B.Tech. 1st **Semester Mid Term Examination- 2021** Name of Subject: **Introduction to Programming**

Paper Code: UCS12B01

Full Marks: 20 Time: 1 Hour

All questions are compulsory

PART-A (Total Marks:10)

(10*1 = 10 marks)

- 1. What do we mean by a variable and a constant? What is a difference between a declaration and a definition of a variable?
- 2. Find $(5B2C.2AB)_{16} = (?)_{10} = (?)_2$ and $(32)_{10} (42)_{10}$ using 2's complement.
- 3. What are the features of micro and mini computer?
- 4. What is the importance of flowchart in a C program? What do you mean by debugging?
- 5. Explain bit-wise operator in C programming. What are the advantages of 2's complement over sign-magnitude representation?
- 6. What is character constant? How does numeric constant differ from character constant?
- 7. What is the use of format specifier? What are the limitations of the switch case statement?
- 8. What is machine language? How does it differ from high-level language?
- 9. What are the general characteristics of C language? What is the library function to display a statement and that is under which header file?
- 10. What is an assignment statement? What is the relationship between assignment and expression statement?

Part B: (Total Marks:10)

(10*1=10)

1. What will be the output of the following program segments:

```
void main()
{
  int x = 0;
  if (x == 0)
  printf("hi");
  else
  printf("how are u");
  printf("hello");
}
  a. hi b. how are you c. hello d. hihello
```

- 2. Before C source code is compiled it is passed through another program called
 - a. Processor
 - b. Preprocessor
 - c. Interceptor
 - d. interpreter
- 3. In the given loop construct, which one is executed only once always? for(exp1; exp2; exp3)
 - a. exp1
 - b. exp3
 - c. exp1 and exp3
 - d. exp1, exp2 and exp3
- 4. The continue statement cannot be used with
 - a. For b. while
- 5. Which loop is guaranteed to execute at least one time
 - a. For
- b. while
- c. do-while

c. do-while

d. None

d. switch

```
6. Find the output
             main()
             {
                     char str[20] = "ABCDEFGHIJK";
                     int s = strlen(str);
                     str[3] = '\0';
                     s = strlen(str);
                     printf("%d\n",s);
             }
                                                                         d. 11
           3
                                b. 5
                                                     c. 7
        a.
7. Find the output
             main()
                    {
                     int x=5,y=0,z;
                     while(x>=0)
                     {
                     if(x==y)
                       break;
                     else
             printf("%d%d,",x,y);
                     x--;
                     y++; } }
        a.
               50,32,14,
                                  50,41,32,23,14,
                                                           50,41,32,23,14,05,
                             b.
                                                     c.
                                                                                    None
8. Find the output
                     main()
                     if(printf("NITA"))
                     printf ("I know c");
                     else
                     printf("I know c++");
                               b. I know c
                                                 c. NITAI know c++
                                                                               d. NITAI know c
         a. I know c++
9. Find the output
                     main()
                      {
                     int a=0,b=0,c=0;
                     a=++b+++c;
                     printf("%d%d%d", a,b,c);
                     a=b++ +c++;
                     printf("%d%d%d", a,b,c);
                     }
                     a.112222
                                             b. 211222
                                                                c. 211122
                                                                                      d. 221122
10. Which of the following is a valid identifier?
        a. $tax
                           b. tax1
                                                                                  d. return
                                                   c. 1tax
```