

Goa Vidyaprasarak Mandal's
Gopal Govind Poy Raiturcar College of Commerce and Economics
Farmagudi, Ponda-Goa.

B.C.A. (Semester - I) Examination – October 2016

COMPUTER ORGANIZATION AND ARCHITECTURE

Duration : 2 hours

Marks : 50

Instructions : A.) All the questions are compulsory.
B.) Draw neat diagrams with pencil wherever required.

- I. 1. State whether the following statements are True or False. (1mk x 5 = 5 mks)
- In Direct Addressing, address field contains address of operand.
 - The non maskable interrupts are the interrupts which cannot be ignored.
 - CISC stands for Complex Instruction Set Computer.
 - In Indirect Cycle, indirect addressing does not require more memory access.
 - int 21h is not used for interrupt in the Assembly Language.
2. Answer the following. (1mk x 5 = 5 mks)
- What is Assembly Language ?
 - What is InfiniBand ?
 - What is Semiconductor Memory ?
 - What is an Instruction Set ?
 - What is Loop Buffer ?
- II. 1. Explain the Read and Write Mechanisms of Magnetic Disk. (2 mks)
2. Explain the Micro-programmed Control. (3 mks)
3. Explain the CPU with Internal Bus with the diagram. (5 mks)
- III. 1. Perform the following operations. (1 mk x 2 = 2 mks)
- $(-4) + (-1)$
 - $(+5) + (+4)$

2. Perform the following conversions. (1.5 mk x 2 = 3 mks)

i. $(73)_{10} = (X)_2$

ii. $(10001011)_2 = (X)_{10}$

3. Explain the DMA Module with the diagram. (5 mks)

IV. 1. Explain the Advanced DRAM Organization. (2 mks)

2. Explain the 8086 Instruction sets with the appropriate examples. (3 mks)

3. Explain the Typical Cache Organization with the diagram. (5 mks)

V. 1. Explain the Fetch Cycle and the Execute Cycle. (2 mks)

2. Explain the functions of I/O Module. (3 mks)

3. Explain the major computer operations and draw the block diagram of the Computer. (5 mks)
