TUTORIAL – 2: Review of C Concepts

Class: III sem ' '   **Subject:** Data Structures(**3**CCI02)

Answer the following Questions:
1. Find out the errors if any in each of the following expressions:

   i) int x=5;   ii) int *x=5;   iii) int a;
                                                                                       int

   **p=&a;

  iv) int *x;   v) int *x;   vi) int a;
    scanf("%d",&x);   scanf("%d",&*x);   int *x=&a;

    scanf("%d",x);

2. Declare and define the following:
  i) A pointer variable ip pointing to an integer.
  ii) A pointer variable ipp pointing to a pointer to an integer.
  iii) A pointer variable fp pointing to a float.
  iv) A pointer variable cpp pointing to a pointer to a pointer to a character.

3. Write the sequence of scanf( ) statements to read the data to an
    integer variable *n*
  using variables p, q, r given in the following declarations:
      int n;
      int *p;
      int * * q;
      int * * * r;

4. Fill in the blanks in the following:
  i) Pointer variables are declared using _____ operator.
  ii) The pointer that is declared as _____ cannot be de-referenced.
  iii) _____ is a term used to describe pointers whose contents are the
    address of another pointer.

5. What will be the output of the following programs?

a) main( )
  {
    int i;
    *&i=10;
    printf("%d",i);
  }

b) #define STR "Data Structures"
  main( )
  {
    char *p=STR;
    printf("%s",p);
  }

4.   main( )
    {
        char *ptr = "SC Systems";
  ptr++;
  printf("%s\n",ptr);
      ptr++;

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    printf("%s\n",ptr);
  }
  6.    main( )
     {
        int *p="Hello";
        int *z=p;
printf("%s . . .",p);
printf("%s",z);
7.    main( )
     {
         int i=100,j=10,k;
         int *p=&j;
        k=i/(*p);
        printf("%d",k);
      }
```