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53 (CS 101) INCP

2015

**INTRODUCTION TO COMPUTER  
PROGRAMMING**

Paper : CS 101

Full Marks : 100

Time : Three hours

**The figures in the margin indicate  
full marks for the questions.**

Answer **any five** questions.

1. (a) Convert the following : **(any three)**

3×3=9

(i)  $(3421)_{10} = (?)_{16}$

(ii)  $(761)_8 = (?)_{16}$

(iii)  $(5162)_8 = (?)_{10}$

(iv)  $(1234)_{10} = (?)_8$

Contd.

(b) Differentiate between the following :

$$3+4+4=11$$

(i) Precedence and associativity of operators.

(ii) Array and structure

(iii) Prefix and postfix operator.

2. (a) The end term examination is conducted for three subjects. Write a C program to read the data and determine the following :

(i) Total marks obtained by each student.

(ii) The highest marks in each subject and the Roll No. of the student who secured it.

(iii) The student who obtained the highest total marks. 10

(b) Write short notes on : **(any two)**

$$5+5=10$$

(i) Static storage class

(ii) Two dimensional array

(iii) ALU

3. (a) Draw a flowchart to find the minimum of three numbers. 6
- (b) Write the differences among ROM, EPROM, and EEPROM. 6
- (c) Discuss the features of various generations of computers. 8
4. (a) What do you mean by function call by value and function call by reference? Differentiate them with a suitable example.  $3+6=9$
- (b) Write C programs for the following :  $6+5=11$
- (i) Print all prime numbers between 10 and 200.
- (ii) Check whether the input number is palindrome or not.
5. (a) What is recursion? Write a program to find factorial of an input number using recursion.  $2+6=8$
- (b) Write a C program to sort the elements of an array. (Bubble sort) 7

- (c) Explain how to access the elements of an array using pointer arithmetic. 5
6. (a) Write a C program to copy the contents of a test file to another. 7
- (b) Write a C program to compute the product of two matrices. 8
- (c) What is preprocessor ? Explain the various preprocessor directives. 2+3=5
7. Write short notes on the following : **(any four)** 4×5=20
- (i) Bitwise operator
  - (ii) Dynamic memory allocation
  - (iii) Compiler and assembler
  - (iv) Secondary storage device
  - (v) Union in C
  - (vi) Conditional operator
  - (vii) ASCII
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