

(i) Printed Pages : 3

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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Bachelor of Computer Applications 2nd Semester

1048

COMPUTER ORGANIZATION

Paper-BCA-16-202

Time Allowed : Three Hours]

[Maximum Marks : 65

Note :- Attempt **one** question each from Sections A, B, C and D.
Section E is compulsory.

SECTION-A

1. (a) What is Stored Program Architecture ? Explain the limitations of Stored Program Architecture. 6
- (b) What are combinational blocks ? Explain the working of a 3-to-8 line decoder with the help of logic symbol, logic diagram and truth table. 7
2. (a) What is a flip-flop ? What is the use of flip-flops ? Explain the working of any two flip-flops. 6
- (b) Multiply-12 and -9 using Booth's algorithm. 7

SECTION-B

3. (a) What is addressing mode ? Explain Direct, Indirect, Displacement and Register addressing modes. 7

- (b) What are microinstructions ? Explain various Arithmetic and Logic microinstructions. 6
4. (a) What is instruction Cycle ? Explain with the help of a flowchart. 7
- (b) Explain Strobe based and handshake based communication. 6

SECTION-C

5. (a) What is memory hierarchy ? Explain different types of memories used in a computer. 7
- (b) Explain the working of Virtual Memory with the help of a diagram. 6
6. (a) What are the differences between Assembly Language and Machine Language ? What is the use of pseudo instructions in Assembly Language ? 6
- (b) Write an Assembly Language program using subroutines to perform multiplication of two numbers. 7

SECTION-D

7. (a) What is motherboard ? List and explain various components attached on a motherboard. 5
- (b) What is an Expansion card ? Explain any three expansion cards. 8

8. (a) What are the various diagnostics performed on a Personal Computer for its maintenance ? 6
- (b) What is a computer virus ? What are the various symptoms that indicate infection of a PC by a virus ? How virus can be removed from an infected computer ? 7

SECTION-E

9. Attempt **all** questions :

- (a) What is a half adder ? 2
- (b) Define Cache Initialization 2
- (c) Perform $(12)_{10} + (27)_{10}$ using 2's complement. 3
- (d) What is an instruction set ? 2
- (e) What is cycle stealing in DMA ? 2
- (f) What is boot sector virus ? 2