

- Q.29 Differentiate the function of Assembler, Compiler and Interpreter.
- Q.30 List all the addressing modes of 8051 microcontroller
- Q.31 Write a short note on DMA data transfer scheme.
- Q.32 Compare memory mapped I/O and I/O mapped I/O schemes.
- Q.33 What are the advantages of microcontroller over microprocessor?
- Q.34 Discuss the data transfer group instructions with example.
- Q.35 Explain logical instruction set of 8051 microcontrollers.

#### **SECTION-D**

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

- Q.36 Define microprocessor. Draw neat block diagram of internal architecture of 8085 microprocessor and explain its blocks.
- Q.37 Draw and explain the pin configuration of 8051 Microcontroller. Explain the function of each pin.
- Q.38 Write short note on any two of the following:
- Compare the CALL and JMP instructions
  - DMA controller (8257)
  - Modes of the timer of 8051

No. of Printed Pages : 4  
Roll No. ....

122452

**MSME (Mechatronics)**  
**Subject:- Embedded System**

Time : 3Hrs.

M.M. : 100

#### **SECTION-A**

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

- Q.1 The data bus of 8085 is \_\_\_\_\_ bit.
- 8
  - 16
  - 32
  - 64
- Q.2 The mnemonics used in writing a program is called \_\_\_\_\_
- Assembly language
  - machine language
  - high level language
  - object program
- Q.3 What is the bit size of 8051 microcontroller?
- 4 bit
  - 8 bit
  - 16 bit
  - 32 bit
- Q.4 Instruction LXI H, 2500 H belongs to which group?
- Branch control
  - Arithmetic group
  - Data transfer
  - Machine control
- Q.5 The instruction HLT belongs to which group:
- Data transfer
  - Arithmetic group

(40)

(4)

122452

(1)

122452

- c) Branch control      d) Machine control
- Q.6 The full form of DMA is \_\_\_\_\_  
a) direct memory access  
b) direct memory address  
c) direct memory allocation  
d) none of the above
- Q.7 What is the number of I/O ports in the 8051 microcontrollers?  
a) 2 ports               b) 3 ports  
c) 4 ports               d) 6 ports
- Q.8 Which addressing mode is used in instruction MOV M,A?  
a) Direct                b) Indirect  
c) Register            d) Implicit
- Q.9 What is the function of the TMOD register?  
a) to set various operation modes of times/counter  
b) to load the count of the timer  
c) Is used to interrupt the timer  
d) none of the above
- Q.10 Which of the following interrupts has the highest priority?  
a) RST 5.5            b) INTR  
c) RST 7.5            d) TRAP

### SECTION-B

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

- Q.11 Define the term address bus.

(2)

122452

- Q.12 Name various flags of 8085 flag register.  
Q.13 What is the full form of PROM?  
Q.14 Name the interrupt which has lowest priority in 8051.  
Q.15 What is the use of program counter?  
Q.16 Define the term instruction cycle.  
Q.17 What is stack pointer?  
Q.18 Which interrupt has lowest priority?  
Q.19 What is microcontroller?  
Q.20 Define A/D.

### SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Write down the different applications of microprocessor.  
Q.22 What are the various register of 8085? Discuss their functions in detail.  
Q.23 Discuss the various addressing mode of 8085 with the help of an example.  
Q.24 Discuss the function of Assembler, Compiler and Interpreter.  
Q.25 Explain block diagram of 8279 in detail.  
Q.26 What is PSW? How many flags are present in 8051?  
Q.27 Discuss the interfacing of 8279 with 8085.  
Q.28 Explain the sequence of execution of a program by microprocessor.

(3)

122452