

**Program: Diploma in Computer/IT Engineering**

**Full Marks: 80**

**Year/Part: II/II (2018 New Course)**

**Pass Marks: 32**

**Subject: Computer Architecture**

**Time: 3 hrs.**

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt Any Eight questions.**

1. Define instruction with its format. How can you find direct or indirect addressing in memory? Describe with suitable diagram. [3+7]
2. Illustrate common bus system with diagram in brief. [10]
3. Define microinstruction with its format. Describe about binary and symbolic microprogram with examples. [3+7]
4. What do you mean by sub-routine? Differentiate between Microprogrammed and hardwired control unit with its major properties. [3+7]
5. Define control word. Enlist the various types of addressing mode. Explain any two of them. [3+7]
6. Differentiate between RISC and CISC architecture. [10]
7. Write down hardware algorithm and implementation of addition and subtraction. [10]
8. Define mapping. Explain any two types of mapping. [2+8]
9. What is pipelining? Mention about four segment instruction pipeline. [3+7]
10. **Write short notes on : (Any Two)** [2x5=10]
  - a) Program Interrupt
  - b) Characteristics of multiprocessors
  - c) Data Dependency
  - d) Cache Memory

**Good Luck!**