Q.28 Explain general purpose registers used in 8085 microprocessors. (CO03)

Q.29 Write any five applications of 8085 microprocessor. (CO03)

Q.30 Draw the pin diagram of 8051 microcontroller. (CO05)

Q.31 Write a short note on Timer Operation of 8051 microcontroller. (CO05)

Q.32 Differentiate between maskable and non-maskable interrupts. (CO04)

Q.33 Explain the keywords used in 8051 microcontrollers. (CO05)

Q.34 List the various registers of 8051 microcontrollers (CO05)

Q.35 Explain the operation of relay and draw a diagram to interface relay with 8051. (CO06)

Section-D

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

Q.36 Draw and explain the architectural block diagram of 8085 microprocessor. (CO02)

Q.37 What do you mean by serial communication? Explain the function of special purpose registers used in serial communication of 8051 microcontroller. (CO05)

Q.38 Draw the interfacing diagram of stepper motor with 8051 microcontroller and write a program to explain its operation. (CO06)

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4th Sem. Branch : Mechatronics
Subject : Embedded Systems

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 How embedded systems communicate with the outside world? (CO01)

a) Memory b) Output
c) Peripherals d) Input

Q.2 A microcontroller at least should consist of :

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

Q.3 Which architecture is followed by general purpose microprocessor? (CO02)

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

Q.4 _____register deals with sequencing the execution of instructions. (CO02)

a) Stack pointer b) Program counter
c) Accumulator d) Flag

Q.5 Which of the following is an 8085 hardware interrupt? (CO04)

a) TRAP b) RST6.5
c) RST7.5 d) All the above

Q.6 One of the following addressing modes is not possible in 8085. (CO03)

a) Indexed addressing b) Indirect addressing
c) Direct addressing d) Indirect register address

Q.7 Microcontroller 8051 has RAM of _____size (CO05)

a) 32k b) 64k
c) 128-byte d) 256 byte

Q.8 Which of the following are the two 16-bit SFRs of microcontroller 8051. (CO05)

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

Q.9 What is the function of TMOD register? (CO05)

a) To set different timer's or counters to their appropriate modes
b) To load the count of the timer
c) It used to interrupt the timer
d) None of the above

Q.10 Which port of 8051 can be split into two parts? (CO06)

a) PORT 0 b) PORT 1
c) PORT 2 d) PORT 3

Section-B

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

Q.11 What is data bus? (CO02)

Q.12 What is the use of compiler? (CO03)

Q.13 What is auxiliary carry flag? (CO04)

Q.14 Define the term machine cycle. (CO03)

Q.15 Name any two control instructions of 8085. (CO03)

Q.16 What is the full form of RTC? (CO05)

Q.17 What do you understand by the term peripheral? (CO06)

Q.18 Write the function of interrupt. (CO04)

Q.19 Which software is used for the 8051 programming? (CO05)

Q.20 Expand LCD. (CO06)

Section-C

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

Q.21 Define microprocessor and microcontroller. Write the impact of microprocessor on modern society. (CO01)

Q.22 Draw the block diagram of organization of microcomputer system. (CO01)

Q.23 Describe various features of 8085 microprocessor. (CO01)

Q.24 Explain the generation of I/O and memory control signals. (CO02)

Q25 What is assembly language? Explain with a suitable example. (CO03)

Q.26 Explain five data transfer group instructions of 8085 (CO03)

Q.27 Write an assembly language program for finding the larger of two 8bit numbers. (CO03)