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1 (Sem - 1) COA

**2023**

**FUNDAMENTALS OF COMPUTER  
AND PROGRAMMING**

Paper : COA0100404

Full Marks : 45

Time : 2 hours

***The figures in the margin indicate  
full marks for the questions.***

1. Answer the following questions: 1×5=5
- A. “stdio.h” is a—
- (i) Header file
  - (ii) Library function
  - (iii) Preprocessor directive
  - (iv) None of these
- B. What is algorithm?
- C. Which of the following is not a high level language?
- (i) C
  - (ii) Java
  - (iii) Python
  - (iv) Assembly

Contd.

D. What will be the output of the following C program ?

```
#include <stdio.h>
void main()
{
    int i;
    for(i=1;i<=4;i++)
    {
        printf("%d\t",i);
        i++;
    }
}
```

(i) 1 2 3 4

(ii) 1 2 3

(iii) 1 3

(iv) 2 3 4 1

E. What is RJ 45 Connectors ?

2. Answer **any five** questions from the following : 2×5=10

A. What is array in C ? Give examples of one dimensional array and two dimensional array declarations in C.

B. What is disk Defragmentation ?

C. Write the difference between `i++` and `++i` in C.

D. Write the use of *break* and *continue* statements in C.

E. What is cache memory ?

F. Write the difference between RAM and ROM.

G. Mention the logical operators available in C.

H. Write the full form of BCD and ASCII code.

I. Write the syntax of *if* and *if-else* statements in C.

J. What is the use of *strcmp()* and *strlen()* functions in C.

3. Answer **any four** questions from the following :

A. What is file system ? Briefly explain different types of file systems. 1+4=5

B. What are different data types available in C ? Explain each of these data types with examples. 1+4=5

C. Write the prototype of function declaration in C. Write about different parameter passing methods available for a function in C. 5

- D. Convert the term 10456 into binary. Also convert the term 1001101 into decimal. 5
- F. Write the difference between *while* and *do-while* statements with examples. 5
- G. Draw a flow chart to find the maximum of N input numbers. 5
- H. Define the terms— 5  
 (i) Variable (ii) Compiler (iii) SMPS  
 (iv) Pointer in C (v) Operating System
4. Answer **any one** question from the following :
- A. Briefly explain the major components of a computer. 10
- B. Write about different storage classes available in C? 10
- C. Write a program in C to print the summation of first N natural numbers, where N is inputted by the user. 10
- D. Write a program in C to check whether an input number is prime or not. 10
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