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B. Tech. EXAMINATION, 2020

(Fourth Semester)

(B Scheme)

(Re-appear Only)

COMPUTER ORGANIZATION AND ARCHITECTURE

CSE

CSE210B

(Common with ECE 5th Semester)

Time : 3 Hours]   [*Maximum Marks : 75*

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Write and explain the characteristic features of all the categories of computers based upon the computation methodology. **8**

   (b) Explain briefly the different computer generations. **7**

2. Draw and explain the multilevel viewpoint of a digital computer. **15**

Unit II

3. (a) Compare and contrast the features of RISC and CISC architectures. **7**

   (b) What is the need of different addressing modes ? Explain any *five* addressing modes with suitable example. **8**

4. Draw and explain the instruction cycle of a computer. **15**

Unit III

5. Define a Micro-Program Sequencer ? With the help of neat diagram explain the operation of micro-program sequencer for control memory. **15**

6. Write and explain the operation of DMA. **15**

Unit IV

7. (a) Compare the write through and copy back schemes for writing data into cache memory. **10**

(b) What is Associative Memory ? Derive match logic for one word of associative memory. **5**

8. (a) Write and explain any three page replacement strategies with the advantages and disadvantages of each. **9**

(b) What do you mean by Virtual Memory ? How is it useful for the users of a computer system ? **6**