MORNING

11 MAY 2023

[Total No. of Questions: 09]

Uni. Roll No. ....

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Program: B.Tech. (Batch 2018 onward)

Semester: 5

Name of Subject: Microprocessors and Microcontrollers

Subject Code: PCEC-112

Paper ID: 16419

Scientific calculator isAllowed

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) Parts A and B are compulsory
2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice
3) Any missing data may be assumed appropriately

Part – A   [Marks: 02 each]

Q1

(a) Explain the flags used in 8085 microprocessor.

(b) Illustrate the role of register banks in 8051 microcontroller.

(c) Explain any two single bit instructions of 8051 microcontroller.

(d) List the handshaking signals of RS-232.

(e) Distinguish between RIM and SIM.

(f) Develop a program for 8085 microprocessor to add two numbers located in C register and 8000H memory location.

Part – B   [Marks: 04 each]

Q2. With the help of relevant examples, explain the addressing modes of 8051 microcontroller.

Q3. Explain the architecture of 8085 microprocessor in detail.

Q4. Explain any two special function registers of 8051 microcontroller.

Q5. Develop a program for 8051 microcontroller to find 2's complement of a 8-bit number.

Q6. Develop a program for 8085 microprocessor to multiply any two 8-bit numbers.

P.T.O.

Q7. Examine the interfacing of 8051 with stepper motor.

Part – C   **[Marks: 12 each]**

Q8. Explain in detail about interrupt processing of 8085 microprocessor.

OR

Draw the pin diagram of 8051 microcontroller and explain the function of each pin in detail.

Q9. With the help of relevant programs, distinguish between jump, loop and call instructions.

OR

Develop assembly language code for 8051 microcontroller to display "GNDEC" on LCD. Also, draw the relevant interfacing diagram and explain the Significance of each interconnection in detail.

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