

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

B.C.A. (Semester - I) Examination, October 2017

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)
- Interrupt driven and Programmed I/O require active CPU intervention.
 - Loop Buffer is very good for small loops or jumps.
 - The interrupt which can be ignored by the processor while performing its operations are called maskable interrupts.
 - RISC does not stand for Reduced Instruction Set Computer.
 - In Immediate Addressing, operand is not a part of Instruction.
2. Answer the following. (1mk x 5 = 5 mks)
- What is CISC ?
 - What is semiconductor memory ?
 - What is Direct Addressing ?
 - What is Microprocessor ?
 - What is the meaning of the following Instruction ?
mov ah, 09
- II. 1. Explain the Instruction Cycle with Interrupts. (2 mks)
2. Explain the FireWire Protocol Stack. (3 mks)
3. Explain the three categories of external devices and draw the block diagram of External Device. (5 mks)

- III. 1. Perform the following operations. (1 mk x 2 = 2 mks)
- $(+5) + (+4)$
 - $(-7) + (+5)$
2. Perform the following conversions. (1.5 mk x 2 = 3 mks)
- $(85)_{10} = (X)_2$
 - $(10001011)_2 = (X)_{10}$
3. Explain the major Computer operations and draw the block diagram of the Computer. (5 mks)
- IV. 1. Explain the operation of DRAM. (2 mks)
2. Explain the Vertical Micro-programming. (3 mks)
3. Explain the CPU with Internal Bus with the diagram. (5 mks)
- V. 1. Explain the Read and Write Mechanisms of Magnetic Disk. (2 mks)
2. Explain the 8086 Instruction sets with the appropriate examples. (3 mks)
3. Explain the Three-Level cache organization with the diagram. (5 mks)
