

(i) Printed Pages : 2

Roll No. ....

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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Bachelor of Computer Applications 2<sup>nd</sup> Semester

(2053)

## COMPUTER ORGANIZATION

Paper-BCA-16-202

Time Allowed : Three Hours] [Maximum Marks : 65

Note :— (1) Attempt one question from each Unit and the compulsory question (Unit-V).

(2) All questions carry equal marks unless specified.

### UNIT—I

1. (a) Give the design and logic diagram of converting JK flip flop to D flip flop. 8
- (b) Explain half adder and full adder with their logic diagram. 5
2. (a) Discuss addition and subtraction for sign magnitude numbers. 6
- (b) Explain Booth's algorithm with suitable example. 7

### UNIT—II

3. (a) Define Interrupt. What is an interrupt cycle ? Also explain priority interrupt. 7
- (b) What are micro-operations ? Design 4-bit arithmetic circuit. 6
4. Give the instruction set of 8086/8088 microprocessor. 13

### UNIT—III

5. (a) Explain different types of memories with the help of circuit diagram. 6  
(b) Write assembly language program to perform basic input/output. 7
6. (a) Elaborate various features of assembly language. Explain the differences between machine and assembly language. 5  
(b) Compare one pass and two pass assembler. 8

### UNIT—IV

7. Discuss the various physical components of a computer and its inspection and diagnostics on PC. 13
8. Define the term "Computer Virus". Explain its various types and its preventive and protective measures. 13

### UNIT—V

9. (a) What is hit ratio ? 1  
(b) Discuss the role of Execution Unit (EU). 2  
(c) Define the term "parity". 2  
(d) What is DMA ? 2  
(e) What is Cache memory ? 2  
(f) Define RTL. 2  
(g) What is an Expansion Card? 2