

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

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

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

**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 for printing all odd numbers between 10 and 50.                      | (5)   |
| 2 | With the help of an example, explain the use of continue statement.                     | (5)   |
| 3 | Write a C program to find the median of $n$ integers stored in an array                 | (5)   |
| 4 | Using an example, explain the concept of recursion.                                     | (5)   |
| 5 | Using pointers, write a C program to arrange the letters of a word in alphabetic order. | (5)   |
| 6 | What are unions? How are they different from structures?                                | (5)   |
| 7 | Write a C program to append the contents of one file to another file.                   | (5)   |
| 8 | Write a Python program to check if the given string is a palindrome or not.             | (5)   |

**PART B**

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

- |    |   |     |
|----|---|-----|
| 9  | a) What are pre-processor directives? Give examples.  | (4) |
|    | b) Draw a flow chart to determine sum of digits of an integer.  | (6) |
| 10 | a) Differentiate between relational and logical operators in C  | (4) |
|    | b) Write a C program to find the age of a person in years, months and days if his date of birth is entered. | (6) |
| 11 | a) What is the purpose of go to statement? Give an example.   | (4) |
|    | b) Write a program to compute the sum of the series $1 + x^2 + x^3 + x^4 + \dots + x^n$                     | (6) |

**PART C**

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

- |    |   |     |
|----|---|-----|
| 12 | a) What are arrays? How are they advantageous when compared with normal variables?  | (4) |
|    | b) Write a C program to find the product of two matrices.   | (6) |
| 13 | a) Write a C program to count the number of words, vowels and consonants in a sentence entered by the user.   | (5) |
|    | b) Using a function write a C program to find the binary equivalent of an integer.  | (5) |
| 14 | a) Describe the various storage classes in C.   | (4) |
|    | b) Write a C program to find the largest element of each row of an $m \times n$ matrix and place it in the 1 <sup>st</sup> column of the corresponding row. Use function. | (6) |

**PART D**

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

- 15 a) What is chain of pointers? Illustrate using an example. (4)
- b) Define a structure Employee with employee number, name and experience as members. Write a C program to print a list of all employees (from amongst 100 employees) having more than 3 years of experience. (6)
- 16 a) Write a C program using pointers to find the difference of two matrices A and B. (5)
- b) A file contains students' records with roll number, name and mark. Write a program to read the contents of the file and display them. (5)
- 17 a) Differentiate between fscanf() and scanf() functions (2)
- b) Describe the fopen(), fclose(), fseek() and ftell() functions (4)
- c) Write a Python program using function to search for an element in an array. (4)

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