Dr Ruchi Verma

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -3 EXAMINATION- DEC 2017
B.Tech1st Semester

COURSE CODE: 13B21CI121 MAX. MARKS: 35
COURSE NAME: Introduction to Computers and Basic Programming
COURSE CREDITS: 4 MAX. TIME: 2 Hrs

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

1.Write a program to find the average of six numbers with arrays and pointers. (3.5 marks)

2. Write a program to declare int variables x and y and int* pointer variables p and q. Set x to 2, y to 8, p to the address of x, and q to the address of y. (3.5 marks)

Then print the following information.

a. The address of x and the value of x.
b. The value of p and the value of *p.
c. The address of y and the value of y.
d. The value of q and the value of *q.
e. The address of p
f. The address of q

3. Write a program to declare a structure student_college_detail , inside a structure Student detail. Store and display the records of 500 students. The records should store the college id, college name, student id, student name and cgpa of the student. (3.5marks)

4. Write a program to count the vowels, consonants, digits and spaces in a string. (3.5 marks)

5. What do you understand by call by value and call by reference in functions. Explain the difference between them with an example for each. (4 marks)

6. Write a program to read weekday number and print weekday name using switch case. (3.5 marks)

7. Write a program to accept a string and display its alternate characters. (3.5 marks)

(2 marks each)

8. What will be the output of the following code:

(i)
```
int main() {
    int data[5], i;
    printf("Enter elements: ");
    for(i = 0; i < 5; ++i)
     scanf("%d", data + i);

    printf("You entered: \n");
    for(i = 0; i < 5; ++i)
      printf("%d\n", *(data + i));

      return 0;
    }
```

(ii)
```
#include <stdio.h>

    void main()
    {
     char*s="hello"
     char *p=s;
     print ("%c %c",*(p+3),s[1]);
     }
```

(iii)
```
#include <stdio.h>

     void foo(float *);
     int main()
     {
      int i = 10, *p = &i;
      foo(&i);
     }
     void foo(float *p)
     {
      printf("%f\n", *p);
      }
```

(iv)
```
#include <stdio.h>

    void main()
    {
     char *ch;
     printf("enter a value btw 1 to
     3:");
     scanf("%s", ch);
     switch (ch)
     {
     case "1":
        printf("1");
        break;
     case "2":
        printf("2");
        break;}
```

(v)
```
#include <stdio.h>

    void main()
    {
      int x = 5;
      if (x < 1)
         printf("hello");
      if (x == 5)
         printf("hi");
      else
         printf("no");
    }
```