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

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

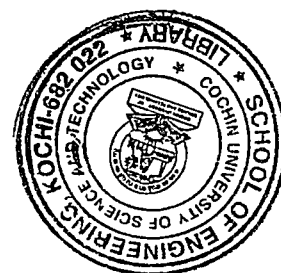
Time: 3 Hours

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)