BT-2/M-11
FUNDAMENTALS OF COMPUTERS AND
PROGRAMMING IN ‘C’
Paper : CSE-101(E)

Time : Three Hours] [Maximum Marks : 100

Note : Attempt five questions in all, selecting at least one question from each unit.

UNIT-I

1. (a) What is Operating system & its services ? 6
(b) Compare LINUX & Window 2000. 6
(c) Explain Cache memory, Primary memory & Secondary memory hierarchy. 8

2. (a) Convert hexadecimal into binary :
   2CF.A
   309.5
   8CF
   BAE. 6
(b) Explain the working of UNIX & its important features. 6
(c) What do you mean by Error detection and Error correction technique ? 8

UNIT-II

3. (a) Differentiate between Syntax, Linking & Logical Errors in details. 10
(b) What is Loader and its types ? 5
(c) Differentiate between Compiler & Interpreter. 5
4. (a) Explain Machine language, Assembly language & High-level language in detail. 10
   (b) Differentiate between FTP and Telnet. 5
   (c) Differentiate between Algorithm and Flow chart. 5

UNIT-III

5. (a) What is main() and role of main() in the compilation and linking process? 5
   (b) What is Function prototyping and its significance to compiler? 5
   (c) Write a program to display first 20 prime numbers. 10

6. (a) Differentiate between Formatted I/O and Unformatted I/O. 6
   (b) What are Command line arguments in C? Write a program to calculate power of a given number \(n^p\) using command line arguments (pass \(n\) and \(p\) from command prompt). 10
   (c) What do you mean by scope and life of different classes of a variable? 4

UNIT-IV

7. (a) Write the output of the following code:
   
   (i) int i;
       for (i = 0, i ≤ 10, i--)
       printf("%d", i);
   
   (ii) int i;
       for (i = 0; i ≤ 10; i++)
       printf("%d", i);
(iii) int x = 10;
    while (x = 5)
    printf("within loop");
    printf("out of loop");

(b) Compare Structure with Union.

(c) Explain strcpy(), strcmp(), getche(), getchar().

8. Write short notes on the following:

(a) File I/O and console I/O.

(b) fopen() and fclose().

(c) Enumerate Data types.

(d) Bitwise operators in C.