

ES202

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8. (a) Write a program in C to Concatenate two strings without using `strcat()` function.
- (b) Differentiate between structure and union.

SECTION - C (16 Marks)
(Compulsory)

9. (a) Write a program in C to rearrange an array such that even index elements are smaller and odd index element are greater than their next. Expected output:

If the array given is 642183

The new array after rearranging 461823

- (b) write a C program to display the following pattern

```

      1
    1 2 1
  1 2 3 2 1
1 2 3 4 3 2 1

```

(1800)

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Enrol. No.

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END SEMESTER EXAMINATION : JAN-2023

**INTRODUCTION TO COMPUTERS AND
PROGRAMMING IN C**

Time : 3 Hrs.

Maximum Marks : 60

Note: Attempt questions from all sections as directed.

SECTION - A (24 Marks)

Attempt any four questions out of five.

Each question carries 06 marks.

1. What is the function of Storage unit of a computer System? How many types of Storage are there in a storage unit? Justify the need of each storage.
2. Design and develop a C program to reverse of an integer number NUM and check whether it is PALINDROME or NOT.

P.T.O.

3. Give Suitable example to differentiate between the following:

- (a) while and do-while loop
- (b) break and continue

4. (a) $(0110110.1100)_2 = 0_8$

(b) $(74.67)_{10} = ()_{16}$

(c) $(EFE.45)_{16} = ()_2$

(d) $(7.12172)_8$ to $()_{10}$

(e) $(479.36)_{10}$ to $()_2$

(f) $(124.05)_8 = ()_2$

5. Explain the difference between parameter passing mechanism_call by value and call by reference. Which is more efficient and why?

SECTION - B (20 Marks)

Attempt any **two** questions out of **three**.

Each question carries **10 marks**.

6. Write a C function `isprime(num)` that accepts an integer argument and returns 1 if the argument is prime, a 0 otherwise. Write a C program that invokes this function to generate prime numbers between the given ranges.

7. Write a program in C to search an element 'x' in an array of n elements.

if the element present in the list it should display the following message:

element 'x' is present 'm'times at location 'i','j','k'....

if the element not present in the list it would display the following message element x is not present in the list