

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

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

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**FOURTH SEMESTER B.TECH DEGREE EXAMINATION(S), DECEMBER 2019**

**Course Code: AE202**

**Course Name: COMPUTER PROGRAMMING**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer any two full questions. Each question carries 15 marks*

- 1 a) Write an algorithm and draw a flowchart to display all odd numbers from 1 to N. 4
- b) Explain different classes of datatypes in C. 5
- c) Write a program in C to find largest among three numbers. 6
- 2 a) Compare compiler and interpreter 3
- b) List the rules for defining identifiers in C. 4
- c) Explain the use and working of switch statement in C. Write a program in C to read week day number and display corresponding day name using switch. 8
- 3 a) Explain the operators ++, --, += and ?: in C 4
- b) Write a C program to reverse a given number. 7
- c) Compare break and continue with proper example. 4

**PART B**

*Answer any two full questions. Each question carries 15 marks*

- 4 a) How do you declare and initialize a one dimensional array in C? Write a C program to perform binary search on an array 7
- b) Differentiate between structure and union. Write a program in C to read and display details of students in a class using structure array. 8
- 5 a) Explain different parameter passing mechanisms in C with examples. 8
- b) Explain how dynamic memory allocation is done in C with examples. 7
- 6 a) Explain recursion with an example 5
- b) What are pointer variables in C? Write a C program to increment all elements of an array by one using pointers. 10

**PART C**

*Answer any two full questions. Each question carries 20 marks*

- 7 a) Compare the usage of for loop in C and Python. Write a program in Python to find the factorial of a number 10
- b) Explain different String methods. 4

- c) Assume that the variable **data** refers to the string "myprogram.exe". Write the values of following expression. 6
- a) data[2]
  - b) data[-1]
  - c) len(data)
  - d) data[0 : 8]
- 8 a) Explain the usage of while loop in Python. Write a program that receives a series of numbers from user and print the sum and average of these numbers. 10
- b) Write a Python program to find factorial of a number using recursive function. 5
- c) Write a Python program to find largest and smallest number in a List of integers. 5
- 9 a) Write a Python program to calculate area of a circle. 3
- b) What are different type conversion functions used in Python? Explain with proper examples. 3
- c) Explain how multiway selection is done in Python with an example. 4
- d) What is Dictionary in Python? Explain different Dictionary methods with examples. 10