

- Q.29 Write a short note on applications of microcontroller in Medical field.
- Q.30 Explain Need of Interfacing
- Q.31 Explain the functions of stack pointer
- Q.32 Write in Detail about Interrupts of 8051 microcontroller
- Q.33 Differentiate between direct and indirect address with example.
- Q.34 Explain POP instruction with a program
- Q.35 Explain Flags in 8051 Microcontroller

SECTION-D

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

- Q.36 What do you mean by addressing modes ? Explain the addressing modes of 8051 with the help of examples.
- Q.37 Draw and Explain architecture of 8051 microcontroller
- Q.38 Explain interfacing of seven segment display with 8051 with the help of diagram.

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5th Sem. / Medical Electronics

Subject:- Microcontrollers and Embedded System

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Microcontrollers often have:
- a) CPUs
 - b) RAM
 - c) ROM
 - d) All of the above
- Q.2 The total external data memory that can be interfaced to the 8051 is :
- a) 32K
 - b) 64K
 - c) 128K
 - d) 256K
- Q.3 The I/O port that does not have a dual-purpose role is
- a) Port0
 - b) Port1
 - c) Port2
 - d) Port3
- Q.4 The total amount of external code memory that can be interfaced to the 8051 is
- a) 32K
 - b) 64K
 - c) 128K
 - d) 256K
- Q.5 A HIGH on which pin resets the 8051 microcontroller?
- a) RESET
 - b) RST
 - c) PSEN
 - d) RSET

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- Q.6 Which of the following is the basic functions of a timer ?
a) It can control the compare, capture mode
b) It provided a time delay
c) It can act as a counter
d) all of the mentioned
- Q.7 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.8 The internal RAM memory of the 8051 is :
a) 32 bytes b) 64 bytes
c) 128 bytes d) 256 bytes
- Q.9 The address space of the 8051 is divided into four distinct areas: internal data, external data, internal code and external code.
a) True b) False
- Q.10 An alternate function of port pin P3.4 in the 8051 is :
a) Timer0 b) Timer1
c) Interrupt0 d) Interrupt1

SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

Q.11 LCD stands for

Q.12 8051 has internal RAM.

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- Q.13 Full form of PIC is
- Q.14 Timer mode is spilt timer mode.
- Q.15 Seven Segment display is basically a combination of 7.....
- Q.16 8051 has two Bit up-counters.
- Q.17 8051 microcontroller has I/O ports.
- Q.18 At ROM location do we store 1st opcode of 8051 program
- Q.19 Interrupts which can be ignored are called
- Q.20 Pcon stands for

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

- Q.21 What is ALU ? Explain.
- Q.22 What is an interrupt ? Explain its type.
- Q.23 Explain all the arithmetic group instruction with example
- Q.24 What is the function of Program counter ?
- Q.25 Explain PUSH Instruction with program.
- Q.26 Explain all the Data Transfer instruction with example ?
- Q.27 Define opcode and operand ?
- Q.28 Explain functions of compiler

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