

Saraswat Vidyalaya's
Sridora Caculo College of Commerce & Management Studies
B.C.A. SEMESTER I END EXAMINATION, November 2022

CAC-102 COMPUTER ORGANISATION AND ARCHITECTURE

Duration : 2 hours

Total Marks : 60

Total No. of Pages : 2

Instructions:

1. All questions are compulsory.
 2. Figures to the right indicate **full marks**.
 3. Draw diagrams wherever necessary.
 4. Use of Calculator is **prohibited**.
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Q1. A. Define the following

(5 × 1 = 05)

- I. CPU
- II. ALU
- III. PROM
- IV. DMA
- V. SRAM

Q1. B. Answer the following in only one sentence.

(5 × 1 = 05)

- I. Instruction set
- II. Peripheral devices
- III. Control bus
- IV. Types of external memory
- V. Flynn's classification of computers

Q2. Answer the following

- A. Explain the instruction cycle. **(02)**
- B. Write a note on any three types of operations that can be performed by any instruction. **(03)**
- C. Explain the block diagram of a computer. **(05)**

Q3. Answer the following

- A. List any four addressing modes used in any instruction. (02)
- B. Write in detail the number of addresses used in any instruction. (03)
- C. Explain interrupt initiated I/O data transfer mode. (05)

Q4. Answer the following

- A. Compare RAM v/s ROM. (02)
- B. Write a note on cache memory. (03)
- C. Write a note on computer organization and computer architecture in detail. (05)

Q5. Answer the following

- A. Compare first generation of computers with fifth generation of computers. (02)
- B. Represent the following nos. in 2's complement with 8 bits. (03)
(i) -18 (ii) -31 (iii) -62
- C. Write a note on two types of control unit. (05)

Q6. Answer the following

- A. Write any two drawbacks of signed magnitude representation. (02)
 - B. Explain any three functions of a computer. (03)
 - C. Convert $(-263.3)_{10}$ to floating point representation using single precision. (05)
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