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M.Tech. 1st Semester (ECE) CBCS Scheme
Examination, December-2019
ADVANCE MICROPROCESSOR AND
MICROCONTROLLER
Paper-MTECE21C1

Time allowed : 3 hours] [Maximum marks : 100

Note: Question No. 1 is compulsory. Attempt one question from each section.

1. (a) Differentiate between microprocessor and microcontroller.
- (b) Explain shift and rotate instructions.
- (c) What are data transfer instructions and arithmetic instructions?
- (d) Write a program to find 1's complement of the number. $4 \times 5 = 20$

Section-A

2. (a) Draw and explain pin diagram of 8259. 10
- (b) Discuss the evolution of microprocessor. 10
3. (a) Explain dence polling and interrupts. 10
- (b) Draw and explain the block diagram of 8086 microprocessor. 10

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22660

Section-B

4. (a) Draw and explain internal architecture of 8051. 10
- (b) Discuss interrupt system of 8051. 10
5. (a) Using 8051 microcontroller write a program to search a byte in an array. 10
- (b) Explain Counter /Times of 8051. 10

Section-C

6. (a) Write short note on 68XXX hardware. 10
- (b) Discuss interrupt structure of 80386. 10
7. For intel 80286 discuss: 20
- (a) Flag register
- (b) PVAM
- (c) Architecture

Section-D

8. (a) Discuss the concept of developing, implementing and testing a design. 10
- (b) Discuss the various standards used in serial data transfer with detail. 10
9. Write short notes on: 20
- (a) D/A and A/D interface.
- (b) UART
- (c) TMOD and TCON registers.