

SECTION-C

No. of Printed Pages : 4

Roll No.

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Note: Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Draw and explain the architecture of 8051 microcontroller.
- Q.4 List down the various advantages of 8051.
- Q.5 Explain the interfacing of a keyboard OR seven segment display with microcontroller 8051.
- Q.6 What do you mean by addressing modes? Explain the addressing modes of 8051 with the help of examples.
- Q.7 Write short notes on (any two)
- a) ARM microcontrollers
 - b) Tuner operation.
 - c) Memory organisation.
 - d) I/o port structure..

(40)

(4)

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5th Sem. / Power Eltx.

Subject : Microcontroller & Applications

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1
- a) Define microcontroller.
 - b) What is a stack pointer?
 - c) What are the functions of accumulator?
 - d) What is DPTR? Explain.
 - e) Write full form of UART?
 - f) How many bits does PSW have?
 - g) Which addressing does MOV A, 25H have?
 - h) What does POP instruction do.
 - i) What is a debugger?
 - j) How many interrupts does 8051 have.

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- k) Which instruction performs clearing of carry bit.
- l) What is TMOD and TCON.
- m) What is USART?
- n) What is a two pass assembler.
- o) What are directives?
- p) What is interfacing?
- q) Draw diagram of a 7 segment display.
- r) What is W register?

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) What is the difference between microcontroller and microprocessor?
 - ii) How does the execute cycle operate in 8051.
 - iii) Explain PSW of 8051.
 - iv) Explain any 4 control signals of 8051.

- v) What are SFR's? Give the details.
- vi) Explain any four logical instructions of 8051.
- vii) Briefly describe interrupt organization of 8051.
- viii) What are assembler directives.
- ix) Differentiate between assembler and compiler.
- x) List a few features of PIC.
- xi) Compare low end, medium end and higher end Pics.
- xii) Compare interrupt versus polling.
- xiii) What functions does NOP and JMP perform.
- xiv) Explain any four types of MOV instruction.
- xv) List instructions for performing following operations:
 - a) Clearing the carry bit
 - b) Rotate bits of accumulator.