

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

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

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**THIRD SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018**

**Course Code: EE207**

**Course Name: COMPUTER PROGRAMMING (EE)**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 5 marks*

Marks

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|---|--|-----|
| 1 | What are the advantages of High Level languages? How a high-level language is converted to Machine language?   | (5) |
| 2 | With suitable example differentiate between <i>while ()</i> and <i>do....while ()</i> statements.  | (5) |
| 3 | Write a program to read an array of integers and search for the occurrence of a given value.   | (5) |
| 4 | What is recursion? Write a recursive function to find factorial of a number  | (5) |
| 5 | Which arithmetic operations are possible with pointers? Illustrate with suitable example.  | (5) |
| 6 | Define and explain a structure to store Roll no, Name, marks for three subjects of a group of 25 students. Write a program to read the data and print the same as a table. | (5) |
| 7 | How is a file pointer declared? What are the different modes of opening a file? Explain with one simple example.   | (5) |
| 8 | Differentiate between <i>for</i> and <i>while</i> loops in Python with examples.   | (5) |

**PART B**

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

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|----|--|------|
| 9  | Write an algorithm and draw flow chart for finding the Average mark for one subject in a class of 50 students. | (10) |
| 10 | a) Which are the basic data types in C language? How much memory is allocated for each?                        | (5)  |
|    | b) Write a program to swap two numbers without third variable.   | (5)  |
| 11 | a) Find the reverse of a number using loop statement.  | (5)  |
|    | b) Write a program to print first 10 numbers of Fibonacci series.  | (5)  |

**PART C**

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

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|----|---|-----|
| 12 | a) What are the differences between Auto and Extern variables? Explain with example.  | (4) |
|    | b) Write a program for multiplication of two matrices.  | (6) |
| 13 | a) Write a program to reverse a string without using string function.   | (4) |
|    | b) With suitable example, explain any three string manipulating functions in header file 'string.h'.  | (6) |
| 14 | a) Differentiate between 'register' and 'static' storage classes with examples.   | (3) |
|    | b) Write a program to prepare a rank list based on marks for five subjects, using three separate functions to read the marks, prepare rank list and print the same. | (7) |

**PART D**

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

- 15 a) With an example each, state the differences between structure and union. (4)  
b) Write a C program using pointers to sort an array of integers by calling a function. (6)
- 16 a) Distinguish between address stored in the pointer and value in that address. How does one pointer point to another pointer? Explain with examples. (3)  
b) Write a C program to store Roll No, Name and Marks for five subjects of class of 50 students to a file named "Student\_data". Based on the data read from this file, prepare a rank list and write into another file "Rank\_list". (7)
- 17 a) Enumerate any three major differences between C and Python. (3)  
b) Write a program to add and subtract two matrices using Python. (7)

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