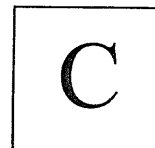


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B.Tech. Degree V Semester Special Supplementary Examination April 2022

CS 15-1505 ADVANCED MICROPROCESSORS AND MICROCONTROLLERS (2015 Scheme)

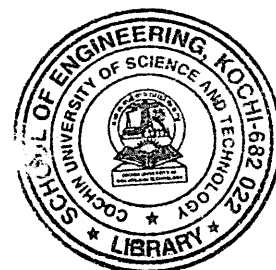
Time: 3 Hours

Maximum Marks: 60

PART A (Answer *ALL* questions)

(10 × 2 = 20)

- I. (a) Compare CISC and RISC processors.
- (b) What is Floating Point Unit? Explain it in detail.
- (c) Write a note on multicore processors.
- (d) Explain Nahelam microarchitecture.
- (e) Compare and contrast microcontrollers and microprocessors.
- (f) Explain interfacing of stepper motor to 8051.
- (g) List out the data transfer instructions of 8051.
- (h) Write a program for finding the sum of 20 natural numbers.
- (i) Draw data memory map of PIC 16F84A microcontroller.
- (j) Explain the status register and option register of PIC16F84A.



PART B

(4 × 10 = 40)

- II. Draw and explain the architecture of 80386 microprocessor. (10)
OR
- III. (a) Explain different operating modes of 80386. (5)
(b) Compare the features of Pentium II, III and IV. (5)
- IV. Compare and contrast core i3, i5 and i7 processors. (10)
OR
- V. (a) Explain the different power reduction techniques used in processors. (5)
(b) Describe the technical features in IA processors. (5)
- VI. Draw and Explain the Architecture of 8051 microcontroller. (10)
OR
- VII. (a) What are the different addressing modes of 8051 microcontroller? Write examples for each. (5)
(b) Discuss the following signal description of 8051 (5)
 - (i) ALE
 - (ii) EA
 - (iii) PSEN
 - (iv) RxD
 - (v) TxD.
- VIII. Draw and explain the architecture of PIC 16F84A microcontroller. (10)
OR
- IX. What are the different PIC 18F2420 instructions used for byte-oriented file register operations? (10)