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Roll No.....

5th Sem, **Branch :** Eltx./Power Eltx.

Subject : Microcontrollers/Microcontrollers & Applications

Time : 3 Hrs. **M.M. : 100**

SECTION-A

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

Q.1 8051 series has how many 16-bit registers? (CO-1)

a) 0 b) 1
c) 2 d) 3

Q.2 When the microcontroller executes some arithmetic operation, then the flag bits of which register are affected? (CO-1)

a) PSW b) DPTR
c) PC d) SP

Q.3 If we push data onto the stack then the stack pointer (CO-2)

a) Increases with every push
b) Decreases with every push
c) Remains same
d) None of the above

Q.4 When the call instruction is executed the topmost element of stack comes out to be. (CO-2)

a) The address where stack pointer starts
b) The address next to the call instruction
c) Address of the call instruction
d) Next address of the stack pointer

Q.5 What is the meaning of the instruction MOV A, 05H? (CO-2)

a) Data 05H is stored in the accumulator
b) Fifth bit of accumulator is set to one.
c) Address 05H is stored in the accumulator
d) None of the above

Q.6 Which of the ports act as the 16-bit address lines for transferring data through it? (CO-4)

a) PORT 0 and PORT 1
b) PORT 0 and PORT 2
c) PORT 1 and PORT 2
d) PORT 1 and PORT 3

Q.7 Which addressing mode is used in pushing or popping any element on or from the stack? (CO-3)

a) Immediate b) Direct
c) Indirect d) Register

Q.8 What is the function of the TMOD register? (CO-4)

a) TMOD register is used to set various operation modes of timer/counter.
b) TMOD register is used to load the count of the timer.
c) Memory where the result is obtained after the operation of the timer.
d) Is used to interrupt the timer.

Q.9 Why micro controllers are not called general purpose computer? (CO-1)

a) Because they have built in RAM and ROM.
b) Because they are cheap.
c) Because they consume low power.
d) Because they design to perform dedicated task.

Q.10 How much I/O pins 8051 has? (CO-4)

a) 4 b) 8

c) 16 d) 32

SECTION-B

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

Q.11 Define Mircocontroller. (CO-1)

Q.12 Define program counter. (CO-2)

Q.13 Define stack. (CO-2)

Q.14 Write full form of LCD. (CO-3)

Q.15 What is the function of RST pin? (CO-3)

Q.16 What is the function of POP instruction? (CO-2)

Q.17 Define PIC microcontroller. (CO-5)

Q.18 Define instruction cycle. (CO-3)

Q.19 What is Interrupt? (CO-2)

Q.20 Write any two applications of PIC micro controller. (CO-5)

SECTION-C

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

Q.21 What are difference between microprocessor and microcontroller? (CO-1)

Q.22 What are different features of 8051 microcontroller? (CO-1)

Q.23 Write a short note on"SFR". (CO-1)

Q.24 Explain CISC and RISC technology. (CO-1)

Q.25 Explain Program status word register. (CO-2)

Q.26 What are different types of interrupts of 8051? (CO-2)

Q.27 What are different types of instructions of 8051? (CO-2)

Q.28 Write a short note on "Serial port operation".(CO-2)

Q.29 Write various timer modes available in 8051. (CO-2)

Q.30 Write a short note on "Assembler operations". (CO-3)

Q.31 Explain, Compiler operations. (CO-3)

Q.32 Explain machine language and assembly language. (CO-3)

Q.33 Explain seven segment display interfacing with 8051. (CO-4)

Q.34 Explain RTC interfacing with 8051. (CO-4)

Q.35 Explain basic features of PIC microcontrollers. (CO-5)

SECTION-D

Note : Long Answer type question. Attempt any two questions. (2x10=20)

Q.36 Draw and explain pin diagram of 8051 microcontroller. (CO-1)

Q.37 Write any five instructions belonging to Boolean instructions of 8051. (CO-2)

Q.38 What is addressing mode? Explain different types of addressing modes of 8051. (CO-4)