Question Paper Code : X 60639

B.E./B.Tech. DEGREE EXAMINATIONS, NOV./DEC. 2020

First Semester

Civil Engineering

GE 2112/CS 16/080230001 – FUNDAMENTALS OF COMPUTING AND PROGRAMMING

(Common to all Branches)

(Regulations 2008)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions.

PART – A   **(10×2=20 Marks)**

1. Give the classification of computers.

2. Convert the $(756)_{10}$ to octal and hexa decimal.

3. List any two types of software.

4. Define Internet.

5. What is an algorithm ?

6. What are the advantages of flowchart ?

7. What do you mean by 'C' Tokens ?

8. What does the following fragment print ?

```
for (int i = 0; i < 10; i + +)
{
        if !(i%2)) continue;
        printf("%d\t", i);
}
```

9. What is the need for user defined functions ?

10. What are the advantages of unions over structures ?

PART – B   **(5×16=80 Marks)**

11. a) i) Explain the various generations of computers.   **(10)**

    ii) Briefly explain the characteristics of a computer.   **(6)**

                    (OR)

    b) i) Draw the block diagram of a computer and explain.   **(10)**

    ii) Convert the decimal number 698.125 into the binary and octal
        equivalent.   **(6)**

12. a) Explain the steps of software developments with suitable examples. **(16)**

(OR)

   b) i) Discuss the following internet terminologies.

      1) Bandwidth

      2) FTP

      3) IP Address

      4) Modem. **(8)**

     ii) Write some of the internet applications. **(8)**

13. a) i) Explain guidelines for preparing flowcharts, benefits and limitation of flowcharts. **(8)**

     ii) Write an algorithm for finding sum and average of n numbers. Also state the properties of a good algorithm. **(8)**

(OR)

   b) What is pseudo code ? How does it differ from flowchart ? Write a pseudo code to add up all the even numbers between 0 and 100 and print the result ? **(16)**

14. a) What are the categories of operators in 'C' ? Discuss any two operators with suitable programs. **(16)**

(OR)

   b) i) Write a 'C' program to generate Fibonacci series for a given number. **(8)**

     ii) Write a 'C' program to find a factorial of a given number. **(8)**

15. a) i) Write a C program to reverse a given string. **(8)**

     ii) Differentiate pass by value and pass by address in C. **(8)**

(OR)

   b) Explain the following with an example program :

     i) Declaring a structure. **(5)**

     ii) Pointer to multi dimensional array. **(6)**

     iii) Union. **(5)**

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