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Total No. of Pages: 02
Total No. of Questions: 09

B. Tech. (Sem.-3rd)
Computer Architecture
Subject Code: BTCS-301
Paper ID: [A1123]

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATE:

1. **Section –A, is Compulsory.**
2. **Attempt any four questions from Section-B.**
3. **Attempt any two questions from Section-C.**

Section –A

(10x2=20)

Q.1.

- (a) What is a Co-Processor and its use?
- (b) Define Micro-operation with example?
- (c) Give the micro instruction format?
- (d) What do you mean by virtual memory and its need?
- (e) Name two types of memory interleaving.
- (f) Define seek time and latency time.
- (g) What is bus arbitration and its types?
- (h) Differentiate synchronous and asynchronous bus.
- (i) What is IO control method?
- (j) Why does the DMA gets priority over CPU when both request memory transfer?

Section –B

(4x5=20)

- Q2. What is micro-programming? What are the advantages and disadvantages of micro programming?
- Q3. What are the difference between the hardwired control organization and micro Programmed Control organization.
- Q4. Describe the concept of pipelining and give the basic structure of the pipeline processor.
- Q5. Discuss the difference between CISC & RISC.
- Q6. Draw and explain the instructions Execution cycle with the help of an example.

Section –C

(2x10=20)

- Q7. What is the need for DMA transfer? Explain with the help of a block diagram, the data Transfer methodology using DMA.
- Q8. What is Associative memory? For what type of operations, it is useful? Explain its hardware organization with the help of a block diagram.
- Q9. Define the term: Instruction format and its addressing mode? Explain in detail the various addressing modes of commonly used by various CPUs.

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