4th Sem / Med. Eltx
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 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.2   What is the order decided by a processor or the CPU of a controller to execute an instruction?
a)   decode, fetch, execute
b)   execute, fetch, decode
c)   fetch, execute, decode
d)   fetch, decode, execute

Q.3   Which operations are performed by stack pointer during its incremental phase?
a)   POP   b)   Push
c)   Return   d)   All of the above

Q.25   Explain any one addressing mode.

Q.26   Explain flags in 8051 microcontroller.

Q.27   Explain any one memory used in micrcontroller.

Q.28   Write a short note on the half duplex.

Q.29   What is Oprand? Explain in a short note.

Q.30   Explain the application of microcontroller in a short note.

Q.31   Write a simple program using different instruction.

Q.32   Write a short note on the logical operation.

Q.33   Write a short note on the O/I port.

Q.34   Explain ALU in a short note.

Q.35   Write a short note on Pop opcode.

SECTION-D

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

Q.36   Draw the pin diagram of microcontroller and name it.

Q.37   Explain the patient data acquisition system in detail.

Q.38   Explain all timer modes of 8051 in detail.

Q.4 8051 microcontrollers are manufactured by which of the following companies?
a) Atmel b) Philips
c) Intel d) All of the mentioned

Q.5 An alternate function of port pin P3.4 in the 8051 is:
a) Timer 0 b) Timer 1
c) interrupt 0 d) interrupt 1

Q.6 Microcontrollers often have
a) CPUs b) ROM
c) RAM d) All of the above

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 8-bit address bus allows access to an address range of
a) 0000 to FFFFH b) 000 to FFFH
c) 00 to FFH d) 0 to FH

Q.9 The microcontrollers are used in_____
a) Computer, laptops, televisions
b) Printers, refrigerators
c) Microwave ovens
d) All of the above

Q.10 What is the maximum capability of addressing the off-chip data memory and off-chip program memory in a data pointer
a) 8k b) 16k
c) 32k d) 64k

SECTION-B

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

Q.11 Write the full form of ALU.

Q.12 Define simplex.

Q.13 The overlapping of instructions fetch and execution stages is known as_____

Q.14 LCD stands for_____.

Q.15 Timer mode '0' is a _____ bit mote.

Q.16 Expand CISC.

Q.17 The way by which the address are specified are called_____.

Q.18 The 8051 offers_____ level of interrupt.

Q.19 Expand PSW.

Q.20 Write the full form of RISC.

SECTION-C

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

Q.21 Write five differences between microprocessor and microcontroller.

Q.22 Write a short note on the stack pointer.

Q.23 Explain the function of program counter.

Q.24 Explain call program in a short note.