53 (CS 101) INCP

2017

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.   2×10

    (a)   Differentiate between Application
software and System software.

    (b)   Give the meaning of the declaration of :
int ∗ptr ;

    (c)   What is function prototype ?

    (d)   What are the use of getchar ( ) and
putchar ( ) ?

Contd. .

(e) What is the purpose of break statement ? Give example.

(f) What is the difference between ++a and a++ in C-language ?

(g) What is the difference between structure and union ?

(h) What is the significant of return type void in a function ?

(i) What is the difference between variable and constant ?

(j) What is static variable ?

2. (a) Write a flowchart to find the largest of three numbers.

(b) Write a C-program to find the smallest of three numbers.

(c) Find the output of the following code (Justify your answer) :

```
#include<stdio.h>
main ( ) {
    int i=1 ;
    printf ("%d", i++ + ++i) ;
}
```

5+10+5

3. (a) Write a C-program to find the GCD or LCM of two numbers.

   (b) Write a program to find the sum of the series
   $$S = 1 + x/1! + x^2/2! + x^3/3! + \ldots + x^n/n!$$
   10+10

4. (a) Write a C-program to convert the binary number to decimal number.

   (b) Write an equivalent if-else statement for the statement $a = A > B\ ?\ A : B;$

   (c) Find the output of the following (Justify your answer) :

   ```
   #include<stdio.h>
   void  main ( ) {
           int i=0, j=–1 ;
           if (i>j, i : j)
               printf ("Hello") ;
           else
               printf ("world") ;
   ```
   10+5+5

5. *(a)* What are the different types of operators in C-language ? Explain with suitable example.

   (b) What do you mean by call-by-value and call-by-reference ? Illustrate with example. 10+10

6. *(a)* What is structure ? Write a C-program to store the student information (Name, RollNo, Course) using structure.

   (b) Write a C-program to display a matrix of order 3×3. 10+10

7. Write short notes on : *(any four)*

   5×4

   (a) High level language

   (b) Low level language

   (c) Compiler

   (d) Loop in programming language

   (e) Structure in C-language.