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***B.Tech. Degree V Semester Supplementary Examination
November 2022***

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

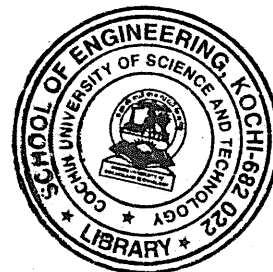
Time: 3 Hours

Maximum Marks: 60

PART A(Answer *ALL* questions)

(10 × 2 = 20)

- I. (a) Point out the need of MMX technology.
- (b) Distinguish between the real mode and protected mode 80386 microprocessor.
- (c) Explain the branch prediction techniques of Pentium processors.
- (d) What are the advantages of multi core processors? Explain.
- (e) Differentiate between Core i3, i5 and i7 processors.
- (f) Write down the power reduction techniques in processors.
- (g) Summarize the concepts of interfacing with DAC.
- (h) Describe the hex keyboard and LCD displays.
- (i) What are the registers in PIC 18F2420 micro controllers?
- (j) What is program memory of PIC 18F2420 micro controllers?

**PART B**

(4 × 10 = 40)

- II. (a) Elaborate the architecture of Intel 80386 microprocessor. (6)
 - (b) Write down the salient features of superscalar architecture. (4)
- OR**
- III. (a) Discuss the memory system of Intel 80386 microprocessor. (6)
 - (b) What are the RISC and CISC architectures? Explain. (4)
- IV. (a) Draw and explain the Intel skylake microarchitecture. (7)
 - (b) List out the technical features in IA processors. (3)
- OR**
- V. (a) Illustrate the main functions of Nahelam micro architecture. (7)
 - (b) Explain the power reduction techniques in processors. (3)
- VI. Outline the general Architecture and functions of 8051 microcontroller. (10)
- OR**
- VII. Explain the interface of 8051 microcontroller with LCD display with the help of a neat block diagram. (10)
- VIII. (a) Determine the PIC microcontrollers using MPLAB. (5)
 - (b) Bring out the architectural features of PIC16F84A micro controllers. (5)
- OR**
- IX. (a) Evaluate the architecture of PIC 18F2420 micro controllers. (5)
 - (b) What are the features of the stack in PIC 18F2420 micro controllers? Explain. (5)