SESSION ENDING Examination (2014-2015)
COMPUTER SCIENCE
Class – XI

Time allowed: 3 hours M M: 70

General Instructions:

a) All the questions are compulsory.

b) Answer the question after carefully reading the text.

1. (a) I am working on a MS-Word document that I saved on hard disk 3 minutes ago. Where is the latest copy of my work? (1)

(b) Convert 44.125 into its binary equivalent. (2)

(c) What is the difference between Open Source Software and Proprietary software? Write one example of each. (2)

(d) Define the term FIRMWARE? (1)

(e) Expand the following

(i) TFT **(ii)** RISC

(f) Write any one point of difference between ROM and EPROM? (1)

(g) Convert the following: (2)

(i) 542_8 to binary number

(ii) $AB54_{16}$ to decimal number

2. (a) What is the difference run time errors and compile time errors? Write one example of each. (2)

(b) What is the difference between testing and debugging? (2)

(c) Write any two characteristics of a good program. (2)

(d) What is the difference between multitasking and multiuser operating systems? (2)

(e) What is the difference between Abstraction and Encapsulation? (2)

3. (a) Define the following terms: (2)

(i) Prettyprinting **(ii)** Robustness

(b) What is the difference between keyword and identifier? Write one examples of each. (2)

(c) What is the difference between fundamental data type and derived data type? Write one

example of each. (2)

(d) What is the difference between I value and r value of a variable. Explain with an example. (2)

(e) What is the difference between implicit and explicit type conversion? Explain with the help of examples. (2)

4. (a) What is comment? What are its different types? What is the difference between those? (3)

(b) Write the output of the code fragment. (2)

```
Int a = 5, b =7
a + 2 <= b? cout<<a++ : cout << b - ;
```

(c) What result following expressions will produce. (1)

```
!((a<b) && (b == c) || (c>=a))
```
If a = 5, b = 7 and c = 5

(d) The following code has some error(s). Rewrite the correct code underlining all the corrections made: (2)

```
int k = 0; sum;
do
{
sum = k;
k + = 2;
}
while (k =<20)
cout>>sum;
```

(e) Rewrite the following program code using switch statement: (2)

```
if (d == 1)
day = 'Monday';
else if (d == 2)
day = 'Tuesday';
else if (d == 3)
day = 'Wednesday';
else
```

day = 'Invalid Input';

5. (a) Rewrite the following using while loop: (2)

```
int sum = 0;
for (int I = 5; i<= 10; ++i)
{
Sum = sum + I;
Cout<<sum;
}
```

(b) What output following code will produce if code is error? (2)

```
Int n1 =0, n2 = 5, n3 = 20
While (n3>10)
{
n1= n1 – n2;
n3 =n3-5;
count <, n1;
```

(c) Find out the output of the following program: (2)

```
#include(iostream.h>
void main ()
{int A =5, B = 10;
For (int I =1; I <== 2; I++)
{
cout<<'First'<<A++"AND" <<B-2<<endl;
cout <<'Second'<<++B<<"A+3<<endl;
}
```

(d) Name the header files to which the following belongs to: (2)

(i) exit ()

(ii) gets ( )

(iii) tolower ( )

(iv) sqrt ( )

(e) What will be the output of the following statement: (2)

(i) x = sqrt(25)

(ii) y = strlen ("HAPPY HOLI")

(iii) tolower ("AmiT SAxena");

(iv) w = abs (- 8)

6. (a) Write the C++ statement to generate the random number between 120 to 180.

(b) Define a structure with following description: (2)

· A Data member flight number of type integer

· A data member destination of type string

· A data member distance of type float

· A data merchant fuel of type float

(c) What is the significance of "typedef" keyword? (1)

(d) How many bytes are required by the following array for its storage? (1)

float a [7][3];

(e) What is the difference between call by value and call by reference method? Explain with examples. (2)

(f) Write a program to find out the length of a string without using Library function. (2)

(g) What do you understand by the scope of the variable? (1)

7. (a) Write a complete C++ program that reads a float array having 15 elements. The program uses a function reverse ( ) to reverse this array. (4)

(b) Write a function in C++ having 2 parameters x and n of integer type with result type float to find the sum of the following series: (3)

(s=1 + x + x^2 + x^3 + ... + x^n)

Write the functions to print sum of n & x are entered by the user.

(c) Write functions to print sum of right and left diagonal if size a square matrix of pyramid, is NxN. (3)