JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION- February-2022
B.Tech IV Semester

COURSE CODE: 18B11BI414   MAX. MARKS:15
COURSE NAME: Programming Language for BI
COURSE CREDITS: 03   MAX. TIME: 1 Hours

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. In mathematics, the gamma function is defined as

$$\Gamma(n+1) = n\,\Gamma(n) \qquad \forall\, n > 1$$
$$\text{and } \Gamma(1) = 1 \qquad \text{if } n = 1$$

For example $\Gamma(5) = 24$ and $\Gamma(4) = 6$.
Write a program to calculate the gamma function of a number entered by the user in C.   [3]

2. Differentiate between call by value and call by reference method of function calling.   [2]

3. If the ages of Ram, Shyam and Ajay are input by user through the keyboard, write a program in perl to determine the youngest among them.   [3]

4. What is the difference between while and do-while loop in C.   [2]

5. Evaluate the following expression step by step and find the value of x   [2]

$$\$x = 4*7 - 6/2*9\%4 + 4**2$$

6. What would be the output of the following programs?   [3]
a)
```c
#include <stdio.h>

void main( ) {
    int i = 5, j = 2 ;
    junk ( &i, &j ) ;
    printf ( "\n%d %d", i, j ) ;
}
junk ( int *i, int *j ) {
    *i = *i * *i ;
    *j = *j * *j ;
}
```

b)
```perl
#!/usr/bin/perl
$num=10;
print "value of num is $num\n";
print 'value of num is $num\n';
```

c)
```perl
#!/usr/bin/perl
$name="kapil";
$num = $name x 3;
print "value of num is $num\n";
```