BTS-V(S)-(11.20/04.21)-1672 Reg. No. | | | | | | | | |

B

B.Tech. Degree V Semester Supplementary Examination November 2020/April 2021

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) Draw the architecture of Pentium processor.
(b) List out the features of Risk Processor.
(c) State the use of debug and test registers.
(d) Define TDP. Why should we keep TDP rating low?
(e) State the major issues in multicore processing.
(f) Why is power reduction a key point in system designing?
(g) State the operation of stack in 8051.
(h) Write short notes on interrupts of 8051.
(i) Draw the pin diagram of PIC 16F84A.
(j) Write short notes on registers of PIC 18F240.

PART B

(4 × 10 = 40)

II. (a) List the features of Pentium II, Pentium III and IV processors. (7)
(b) State the general-purpose registers of 80386 and define their function. (3)

OR

III. (a) Describe virtual 8086 mode of 80386 microprocessor with suitable diagram. (6)
(b) Explain the use of addressing modes of 80386. (4)

IV. (a) In what aspects does Silvermont microarchitecture differ from Bonnel microarchitecture. (6)
(b) Write short notes on Intel Skylake microarchitecture. (4)

OR

V. (a) Name two important enhancement introduced in Nehalem microarchitecture. (5)
(b) Define Turboboost and virtualization. (5)

VI. Draw and explain the architecture of 8051 microcontroller. (10)

OR

VII. (a) Explain the interfacing of hex keyboard with 8051 (5)
(b) WAP to add the first 20 natural numbers and store the sum in a RAM Location. (5)

VIII. Draw and Explain the architecture of PIC 16f84A (10)

OR

IX. (a) Explain the interrupts of PIC 18F2420. (5)
(b) What are the different PIC 18F2420 instructions used for byte oriented file register operations. (5)

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