S.No. : 208

BCS 3502

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Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 33221 Roll No.

B. Tech. Examination 2023-24

(Odd Semester)

MICROPROCESSOR AND INTERFACING

Time : Three Hours] *[Maximum Marks : 60*

Note :– Attempt all questions.

SECTION – A

1. Attempt all parts of the following : 8×1=8

   (a) What is interrupt cycle?

   (b) Define PROM and EPROM.

   (c) What is subroutines?.

   (d) What is register organization?

   (e) Differentiate between instructions set and instruction format.

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(f) What is microcontroller?

(g) Define interfacing and matrix keyboard.

(h) What are the input/output device for interfacing?

SECTION – B

2. Attempt any two parts of the following : 2×6=12

(a) Name the various types of buses in 8085 microprocessor. Explain the function of each in brief.

(b) Distinguish between memories mapped I/O and peripheral I/O.

(c) Draw the block diagram of 8086 micro-processor and explain it.

(d) Define the following :

(i) Macro microprocessor

(ii) Top-down and bottom-up design

(iii) 8259 programmable interrupt controller

(iv) Procedure and macros

SECTION – C

Note :– Attempt all questions. Attempt any two parts from each question. 5×8=40

3. (a) Define architectural advancement of microprocessor in detail.

(b) Define pentium pro and pentium II microprocessor.

(c) Define instruction classification and assembler directives.

4. (a) Explain 16-bit microprocessor architecture and it's functions.

(b) Define the following :

(i) Timing and trouble shooting

(ii) Branch operation and indexing

(c) Write a program in 8085 assembly language to add two 16 bit numbers using ADC instructions. Store result in memory.

5. (a) Write short notes on the following :

(i) RS232 C

(ii) DMA controller

(b) Define modular programming and structured programming in detail.

(c) Differentiate between 8259 programmable interrupt controller and 8251 USART.

6. (a) Write an assembly program to implement 16 bit counter.

(b) Explain the following instructions :

(i) CMA

(ii) CMP

(iii) LXI

(iv) LDAX

(c) Define memory and different types of memory in detail with examples.

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