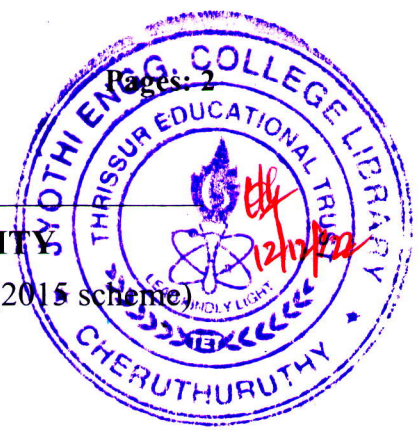


Reg No.: \_\_\_\_\_

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

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Third Semester B.Tech Degree (S,FE) Examination December 2022 (2015 scheme)

**Course Code: EE207****Course Name: COMPUTER PROGRAMMING**

Max. Marks: 100

Duration: 3 Hours

**PART A***Answer all questions, each carries 5 marks.*

Marks

- |   |  |     |
|---|--|-----|
| 1 | Write an algorithm to convert Indian Standard Time (IST) to GMT (IST = GMT + 5 hours and 30 Minutes)   | (5) |
| 2 | Write a 'C' program to accept three different numbers and find the median number among them (The number which is neither the biggest, nor the smallest).                       | (5) |
| 3 | Write a 'C' program to initialise a three-dimensional integer array and find the sum of elements.  | (5) |
| 4 | Write a 'C' program to accept three numbers. The user shall be given a choice to find their sum, average or the largest number. Use separate functions to do these operations. | (5) |
| 5 | Explain with the help of an example, how a variable can be accessed through a chain of pointers in 'C'.  | (5) |
| 6 | Write a 'C' program to check if a number is prime or not using pointers.   | (5) |
| 7 | Explain any three control statements in Python.  | (5) |
| 8 | Write a Python program to find the factorial of a number.  | (5) |

**PART B***Answer any two full questions, each carries 10 marks.*

- |    |   |     |
|----|---|-----|
| 9  | a) Draw a flowchart to print all leap years between 1900 and 2021.                    | (5) |
|    | b) Differentiate between compilers and assemblers.                                    | (5) |
| 10 | a) Write any five types of operators in 'C'.  | (5) |
|    | b) Write a 'C' program to check whether a given number is palindrome.                 | (5) |
| 11 | a) Explain 'go-to' and 'label' in 'C' with the help of an example.                    | (5) |
|    | b) Write a 'C' program to display all characters from A to Z using a 'do-while' loop. | (5) |

**PART C**

*Answer any two full questions, each carries 10 marks.*

- 12 a) Write a 'C' program to find the largest element in each row of a matrix. (5)  
b) Write a 'C' program to make a simple calculator using 'switch-case' statement. (5)
- 13 a) Write a 'C' program to concatenate two strings without using string handling functions. (5)  
b) Differentiate between 'pass-by-value' and 'pass-by-reference' in 'C' with the help of examples. (5)
- 14 a) Write a 'C' program to find the LCM of two numbers using recursive function (5)  
b) Differentiate between 'auto' and 'register' storage classes in 'C' with the help of examples. (5)

**PART D**

*Answer any two full questions, each carries 10 marks.*

- 15 Write a 'C' program using 'structures' to accept the name, register number and marks for three subjects of students in a class. Print the name and register number of students in the order of total marks scored. (10)
- 16 a) Write a 'C' program to find the largest element in an array, using pointers. (5)  
b) Write a 'C' program to open a file named 'numbers' and enter some numbers in it. (5)  
Now open another file called 'even' and transfer the even numbers in the file 'numbers' to it.
- 17 a) Explain how random access in files can be done in 'C'. (5)  
b) Write a Python program to find the factors of a number. (5)

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