

Roll No.

3217

**B. Tech. (ECE) 5th Semester
Examination – February, 2022**

COMPUTER ORGANIZATION & ARCHITECTURE

Paper : PCC-ECE-303-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 five questions in all, selecting one question from each Unit. Question no. 1 is compulsory. All questions carry equal marks.

1. Write short notes on :

2.5 × 6 = 15

- (a) ALU
- (b) Addressing modes
- (c) SIMD
- (d) Cache memory
- (e) Amdahl's law
- (f) Instruction format

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UNIT - I

2. (a) Describe various types of data representation. 7.5
(b) Explain binary to gray code conversion with suitable example. 7.5
3. (a) Describe Resister transfer Language in detail. 8
(b) Explain various types of microoperations. 7

UNIT - II

4. (a) Compare RISC and CISC. 8
(b) Describe general Register organization. 7
5. (a) Explain memory reference instruction in detail. 8
(b) Define various types of computer Registers. 7

UNIT - III

6. Explain various types of pipeline in detail. 15
7. (a) What is pipeline hazards ? Explain. 8
(b) What is vector processing ? Explain. 7

UNIT - IV

8. (a) What is Privileged and Non-privileged Instructions ? 8
(b) Define various types of Interrupts in detail. 7
9. Define memory and various types of memory in detail. 15