(i) Printed Pages : 3] Roll No. .....

(ii) Questions : 9] Sub. Code : 0 2 9 1

Exam. Code : 0 0 0 3

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

1127

COMPUTER SCIENCE

(Computer Organization)

Paper : CS05 : Theory–A

Time : 3 Hours] **[Max. Marks : 30**

Note :– Attempt *five* questions in all. Question No. **1** is compulsory and attempt *one* question from each Unit.

Compulsory Question

1. Attempt the following :

   (i) Define Hamming Code.

   (ii) Describe Registers.

   (iii) How we do PC diagnostics ? 3×2=6

Unit–I

2. What is meant by fixed and floating point representation ? Differentiate between them giving examples. 6

3. (a) Add –34 and –26 using 8 bit 2's complement signed arithmetic.

   (b) Prove the following using rules of Boolean Algebra :

   (i) $A'.B'.C' + A'.B.C' + A.B'.C' + A.B.C' = C'$

   (ii) $(A + B).(A + B').(A' + Ztw) = A.Z$ 2×3

Unit–II

4. What do you mean by Gates ? Explain Half Adder and Full Adder with the help of suitable example. 6

5. Describe Microinstructions. Define the working of logical and shift operations. 6

Unit–III

6. What do you mean by Microprocessor ? Explain the architecture of 8086/8088 in detail. 6

7. Write short notes on the following :

   (a) Pseudo instruction

   (b) Assembly language 2×3

Unit–IV

8. What is a Computer Virus ? Explain different types of virus and methods of their removal. 6

9. Discuss various physical components of a computer. Explain. 6