22660

M.Tech. 1st Semester (ECE) CBCS Scheme

Examination, December–2018

ADVANCE MICROPROCESSOR AND MICROCONTROLLER

Paper– MTECE 21C1

Time allowed : 3 hours] *[Maximum marks : 100*

Note: ***Question No. 1 is Compulsory.*** Attempt **one** question from each Section.

1. (a) Explain the function of $\overline{PSEN}$ and $\overline{EA}$ pin of 8051 micro controller.

(b) Differentiate vectored and non-vectored interrupt.

(c) What is pipelining? How does this occur.

(d) Differentiate microprocessor and microcontrollers. 5×4=20

Section–A

2. (a) Compare 8086, 80286, 80386 and 80486 microprocessors. 10

(b) Discuss the evolution of microprocessor. 10

3. Explain the following terms. 20

(a) ALU

(b) Device Polling

(c) Special function registers.

(d) Addressing modes.

Section–B

4. (a) Draw and explain architectural block diagram of 8051. 10

(b) Write in brief about interrupt system of 8051. 10

5. (a) Explain the following terms in context with 8051. 15

(i) TMOD (ii) TCON (iii) SCON (iv) PCON

(b) Discuss 4, 8 bit ports of 8051. 5

Section–C

6. For 68 XXX series of microprocessor, discuss

(a) Adderssing Modes. 10

(b) Hardware. 10

7. (a) Explain the functions of following 8086 instructions with example. 10

(i) STOSB (iv) LES

(ii) LOOPNZ (v) TEST

(iii) XLAT (vi) NEG

(b) Write a program using 8086 to arrange the ten numbers in ascending order. 10

Section–D

8. Interface DAC $^{0808}/_{0809}$ to microprocessor. Draw the interfacing diagram and address mapping. Also write a subroutine to generate a square wave. 20

9. Write short notes on- 20

(i) Regulation Compliance Testing.

(ii) Various standards used in serial data transfer.