UNIT – I

2. Convert the following numbers with the indicated bases to decimals : 15

   (a) $(12121)_3$

   (b) $(4310)_5$

   (c) $(50)_7$

   (d) $(198)_{12}$

   (e) $(125)_7$

3. (a) Explain Logic Microoperations in detail. 7.5

   (b) Explain Shift Microoperations in detail. 7.5

UNIT – II

4. Explain design of accumulator logic in detail. 15

5. Define addressing modes. Explain different types of addressing modes in detail. 15

UNIT – III

6. Describe parallelism. What are its objectives ? Also explain pipelining technique. 15

7. How parallel processing enhances the system performance ? Explain. 15

UNIT – IV

8. Write short notes on the following : 15

   (a) Direct Memory Access

   (b) Software Interrupts

9. What is associative memory? Explain direct mapped cache organization in detail. 15

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B. Tech. 4th Semester (CSE)
Examination – May, 2023

COMPUTER ORGANIZATION & ARCHITECTURE

Paper : PCC-CSE-204-G

Time : Three hours]   *[Maximum Marks : 75*

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

Note : Attempt any *five* questions in all, selecting *one* question from each Unit. Question No. **1** is *compulsory*. All questions carry equal marks.

1. (a) Convert the following binary numbers to decimal: 111010; 100101.

     (b) Why Gray code is called reflected code ? Explain.

     (c) Write down the list of registers and their functions of the basic computer.

     (d) What is direct associative memory ? Describe.

     (e) What is interrupt ? Explain types of interrupt.

     (f) Explain cache memory mechanism. $2.5 \times 6 = 15$