning any instruction as register indirect instruction?
 a) \$ b) #
 c) @ d) &
- Q.8 8051 microcontrollers are manufactured by which of the following companies.
 a) Atmel b) Philips
 c) Intel d) All of the mentioned
- Q.9 If we push data onto the stack then the stack pointer
 a) Increases with every push
 b) Decreases with every push
 c) Increases & Decreases with every push
 d) None of the mentioned
- Q.10 What is the clock source for the timers?
 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

SECTION-B

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

- Q.11 D/A converter is digital to _____.
- Q.12 SFR mean is special function _____.
- Q.13 What is the full form of RTC?
- Q.14 After the completion of the DMA transfer, the processor is notified by _____.
- Q.15 What is the width of the data bus in 8051?
- Q.16 RTC mean is real time _____.
- Q.17 8051 Microcontroller has _____ (4k/64K) bytes of RAM.
- Q.18 Define Program Counter.
- Q.19 This stack is used in 8085 microprocessors is _____.
- Q.20 Define Opcode.

SECTION-C

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

- Q.21 What are the functions of following 8051 pins?
 a) ALE
 b) RST, TXD, XTAL2
- Q.22 How to interface the keyboard with 8051 microcontrollers.
- Q.23 What is PPI and 8253 PIT?
- Q.24 What is decimal adjust accumulator instruction? Explain this with example.
- Q.25 Write a programme to move a bit 4 of RAM location 30H to bit 2 of A.