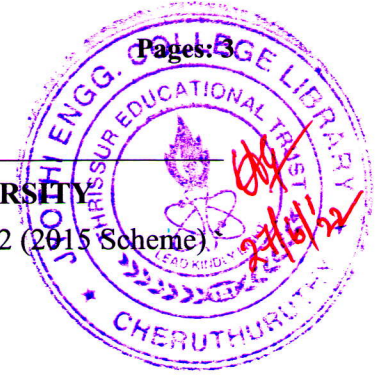


Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S1 (S,FE) S2 (S) / S2 (FE) Examination May 2022 (2015 Scheme)

**Course Code: CS100****Course Name: BASICS OF COMPUTER PROGRAMMING (CS,IT)**

Max. Marks: 100

Duration: 3 Hours

**PART A***Answer all Questions.*

Marks

- |    |  |     |
|----|--|-----|
| 1  | What are keywords in C? What restriction apply to their use?   | (3) |
| 2  | Explain enumerated data type in C with an example.   | (3) |
| 3  | What is the minimum number of times that a do-while loop can be executed?<br>Compare with a while loop and explain the reason for differences.   | (3) |
| 4  | What is a pointer? How is a pointer variable declared?   | (3) |
| 5  | Explain the purpose of function prototype and also write it's syntax.  | (3) |
| 6  | Write a C program to find factorial of a given number using recursion.   | (3) |
| 7  | With a simple example program, explain scope and life time of variables in C.  | (3) |
| 8  | A C program contains the following declaration<br><code>static int y[7] = {55, 100,133,14,55,66,77};</code> Assume that the array begins at location 1000.<br>(i) What is the value of (y + 3)?<br>(ii) What is the value of * (y+ 2)?<br>(iii) What is the value of (*y + 2)? | (3) |
| 9  | Explain static storage class with an example.  | (2) |
| 10 | What is the purpose of fopen( ) and fclose( ) functions in C.  | (2) |
| 11 | Explain the different modes of opening a file.   | (2) |
| 12 | Is it advisable to use go-to statements in a C program? Justify your answer.   | (2) |
| 13 | What are the advantages of using functions in a program?   | (2) |
| 14 | When a program is terminated, all the files used by it are automatically closed.<br>Why is it then necessary to close a file during execution of the program?  | (2) |
| 15 | With help of an example explain command line arguments.  | (2) |
| 16 | Differentiate between structure and union in C.  | (2) |

**PART B**

*Answer any four questions. Each question carries 8 Marks*

- 17 a) Describe about the fundamental datatypes used in C. (5)  
b) Explain the working of break statement with an example. (3)
- 18 a) Write a C program to perform matrix multiplication. (5)  
b) Explain the different ways in which you can declare & initialize a single dimensional array. (3)
- 19 Declare a structure namely Student to store the details (roll number, name, mark\_for\_C) of a student. Then, write a program in C to find the average mark obtained by the students in a class for the subject Programming in C (using the field mark\_for\_C). Use array of structures to store the required data (8)
- 20 a) What will be the output of the following code snippet? (3)
- ```
int x=1;
switch(x)
{
case 0: printf( "hello" );
case 1: printf( "everyone" );
default:printf("learning C");
}
```
- b) How does an array differ from a structure? (2)  
c) Write a C program to find the length of string without using built-in function. (3)
- 21 a) Explain the concept of call by value and call by reference with suitable example. (5)  
b) List any three-built-in function with example. (3)

**PART C**

*Answer any two full questions. Each carries 14 Marks*

- 22 a) With suitable example explain the functionality provided by the following functions. (10)
- i. fseek()
  - ii. ftell()
  - iii. fread()
  - iv. fwrite()
  - v. rewind()
- b) Describe bitwise operations in C. (4)

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- 23 a) Write a C-program to copy the contents from one file to another file. (8)  
b) With necessary code, explain flow bubble sort on a given array of numbers. (6)  
5,2,11,33,15,18,26,33
- 24 a) Explain the various storage classes used in C with suitable examples. (8)  
b) Write a C program to perform binary search on a list of sorted numbers. (6)

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