BACHELOR OF TECHNOLOGY (CBCS) (2020 COURSE)

B.Tech.Sem - IV Information Technology : WINTER : 2023

SUBJECT : MICROPROCESSORS & MICROCONTROLLERS

Day : Tuesday

Date : 21-11-2023

W-24720-2023

Time : 02:30 PM-05:30 PM

Max. Marks : 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagram **WHEREVER** necessary.
4) Assume suitable data if necessary.

Q.1 Explain the internal architecture of 8086 processor with neat diagram. Also explain the concepts of segmentation and pipelining in 8086. **(10)**

OR

Explain the concept of inter-processor communication in detail with suitable figures.

Q.2 Explain the features of Intel Pentium processor in detail. **(10)**

OR

Describe the internal architecture of Intel i7 processor with suitable diagram.

Q.3 Explain various features of ARM processor in detail. **(10)**

OR

Discuss the internal architecture of ARM processor with neat diagram.

Q.4 Differentiate between microprocessors microcontrollers in detail (min. 10 points). **(10)**

OR

Discuss the internal architecture of Intel 8096 microcontroller with neat diagram.

Q.5 Discuss the internal architecture of ATmega-16 AVR microcontroller with neat diagram. **(10)**

OR

Discuss the program and data memory organization of ATMega-16 AVR microcontroller with suitable figures.

Q.6 Explain the step-by-step procedure for programming an Arduino device. Give an example. **(10)**

OR

Discuss the architecture of Raspberry Pi microcontroller in detail with neat diagram.

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