

1 i) What is the output of the following program? (Marks will be awarded if

Explanation is given otherwise not)

a) main()

```
{ int k = 3;
  switch(k)
  { default : k += 2;
    case 4 : k =14;
    case 5: --k;
  }
cout << k;}
```

b) main()

```
{ char *s1 = "ABCDE"; char *s2 = "AB";
while(*s1 == *s2)
{ if (*s1 == '\0' || *s2 == '\0') break; s1++; s2++;}
if(*s2 == '\0') cout<<"ABC" ; else cout <<"XYZ"; }
```

c) main()

```
{ int i , a[] = {34, 56, 78, 89, 90};
for ( i=0; i <=4 ; i++)
{ if (i) continue ; else cout << a[i];}
}
```

ii) Is there any difference between expression "`*p++`" and "`++*p`"? Explain with example.

iii) How syntax error is different from logical error? Explain with example.

iv) Given the following declarations and statements:

```
int i , x[5] , *xpoint ; xpoint = x;
```

Make the two groups of the following expression which mean the same thing.

`x + i`

`xpoint + i`

`&x[i]`

`*(x + i)`

`*( xpoint + i)`

`x[i]`

2 A) Define & explain

a) System Software

b) Secondary memory

	<p>c) Structured Programming</p> <p>B) Explain using a suitable example</p> <p>a) Preprocessor Directive</p> <p>b) Recursion</p> <p>c) Arithmetic operators</p>
3	<p>Differentiate Between the following with appropriate examples</p> <p>a) local and global variables</p> <p>b) single and multidimensional arrays</p> <p>c) structure and union</p>
4	<p>a) Write a program to print all the prime numbers between two given numbers.</p> <p>b) Write a program to delete all occurrences of the string 'are' in a given text of 80 characters. Also print the modified string.</p> <p>c) Design a structure named student to store data about a student which contains elements RollNo, Name, College and Score. Use Functions and write a well documented program to input the data about the students and output the stored data according to the merit of the students.</p>
5	<p>a) Write a program to copy the contents of one text file into another text file in reverse order. For example if abc.txt contains "hello, how are you" Then the file xyz.txt should contain "uoy era who, olleh" .</p> <p>b) Suppose in the year 1975, the population of cities A and B is 70,000 &amp; 1,00,000 respectively. If the population of the cities A and B increase at a rate of 6 and 4 percent respectively Write a program to find the year in which the population of city A will exceed the population of city B. Use Do-while Loop.</p>
6	<p>How the following concepts are implemented in C++. Give examples.</p> <p>a) Encapsulation</p> <p>b) Constructors</p> <p>c) Function overriding</p>
7	<p>Write short notes on the following with examples</p> <p>a) Function overloading</p> <p>b) Inheritance</p> <p>c) Friend functions</p>