76/10

(i) **Printed Pages : 2**

(ii) **Questions** : 9

Roll No. ....

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

(2123)

COMPUTER SCIENCE

Paper-CS05 Theory-A Computer Organization

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

Note :— Attempt **five** questions in all, including Question **9** (Section-E) which is compulsory and selecting **one** question each from Sections A-D.

SECTION—A

I. (a) Add –42 and –24 decimal numbers using 2's complement signed arithmetic.

   (b) $\overline{X+Y} = ?$ and $\overline{X-Y} = ?$ $2 \times 3 = 6$

2. Discuss the utility of error detection and correction codes. $1 \times 6 = 6$

SECTION—B

3. What do you mean by counters ? Design a 3-bit synchronous counter and discuss its truth table. $1 \times 6 = 6$

4. What do you mean by multiplexer ? Discuss 4 to 1 multiplexer using a diagram. $1 \times 6 = 6$

SECTION—C

5. What is address model ? Discuss register, direct and register indirect addressing modes of 8086 with example. 1×6=6

6. (a) Discuss various features of assembly language.

   (b) What do you mean by pseudo instructions ? Discuss their role. 2×3=6

SECTION—D

7. Write various steps required to diagnose your PC. 1×6=6

8. What is Virus ? How it is harmful to your PC ? How would you protect your PC from it ? Describe in detail. 1×6=6

SECTION—E

9. Explain the following terms :—

   (a) Gate

   (b) Flip flop

   (c) Light pen

   (d) ASCII code. 4×1.5=6