

**GOA VIDYAPRASARAK MANDAL'S
GOPAL GOVIND POY RAITURCAR COLLEGE OF COMMERCE AND ECONOMICS
PONDA -- GOA**

**B.C.A. (SEMESTER -I) EXAMINATION - OCTOBER 2011
COMPUTER ORGANIZATION AND ARCHITECTURE**

Marks : 50

Duration : 2 Hrs

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- I. 1. Explain the Traditional bus architecture with a diagram. (5 mks)
2. Explain the Cache memory organization with a diagram. (5 mks)
- II. 1. What is the use of the following CPU registers :
i. MAR
ii. MBR
iii. AC
iv. PC (2 mks)
2. Explain Direct Memory Access. (3 mks)
3. Explain the working of a SRAM cell with a diagram. (5 mks)
- III. 1. What are the two types of Multiplexors? (2 mks)
2. Explain any 6 instructions of the 8086 Instruction Set. (3 mks)
3. Explain how data is recorded and read from a CD. (5 mks)
- IV. 1. Perform the following operations : (2 mks)
i. $2+(-7)$
ii. $5+(-2)$
2. Explain Displacement Addressing. (3 mks)
3. With a block diagram explain the components of an I/O module. (5 mks)
- V. 1. Explain Indirect Addressing. (2 mks)
2. Perform the following conversions : (3 mks)
i. $(101101)_2 = (X)_{10}$
ii. $(108)_{10} = (X)_2$
3. With a diagram explain the model of the "Control Unit". (5 mks)

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