

(i) Printed Pages : 2

Roll No. ....

(ii) Questions : 9

Sub. Code : 

0	9	2	0
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Exam. Code : 

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**Bachelor of Computer Applications 2<sup>nd</sup> Semester**  
**(2042)**

**COMPUTER ORGANIZATION**

**Paper—BCA-16-202**

**Time Allowed : Three Hours]**

**[Maximum Marks : 65**

**Note :—** (1) Attempt **One** question from each Unit.

(2) Question No. 9 is compulsory.

(3) All questions carry equal marks unless specified.

**UNIT—I**

1. Give the design and logic diagram of converting JK flip flop to D flip flop. 13
2. Design a 5\*32 decoder with four 3\*8 decoders and a 2\*4 decoder. 13

**UNIT—II**

3. (a) What are addressing modes ? Discuss various addressing modes. 8
- (b) What is RTL ? Discuss different logic micro-operations. 5
4. (a) Write a note on various instruction codes. 6
- (b) Explain instruction cycle in detail. 7

### UNIT—III

5. (a) What is virtual memory ? Discuss its working. 5  
(b) Elaborate various mapping techniques of Cache memory. 8
6. (a) Compare one pass and two pass assembler. 5  
(b) Write assembly language program to perform basic input/output. 8

### UNIT—IV

7. Explain various physical components of a computer along with its inspection and diagnostics on PC. 13
8. Describe the working of various internal and external cards of PC. 13

#### (Compulsory)

9. (a) Discuss fixed point and floating point representation. 3  
(b) What is the function of Bus Interface Unit ? 3  
(c) What is cycle stealing in DMA ? 3  
(d) Discuss various types of RAM and ROM. 2  
(e) What is an Expansion card ? 2