



Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S2 (R,S) Examinations April 2026 (2024 Scheme)

Course Code: GXEST204

Course Name: PROGRAMMING IN C

Max. Marks: 60

Duration: 2 hours 30 minutes

PART A

(Answer all questions. Each question carries 3 marks)

CO Marks

- | | | | |
|---|--|-----|-----|
| 1 | Differentiate between 'break' and 'continue' statements. | CO1 | (3) |
| 2 | What will be the output of the following C program? Justify your answer. | CO1 | (3) |

```
#include <stdio.h>
int main() {
    int a = 2;
    switch(a) {
        case 1: printf("One ");
        case 2: printf("Two ");
        case 3: printf("Three ");
        default: printf("Default");
    }
    return 0;
}
```

- | | | | |
|---|---|-----|-----|
| 3 | Explain any 3 string handling functions using examples. | CO2 | (3) |
| 4 | Fix the logical error in the code given below. Correct the error and justify your answer. | CO2 | (3) |

```
for (i = 0; i < n; i++) {
    for (j = 0; j < n; j++) {
        if (arr[j] > arr[j+1]) {
            temp = arr[j];
```

```

arr[j] = arr[j+1];
arr[j+1] = temp;
}
}
}

```

- 5 Name the different types of parameter passing. Illustrate each of them with an example. CO3 (3)
- 6 Define a macro to calculate the cube of a number. How does a macro differ from a function? CO3 (3)
- 7 Explain the use of fseek() function. CO4 (3)
- 8 What is the difference between a pointer and a normal variable? CO4 (3)

PART B

(Answer any one full question from each module, each question carries 9 marks)

Module -1

- 9 a) Discuss the different types of operators in C, including bitwise operators. Illustrate your answer with examples showing operator precedence. CO1 5
- b) Describe the different data types available in C. Give examples for each type. CO1 4
- 10 a) Explain the difference between =, ==, and != operators in C. CO1 3
- b) Design a menu-driven C program using switch for simple banking operations like deposit, withdraw, and check balance. Explain how default cases can handle invalid menu choices. CO1 6

Module -2

- 11 a) Write a C program to check whether a string is palindrome or not without using string handling functions. CO2 5
- b) Write a C program to find the transpose of a matrix. CO2 4
- 12 a) Write a C program to accept a two-dimensional matrix and display the row sum, column sum and diagonal sum of elements. CO2 5
- b) Give the differences between while and do-while statement. CO2 4

Module -3

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- 13 a) What is the purpose of function declaration, function definition and function call? With examples illustrate their syntax. CO3 4
- b) What are different storage classes in C? Give examples for each. CO3 5
- 14 a) What are the main differences between structures and unions? Which is preferred in what situation? Give examples. CO3 4
- b) Write a C program to define a structure Student with fields: name, roll number, and marks in 3 subjects. Accept the details of 5 students and find the student with the highest total marks. CO3 5

Module -4

- 15 a) Write a C program to print the elements of an array in reverse order using pointers. CO4 5
- b) Write a C program to open an existing file, notes.txt in append mode. Add a new line of text entered by the user-and close the file after writing. CO4 4
- 16 a) Describe how dynamic memory allocation is done using pointers. Explain malloc(), calloc(), realloc(), and free() functions. CO4 5
- b) Write a program in C to copy the contents of-one file into another. CO4 4
