BTS–V(S.S)–04–22–0674 Reg. No. | | | | | | | | |

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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)

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