

- Q.26 Explain all the arithmetic group instruction with Example.
- Q.27 What is the function of program Counter?
- Q.28 Explain Rotate and Swag operation.
- Q.29 Define 8,16 and 32 bit Microcontroller with example.
- Q.30 What is Bus? Explain types.
- Q.31 Define Microcontorller and its types.
- Q.32 Define Instruction. And its types
- Q.33 Write five features of PIC 16C84.
- Q.34 Explain different Addressing modes of 8051.
- Q.35 Write in Detail about the Interrupts of 8051 Microcontroller.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 What do you mean by addressing modes? Explain the addressing modes of 8051 with the help of examples.
- Q.37 Draw and explain pin Diagram of 8051 Microcontroller.
- Q.38 Explain interfacing of Seven Segment Display with 8051 with the help of Diagram.

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4th Sem / Branch : Medical Electronics
Subject:- Microcontrollers Application in
Medical Technology

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 The I/O ports that are used as address and data for external memory are:
- a) Ports 1 & 2 b) Ports 1 & 3
c) Ports 0 & 2 d) Ports 0 & 3
- Q.2 Which operations are performed by the bit manipulating instructions of boolean processor?
- a) Complement bit b) Set Bit
c) Clear Bit d) All of above
- Q.3 MOVA, @R1 will:
- a) Copy R1 to the accumulator
b) Copy the accumulator to R1
c) Copy the contents of memory whose address is in R1 to the accumulator
d) Copy the accumulator to the contents of memory whose address is in R1
- Q.4 What kind of instructions usually affect the program counter?

- a) Call & Jump b) Call & Return
c) Push & Pop d) Return & Jump
- Q.5 Which is the only register without internal on chip RAM address in MCS-51?
a) Stack pointer b) Program counter
c) Data pointer d) Timer register
- Q.6 Which control signal/s is/are generated by timing and control unit of 8051 microcontroller in order to access the off-chip devices apart from the internal timings?
a) ALE b) PSEN
c) RD & WR d) All of the above
- Q.7 How many registers can be utilized to write the programs by an effective selection of register bank in program status word (PSW)?
a) 8 b) 16
c) 32 d) 64
- Q.8 The 8051 has _____ interrupt sources
a) 3 b) 4
c) 5 d) 6
- Q.9 The 8051 has _____ 16-bit counter/timers
a) 1 b) 2
c) 3 d) 4
- Q.10 An alternate function of port pin P3.4 in the 8051 is:
a) Timer 0 b) Timer 1
c) Interrupt 0 d) Interrupt 1

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SECTION-B

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

- Q.11 Seven segment display is basically a combination of 7.....
- Q.12 Internal RAM of 8051 is.....
- Q.13 Full form of PIC is.....
- Q.14 Pcon stands for.....
- Q.15 The accumulator is a special purpose and the versatile.....bits register of 8051 microcontroller
- Q.16 Expand UART.....
- Q.17 Timer mode '0' is abit mode
- Q.18 At.....ROM location do we store 1st opcode of 8051 program
- Q.19 8051 Microcontroller has.....I/O ports.
- Q.20 The 8051 offers.....level of interrupt priority.

SECTION-C

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

- Q.21 Write short note on applications of microcontroller in Medical field.
- Q.22 Explain Need of Interfacing.
- Q.23 Explain methods of Interfacing in Microcontroller
- Q.24 Discuss the Differences B/W direct and indirect address with example.
- Q.25 Explain PUSH Instruction with program.

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