

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

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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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Roll No.

3086

**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. $2.5 \times 6 = 15$

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