

- (a) DPTR
- (b) Accumulator
- (c) SP
- (d) PC
- (e) ALU

Q.31 Explain how interrupts can be enabled or disabled.

Q.32 Write Five important features of PIC 16C84.

SECTION-D

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

Q.33 Explain architecture of 8051 microcontroller with the help of neat block diagram.

Q.34 With the help of neat diagram explain interfacing of Seven segment Display with 8051.

Q.35 Define Embedded system and explain its different applications.

Q.36 Draw and explain the functional block diagram of PIC microcontroller.

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5th Sem. / Medical Electronics Subject : MICROCONTROLLER AND EMBEDDED SYSTEM

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

Q.1 8051 is a _____ bit Microcontroller.

Q.2 RISC stands for _____.

Q.3 8051 has _____ size internal RAM.

Q.4 Number of input output ports 8051 are _____.

Q.5 DAA stands for _____.

Q.6 RESET pin in 8051 is active low input pin. (True/false)

Q.7 Write one instruction from immediate addressing mode.

(100)

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- Q.8 RESET interrupt in 8051 is maskable interrupt.
(True/False)
- Q.9 When PUSH instruction is executed then stack pointer _____ (increments/decrements)
- Q.10 8051 has two _____ bit up-counters.

SECTION-B

Note: Very Short answer type questions. Attempt any ten questions out of twelve questions. $10 \times 2 = 20$

- Q.11 Define Microcontroller.
- Q.12 Name Interrupts of 8051.
- Q.13 Write the function of following pins.
(A) $\overline{\text{PSEN}}$
(B) ALE
- Q.14 List different addressing modes of 8051.
- Q.15 Define Embedded system.
- Q.16 Give two example of data transfer instructions.
- Q.17 Explain how a timer mode can be set?

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- Q.18 Define assembler.
- Q.19 Differentiate between microprocessor and microcontroller.
- Q.20 Draw PSW register of 8051.
- Q.21 Define interfacing.
- Q.22 why 8051 is called 8-bit microcontroller.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. $8 \times 5 = 40$

- Q.23 Explain memory organization of 8051.
- Q.24 Explain interfacing of A/D converter with 8051 microcontroller.
- Q.25 Write short note on applications of microcontroller in communication system.
- Q.26 What do you mean by assembler directives? Explain DB (Define byte) assembler directive.
- Q.27 What do you understand by Edge triggered and level triggered interrupts.
- Q.28 Draw the pin diagram of 8051.
- Q.29 Define addressing mode. Explain immediate and indirect addressing mode of 8051.
- Q.30 Write function of following:

(3)

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