Roll No. ☐☐☐☐☐☐☐☐☐☐☐   **Total No. of Pages : 02**

Total No. of Questions : 07

BCA (2011 & Onward) (Sem.–2)
COMPUTER SYSTEM ARCHITECTURE
Subject Code : BSBC-204
Paper ID : [B1116]

Time : 3 Hrs.   **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a. Define Von Neumann architecture in brief.

   b. What are the register and register transfer language?

   c. Define the term BUS used in computer architecture.

   d. What are the most common phrases of an instruction cycle?

   e. What do you mean by an instruction format? Name different instruction formats used in computer system architecture.

   f. Define the I/O interface unit.

   g. Briefly explain the DMA controlled data transfer technique.

   h. What is difference between logical and physical addresses?

   i. What do you mean by locality of reference?

   j. Briefly tell what is the layered approach architecture? Why is it used?

SECTION-B

2. What is Flynn's classification of computer architecture? Explain SISD, SIMD and MIMD in detail with relevant diagram.

3. What do you mean by micro-operations? Discuss their types in detail. Also tell the relationship between micro-operation, micro instruction and micro program.

4. What is an interrupt in computer organisation? Discuss interrupt types and interrupt cycle in brief.

5. Discuss the role of control unit in computer system. Explain hardwired and micro programmed control unit in detail also tell the steps to design both types of control unit.

6. Explain the following :

   a. Asynchronous data transfer

   b. Port and their types used in computer

7. Write note on the following :

   a. Memory, memory types and memory hierarchy

   b. Cache memory mapping techniques