(i)   **Printed Pages: 2**   Roll No. ....

(ii)   **Questions**   **: 9**   **Sub. Code :** | 0 | 2 | 9 | 1 |
                             Exam. Code : | 0 | 0 | 0 | 3 |

B.A./B.Sc. (General) 3rd Semester

(2122)

COMPUTER SCIENCE

Paper : CS05 Theory-A (Computer Organization)

Time Allowed : Three Hours]   **[Maximum Marks : 30**

Note :— Attempt **FIVE** questions in all, including Question No. 9 (Section-E) which is compulsory and selecting **ONE** question each from Sections-A-D.

SECTION—A

1. Describe various approaches to store real numbers in modern computers with suitable example.   6

2. (a) Prove using truth table that :

$$A + A' \cdot B = A + B$$

$$A + (B \cdot C) = (A + B)(A + C)$$

    (b) Convert the following :

$$(7688)_{10} = (?)_2$$

$$(664)_8 = (?)_{10} \qquad\qquad 3+3$$

SECTION—B

3. What do you mean by multiplexer ? Discuss 4 to 1 multiplexer using a diagram. 6

4. What do you mean by an interrupt ? Describe interrupt cycle with suitable diagram. 6

SECTION—C

5. What do you mean by addressing modes ? Describe register, register indirect and immediate addressing modes with example. 6

6. Differentiate between machine language and assembly language. 6

SECTION—D

7. What do you mean by virus ? Describe various symptoms of viruses affecting your computer system. 6

8. What do you mean by a card ? Name various internal and external cards available in your PC. Also write their functions. 6

SECTION—E

9. Explain the following terms :—

(a) Hamming Code

(b) Half Adder

(c) Peripheral Devices

(d) Flag Register. 4×1.5=6