IT 302 - Advanced C Programming and Logic Design

P. Pages : 2

GUG/W/16/3769

Time : Three Hours

‖‖‖‖‖‖‖‖‖‖‖
3619

Max. Marks : 80

_____

Notes : 1.   All questions carry equal marks.
2.   Illustrate your answers wherever necessary with the help of neat sketches.
3.   Due credit will be given to neatness and adequate dimensions.
4.   Assume suitable data wherever necessary.

1. a) Explain what is logic? Write a C program to check number entered is palindrome or not? **8**

b) Explain different data types in C? Write a C program to check number entered is prime or not? **8**

OR

2. a) Explain what is pseudocode? Write a pseudocode to solve the roots of quadratic equation? **8**

b) What is armstrong number? Write a C program to check number entered is armstrong or not? Show your mathematical calculation? **8**

3. a) What is menu driven programming? Write a C program to design the following menu. **10**
1.   no. is prime or not.
2.   no. is armstrong or not.
3.   factorial of a no.
4.   no. is even or not
5.   exit.

b) Explain ternary operators along with a suitable line of code? **6**

OR

4. a) Explain nested for loop? Write a C program to find the prime factorials of a number? **8**

b) Write a C program to produce following output? **8**

```
i)   *                        ii)  1
     *   *                         2   4
     *   *   *                     3   6   9
     *   *   *   *                 4   8   12   16
```

5. a) Explain call by value and call by reference? **8**

b) Modularize a C program to calculate sum of a sine series. **8**

OR

6. a) Explain what is pointer? Prove how we can return a two value at a time using pointer? **8**

b) Find GCD of two numbers using function? Explain euclids algorithm. **8**

| **7.** | a) | Write a C program to find transpose of a matrix? | **8** |
| | b) | Write a C program to sort an array using bubble sort? | **8** |

OR

8.	a)	Write a C code to search an element in an array by using binary search?	**8**
	b)	Write a C function to modify an array elements by multiplying them by 3?	**8**
9.	a)	Write a C program to concatenate two files use command line arguments?	**8**
	b)	What is array of structure? Write a C program to display information of 30 employees?	**8**

OR

10.	a)	Write a program to store every character typed at keyboard into a file. The process should come to an end as soon as ~ character is bit from k/b?	**8**
	b)	Write a program in C to copy out following.	**8**
		i) Read a text file 'INPUT. TXT'.	
		ii) Print each word in reverse order.	

****