

AE-1340

B.C.A. Old Course (Part - II)
Term End Examination, 2016-17

Paper - III

Computer Architecture

Time : Three Hours] [Maximum Marks : 100
[Minimum Pass Marks : 33

Note : Answer **all** questions. All questions carry equal marks.

1. (a) What is Flip Flop ? Explain J-K flip-flop with circuit diagram and truth table.
- (b) Find the complement of the function
$$f = x'yz' + x'y'z.$$

OR

- (a) What is Code Converters ? Explain BCD to binary converter with circuit diagram and truth table.

(2)

(b) Reduce the following Boolean expression using law of theorems of Boolean Algebra

$$Y = A'B'C' + A'BC' + A'BC$$

2. (a) What is Register ? Explain the different types of register.
(b) What is Micro-operations ? Explain any two micro-operations with suitable example.

OR

(a) Explain Microprogrammed Control Unit.
(b) Explain the components of basic computer.
3. (a) What is RISC ? Explain the features of RISC.
(b) What is hazard ? Explain the different types of hazard in pipelining.

OR

(a) Explain the working of CPU in detail.
(b) What is CISC ? Explain the feature of CISC.
4. (a) What is Secondary Memory ? Explain in detail.

(3)

(b) Explain the architecture of multiprocesssing.

OR

(a) What is RAM ? Explain the different types of RAM in detail.

(b) Explain input/output organization in detail.

5. Write short notes on any **two** of the following :

- (a) Associative memory
- (b) Master-slave J-K Flip-Flop
- (c) T Flip-Flop
- (d) D Flip-Flop
