

- Q.23 How many timers are in 8051? Specify their names with their functions.
- Q.24 Write functions of stack pointer?
- Q.25 What is Opcode and Operand?
- Q.26 Define Microcontroller And its types.
- Q.27 What is the function of Program counter?
- Q.28 Write short note on applications of microcontroller in communication system.
- Q.29 Write a short note on Interrupts organization.
- Q.30 Discuss the various type of memory used in Microcontroller.
- Q.31 What are the Important features of 8051 Microcontroller.
- Q.32 Explain functions of compiler.
- Q.33 Explain Need of Interfacing.
- Q.34 Explain different Addressing modes of 8051.
- Q.35 What is Bus? Explain types.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Explain the interfacing of A/D and D/A converter with 8051 with the help of Diagram.
- Q.37 Draw and Explain Pin Diagram of 8051 Microcontroller.
- Q.38 What do you mean by instruction? Explain the types of instructions of 8051 with the help of Examples.

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5th Sem / Medical Electronics

Subject:- Microcontroller and Embedded System

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Does 8255 have handshaking capability?
- a) depends on the conditions
 - b) cant be said
 - c) yes
 - d) No
- Q.2 The 8255 is a _____ chip.
- a) Digital to analog b) Input/Output
 - c) Analog to Digital d) None of the mentioned
- Q.3 The total space for the data memory available in the AVR-based microcontroller is ?
- a) FFFH b) FH
 - c) FFFFH d) FFFFFFFH
- Q.4 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.5 Which of the following devices are specially being used for converting serial to parallel and from

parallel to serial respectively?

- a) Microcontroller
- b) timer
- c) counters
- d) register

Q.6 When the microcontroller executes some arithmetic operations, then the flag bits of which of the following register are affected?

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

Q.7 Which of the following microcontroller doesn't match with its architecture below?

- a) ARM7 - Von Neumann
- b) Microchip PIC - Harvard
- c) ARM9 - Harvard
- d) MSP430 - Harvard

Q.8 Which of the following architecture is followed by general-purpose microprocessors?

- a) Von Neumann architecture
- b) Harvard architecture
- c) None of the mentioned
- d) All of the mentioned

Q.9 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.10 Which of the following should a microcontroller at least consist of?

- a) CPU, ROM, I/O ports, and timers
- b) RAM, ROM, I/O ports, and timer
- c) CPU, RAM, I/O ports , and timers
- d) CPU, RAM, ROM, I/O ports, and timers

SECTION-B

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

Q.11 The accumulator is a special purpose and the versatile _____ bits register of 8051 microcontroller.

Q.12 Pcon stands for _____.

Q.13 The overlapping of instruction fetch and execution stages is known as _____

Q.14 Internal RAM of 8051 is _____.

Q.15 ALE stands for _____.

Q.16 The 8051 offers _____ level of interrupt priority.

Q.17 8051 Timer can operate in _____ number of modes.

Q.18 UART stands for _____

Q.19 Timer mode '0' is a _____ bit mode.

Q.20 Expand UART _____.

SECTION-C

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

Q.21 Discuss the Difference B/W direct and indirect address with example.

Q.22 Explain methods of Interfacing in Microcontroller.