

Exam. Code : 107203
Subject Code : 1760

Bachelor of Computer Application (BCA) 3rd Semester
COMPUTER ARCHITECTURE

Paper—I

Time Allowed—3 Hours] [Maximum Marks—75

Note :—There are **EIGHT** questions. Candidates are required to attempt any **FIVE** questions. All questions carry equal marks.

SECTION—A

- (a) How Logical and Arithmetic micro operations are used ? Explain the role of flags. 8
(b) What is the need of timing signals ? Explain. 7

What is the role of instruction cycle ? Explain the different phases of this cycle. 15

SECTION—B

- Explain the following concepts : 7.5
(a) Stack Organisation 7.5
(b) Instruction formats.
Discuss the characteristics of the following control unit designs : 7.5
(a) Hardwired 7.5
(b) Micro programmed.

(Contd.)

SECTION—C

5. Write notes on the following :
(a) Virtual memory 7.5
(b) Cache memory. 7.5
6. (a) What is the concept of memory organisation ? Explain. 7.5
(b) Discuss the role of auxiliary memory in detail. 7.5

SECTION—D

7. (a) How I/O processor is used as an interface ? Explain in detail. 8
(b) Discuss modes for data transfer operations. 7
8. (a) Explain the uses of pipeline processing. 7.5
(b) How MISD and MIMD architectures are employed ? Explain. 7.5