

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No 0810CA21DD24

## MCADD-201

M.C.A. (Integrated), II Semester

Examination, June 2022

Computer Architecture

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.

1. a) What is meant by the 'stored-program' concept? Draw a diagram of von Neumann architecture and explain it briefly.  
b) What are the various types of operations required for instructions?
2. a) Explain the design of Arithmetic and Logic Unit in detail.  
b) Difference between hardwired and micro programmed control unit.
3. a) Explain the implementation of processor using the building blocks.  
b) Explain instruction cycle, machine cycle and states.
4. a) What are the different types of addressing Modes?  
b) Specify the three types of the DMA transfer techniques?

[2]

5. a) Describe RAM, ROM and Nonvolatile RAM with their merits and demerits.
- b) Explain the function of cache memory. Also discuss cache hit and cache miss.
6. a) What do you mean by Associative mapping technique?
- b) Distinguish between asynchronous DRAM and synchronous RAM.
7. a) Explain the execution of instruction in terms of microinstruction in detail.
- b) Explain the Architecture of 8086 microprocessor.
8. Write short notes on any four:
- i) Register transfer language
  - ii) Static and dynamic RAM
  - iii) Associative memory
  - iv) Bus structures and concept of bus
  - v) Interrupt cycle

\*\*\*\*\*