Q.24 Explain different Addressing modes of 8051.

Q.25 What is Bus? Explain types.

Q.26 Define Microcontroller. And its types.

Q.27 What is the function of Program counter?

Q.28 Write short note on applications of microcontroller in communication system.

Q.29 Write a short note on Interrupts organization.

Q.30 Discuss the various type of memory used in Microcontroller.

Q.31 Discuss the Difference B/W direct and indirect address with example.

Q.32 Explain methods of Interfacing in Microcontroller

Q.33 How many timers are in 8051? Specify their names with their functions.

Q.34 Write functions of stack pointer?

Q.35 What is Opcode and Oprand?

SECTION-D

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

Q.36 Draw and Explain architecture of 8051 Microcontroller.

Q.37 What do you mean by addressing modes? Explain the addressing modes of 8051 with the help of examples.

Q.38 Explain interfacing of Seven Segment Display with 8051 with the help of Diagram.

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Subject:- Microcontrollers Applications in Medical Technology

Time : 3Hrs.　　　　　　　　　M.M. : 100

SECTION-A

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

Q.1 Which of the following should a microcontroller at-least should consist of ?
   a) CPU, ROM, I/O ports, and timers
   b) RAM, ROM, I/O ports, and timers
   c) CPU, RAM, I/O ports, and timers
   d) CPU, RAM, ROM, I/O ports, and timers

Q.2 Which of the following buses are present in a microcontroller for transferring data from one place to another?
   a) data bus only
   b) data bus, address bus
   c) address bus only
   d) address bus, data bus, control bus

Q.3 Which of the following architecture is followed by general-purpose microprocessors?
   a) Von Neumann architecture
   b) Harvard architecture
   c) None of the mentioned
   d) All of the mentioned

Q.4 Which of the following microcontroller doesn't match with its architecture below?
a) ARM7 - Von Neumann
b) Microchip PIC - Harvard
c) ARM9 - Harvard
d) MSP430 - Harvard

Q.5 When the microcontroller executes some arithmetic operations, then the flag bits of which of the following register are affected?
a) DPTR   b) PSW
c) PC   d) SP

Q.6 Which of the following devices are specifically being used for converting serial to parallel and from parallel to serial respectively?
a) microcontroller   b) timers
c) counters   d) registers

Q.7 Which of the following pins of a microcontroller are directly connected with 8255?
a) WR   b) D0 -D7
c) RD   d) All of the mentioned

Q.8 The total space for the data memory available in the AVR- based microcontroller is?
a) FFFH   b) FH
c) FFFFH   d) FFFFFFFH

Q.9 The 8255 is a _____ chip.
a) Digital to analog   b) Input/Output
c) Analog to Digital   d) None of the mentioned

Q.10 Does 8255 have handshaking capability?
a) depends on the conditions
b) cant be said
c) yes
d) no

SECTION-B

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

Q.11 8051 has two_____ Bit up-counters.

Q.12 8051 Microcontroller has_____ I/O ports.

Q.13 At_____ ROM location do we store 1st opcode of 8051 program.

Q.14 Interrupt which can be ignored are called_____

Q.15 Pcon stands for_____.

Q.16 LCD stands for_____.

Q.17 8051 has_____ internal RAM.

Q.18 Full form of PIC is_____.

Q.19 Timer mode_____is split timer mode.

Q.20 Seven Segment display is basically a combination of 7 _____

SECTION-C

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

Q.21 What are the Important features of 8051 Microcontroller

Q.22 Explain functions of compiler.

Q.23 Explain Need of Interfacing.