



C20-EE-306

7250

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2024

DEEE – THIRD SEMESTER EXAMINATION

PROGRAMMING IN C

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define the terms variable and constant.
2. Give the syntax and purpose of scanf() statement.
3. List the operators of c used for addition, multiplication and division.
4. Differentiate 'break' from 'continue'.
5. Define a string and give an example.
6. How do you declare an array to store integers in 5 rows and 3 columns?
7. Explain function prototype with an example.
8. List the types of functions based on parameters and return values.
9. Declare a structure with 5 members out of which two are integers and one is a string and other two are float.
10. State the importance of #define directive.

PART—B

8×5=40

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Write a C program to find the roots of a quadratic equation.

(OR)

(b) Explain all logical operators and their precedence.

12. (a) Explain the working of switch-case with syntax and an example program.

(OR)

(b) Write a program in C to print all odd numbers between 10 and N using do-while loop.

13. (a) Write a C program to declare, initialize an array with 5 elements and to find the average of them.

(OR)

(b) Write a C program to find the transpose of a matrix of order N×N.

14. (a) Write a C program using an user defined function to find the area of a circle using with parameters and with no return values.

(OR)

(b) Write a C program using static and auto variables.

15. (a) Write a C program to make use of array of structures.

(OR)

(b) Illustrate with example how pointer can be used to realize the effect of parameter passing by reference to exchange two values.

PART—C

10×1=10

- Instructions :**
- (1) Answer the following question.
 - (2) The question carries **ten** marks.
 - (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** You are required to read the EMPNO, EMPNAME, SALARY for 100 employees. For each employee you need to calculate an increment of 10% on their salary. Each employee assigned a Grade based on increment GARDEA or GRADEB. GARDEA is assigned to all the employees whose increment is above 2000 and for all others the grade is GRADEB. Write the respective C program to read, process and print individual employee data one after the other by using some or all features among arrays, structures, and pointers. Justify your choice of selection of features among the above three features.

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