QP – 450

13

I Semester B.C.A. Examination, April/May 2021
(CBCS) (Y2K14 Scheme) (F + R)
COMPUTER SCIENCE
BCA 103T : Problem Solving Techniques Using C

Time : 3 Hours | Max. Marks : 70

Instructions : *1) Answer **all** Sections.*
*2) Section – **A** : Answer **any ten** questions.*
*3) Section – **B** : Answer **any five** questions.*

SECTION – A

Answer **any ten** questions : **(10×2=20)**

1. "C programming is a middle level language". Justify the statement.
2. What do you mean by Reserved Words in C ? Give a few examples.
3. What is identifier ? Give example.
4. What will be the output of following code :

```
# include <stdio.h>
  void main( )
  {
     int a=10, b=20, c=30;
     (a>b && c++) ? a++ : c ;
     printf("%d %d %d", a, b, c);
  }
```

5. What is recursion ? Mention disadvantages of using recursive functions.
6. Write the syntax of strcat( ) and strcmp ( ).
7. What is an array ? How one dimensional array can be declared and initialized ?
8. Why is the returntype of malloc( ) a void* ?
9. What is reference variable and how it can be created ?
10. Define macro with an example.
11. What is the difference between text and binary files ?
12. Differentiate between actual and formal parameters.

P.T.O.

SECTION – B

Answer **any five** questions :

13. a) Discuss the differences between system software and application software. Give example. **5**

    b) Explain how C Programming has evolved and its features. **5**

14. a) Explain relational operators, with suitable example. **5**

    b) Write an algorithm to find largest number among three different numbers. **5**

15. a) Write a C program to find Fibonacci series of n terms using recursion. **5**

    b) How is a switch statement being used and what are the limitations of using a switch statement ? **5**

16. a) Discuss about getchar( ), getch( ) and getche( ). Which among these three you would prefer to use while taking password as input and why ? **7**

    b) Explain the use of break statement in a C program. **3**

17. a) Explain different storage classes in C. **5**

    b) Write a C program to reverse a string without using any string handling functions. **5**

18. a) What is dynamic memory allocation and how is it different from static memory allocation ? **4**

    b) Explain the differences between call by value and call by reference. Give example to justify the differences. **6**

19. a) Discuss the use of fopen( ). Explain different modes of opening a file. **5**

    b) Write a C program to copy the contents of one file to another file in uppercase. **5**

20. a) How are array of structure created and initialized ? Illustrate with an example. **5**

    b) Explain with a suitable example the use of argv and argc as arguments to main function. **5**
