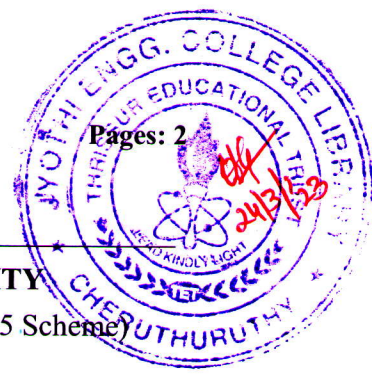


Reg No.: \_\_\_\_\_

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

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
 B.Tech Degree S1 (S, FE) S2 (S) Examination February 2023 (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	Explain with examples, the pre-processor directive statements used in C.	(3)
2	What are the qualifiers used with int data type?	(2)
3	Explain about format strings used with printf function.	(3)
4	Describe the rules for framing an identifier.	(3)
5	Describe how pointers can be used to modify the value a variable indirectly.	(3)
6	Explain the concept of operator precedence. How the expression $5+2*3/3-2$ is evaluated.	(3)
7	Illustrate with example how one dimensional and two-dimensional arrays are created and initialized.	(3)
8	Distinguish between structure and union.	(3)
9	Write a function which will return the power $x^y$ . ( eg $2^3 = 8$ ).	(3)
10	Distinguish between text and Binary files.	(2)
11	What are global variables? Explain with an example.	(2)
12	Write a function to Check whether the given number is odd or even using bitwise operator.	(2)
13	Explain the use of command line arguments in C program.	(3)
14	Describe the important steps involved in handling a file in C.	(2)
15	Write a C program to display the content of a text file "sample.txt".	(3)

**PART B**

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

- |    |   |   |     |
|----|---|---|-----|
| 16 | a | Explain the use of switch statement with an example.  | (4) |
|    | b | Write a program which will read a number and print it in words.<br>Eg: Input: 123 Output: one two three | (4) |
| 17 | a | Explain any four string handling functions in C   | (4) |
|    | b | Write a C program to read a string and count the number of vowel characters in it.                      | (4) |

- 18 a Illustrate about enumerated data type. (3)  
b Write a C program to read a matrix and print the largest element in each row. (5)
- 19 a Distinguish between call by value and call by reference mechanism with an example. (4)  
b Write a function to reverse an array passed as an argument. (4)
- 20 a Illustrate about Recursion with an example. (4)  
b Write a recursive function to find the sum of digits in a number. (4)

**PART C**

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

- 21 a Illustrate the Binary search algorithm. (7)  
b Read names of n students and sort them using bubble sort. (7)
- 22 a Explain the different storage classes available in C (8)  
b Define a structure array to read Rollno, name, marks obtained for 3 different subjects of 'n' students. Compute the total mark for each student and display the details of student who secured the highest total mark. (6)
- 23 a Explain the following file handling functions fopen, fseek, ftell, fclose with examples. (8)  
b Write a C program to read numbers from a data file 'num.dat' and write even and odd numbers into two separate files. (6)

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