

Reg No.: _____

Name: _____

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

Course Code: AE202

Course Name: COMPUTER PROGRAMMING (AE)

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions. Each question carries 15 marks

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|---|----|---|---|
| 1 | a) | What is a compiler? How does it differ from an interpreter? | 5 |
| | b) | Write a C program to find the roots of a quadratic equation | 5 |
| | c) | Draw a flowchart to find the sum of digits of an integer. | 5 |
| 2 | a) | Explain switch and goto statements in C with suitable examples | 5 |
| | b) | Write a C program to enter a 3 digit number and print it in reverse. | 6 |
| | c) | Define 1). Loader 2). Linker. | 4 |
| 3 | a) | Differentiate between ++i and i++ with help of examples | 5 |
| | b) | Draw the flowchart of a switch statement. Write a C program to print the days of a week using switch statement. | 6 |
| | c) | Compare while and do_ while loops with proper examples | 4 |

PART B

Answer any two full questions. Each question carries 15 marks

- | | | | |
|---|----|--|---|
| 4 | a) | Write with suitable examples 1).Array declaration 2). Array initialization | 5 |
| | b) | Write a C program to sort an array using selection sort | 6 |
| | c) | What is user defined functions? Explain with an example. | 4 |
| 5 | a) | Explain dynamic memory allocation in C. | 6 |
| | b) | Write a C program to swap the values of two variables using pointer. | 5 |
| | c) | Write a C program to find the transpose of a matrix | 4 |
| 6 | a) | Compare structure and union | 4 |
| | b) | What are enumerated data types? Write a program to create enumerated data type for 12 months | 6 |

- c) Write a C program to find the factorial of a number using recursion. 5

PART C

Answer any two full questions. Each question carries 20 marks

- 7 a) Compare the use of different loops in Python with C? 8
- b) Write a python program to read a number and display whether it is positive or negative or zero. 6
- c) What are the operators used in python explain with examples 6
- 8 a) Explain, recursion in python with a suitable example 7
- b) Explain Dictionary in python with example 7
- c) Write a python program to check whether the given year is leap year or not. 6
- 9 a) What is tuple in python? What is the difference between list and tuple? 6
- b) Write a python program to check whether the given number is prime or not. 6
- c) Explain how exceptions are handled in python. Illustrate with examples 8