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Roll No.					Total No. of Pages: 02

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B.Tech.(CSE/IT) (Sem.-4)

# MICROPROCESSOR & ASSEMBLY LANGUAGE PROGRAMMING

Subject Code: CS-208 Paper ID: [A0461]

Time: 3 Hrs. Max. Marks: 60

#### **INSTRUCTION TO CANDIDATES:**

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

#### **SECTION-A**

## 1. Write briefly:

- (a) What is fetch cycle and why is it required?
- (b) What is the need of control bus in microprocessor?
- (c) Write three different methods to clear the accumulator.
- (d) What do you understand by asynchronous data transfer?
- (e) Differentiate between IN and OUT instructions.
- (f) How does microprocessor differentiate software and hardware interrupts?
- (g) List the uses of 8251.
- (h) What are the features of Motorola 68000?
- (i) Write the addressing modes of 8086.
- (i) Discuss briefly about DMA Controller.

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### **SECTION-B**

- 2. Draw the block diagram of 8251 and explain the function of each pin.
- 3. Explain the format and functions of DAD, CALL and RAL instructions of 8085.
- 4. Write an assembly language program to multiply to 8-bit unsigned numbers.
- 5. Describe the sequence of events that occurs when vectored interrupts occurs in 8085.
- 6. Differentiate between instruction cycle and execute cycle.

### **SECTION-C**

- 7. Write an assembly language program to count continuously in hexadecimal from FFH to 00H in a system with 0.5 microsecond clock period. Use register C to set up a one millisecond delay between each count and display the numbers at one of the output ports.
- 8. Draw the circuit diagram to interface memory PROM 4K\*8 starting from 4000H address to 8085.
- 9. Write short notes on the following
  - (a) Architecture of 8086
  - (b) PROM programming

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