

Diploma Board Examination – February 2022

Course: Diploma in Computer Engineering.

Subject : C Programming and Data Structures.

QP Code: 160

Time: 3 Hours

Sub Code: 4052330

Max. Marks: 100

*[N.B: (1) Answer all 10 Questions in PART A and each question carries 3 Marks.
(2) Answer division (a) or division (b) of each question in PART B and each question carries 14 marks.]*

PART – A

1. Define symbolic constant.
2. Write bitwise operator and conditional operator.
3. Write short notes on goto statement.
4. Mention standard I/O functions.
5. What is the use of argc?
6. Write any two advantages of dynamic memory allocation.
7. What are the different types of data structures?
8. Define polish notations.
9. What is a null pointer?
10. What is a leaf node?

PART – B

11. (a) Explain the execution of a C program with the help of a diagrammatic representation.

(Or)

- (b) Explain the following operators with example.
 - (i) Assignment
 - (ii) Increment and decrement
 - (iii) Conditional
 - (iv) Comma, size of () operator.

[Turn over.....]

12. (a) (i) Explain "for" statement with syntax and an example.
(ii) How does "switch" statement differ from "if" statement?
Give example.

(Or)

- (b) (i) Write a program to read a list of n elements and find the minimum number using an array.
(ii) Write a program using the function power (a,b) to calculate the value of a raised to b.

13. (a) Explain structure with definition, initialization, accessing and giving values to structures.

(Or)

- (b) Explain arg V and arg C arguments.

14. (a) Explain the different approaches for designing an algorithm.

(Or)

- (b) Explain conversion of infix to postfix expression.

15. (a) (i) State the difference between linked & sequential list.
(ii) What are the advantages and disadvantages of linked list?

(Or)

- (b) Write short notes on (i)Depth / Height of a tree (ii)In-degree and out-degree (iii)Siblings.
