D 3071 **(Pages 2)** **Name.....**

Reg. No.....

FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2009

Computer Science—Complementary Course

CMC A 01—COMPUTER FUNDAMENTALS AND APPLICATION PACKAGES

(C.S.S. Programme)

Time : Three Hours Maximum Weightage : 30

I. Answer *all* questions :

1 $(1234)_8$ = $(\ldots\ldots\ldots)_{10}$.

2 101101 + 101001 = _____ (Binary numbers)

3 _____ is an example of error detecting and correcting code.

4 X + XY = _____ (X and Y are boolean variables)

5 _____ is an example of a universal gate.

6 Nibble is a collection of _____ bits.

7 2's complement of 10110001 is _____

8 Register which holds the current instruction that is being executed is _____

Give the full form of MICR.

10 Draw flow chart symbol for "Decision".

11 Dot matrix is _____

(a) An impact printer.

(b) A non-impact printer.

(c) A page printer.

12 _____ is an example of pointing device.

(12 x ¼ =3)

II. Answer *all* questions : —

13 Give the significance of computer codes.

14 What is a parity bit ?

15 Give the truth table of XOR operation.

16 Draw block diagram of a half adder.

17 Define access time of a hard disk.

18 What is a register ?

19 Give the basic principle of dot matrix printers.

Turn over

20 What is a scanner ?

21 Define algorithm.

(9 x 1 = 9)

III. Answer any *five* questions :

22 With suitable examples, explain Binary to Hexadecimal, Hexadecimal to binary, Binary to Octal and Octal to Binary conversions.

23 Simplify the following boolean expression and draw logic diagram : —

$$xyz + x\bar{y}z + xyz + \bar{x}\bar{y}z$$

24 Prove that : $x + y =$

25 Explain "Microprogrammed" control unit.

26 Briefly explain working of CD drive.

27 Compare laser printer with inkjet printer.

28 Draw flow chart to find largest of three given numbers.

(5 × 2 =

IV. Answer any *two* questions :

29 Give and explain truth table, block diagram and NAND—NAND implementation of a fu adder.

30 Give a detailed account of Hard disk.

31 Discuss the working of the following : key board, mouse, digital camera and joystick.

(2 × 4 = 8)