HIGHER SECONDARY EXAMINATION, March 2012

COMPUTER SCIENCE Time: 2¼ Hours

HSE I Maximum: 60 Scores

Instructions:

1. Read the questions carefully before answering them.
2. Maximum time allowed is 2 hours 15 minutes, including cool off time
3. First 15 minutes is cool off time during which you should not answer the questions. This time is meant to read the questions and to get prepared for answering.
4. Answer all questions taking the internal choices.

1. Name the device used to connect a computer to a network. **[1]**

2. A C++ programmer wishes to use the identifier PI in his program code wherever the value 3.14 appears. Write the C++ statement which is used for such declaration. **[1]**

3. Predict the output:
   ```
   int b = 2;
   int c = ++b + b++;
   cout << b << "\n" << c;
   ```
   [2]

4. When a C++ program is compiled, the following errors are reported:
   1) Undefined symbol cin
   2) Undefined symbol cout

   (a) What can be the reason for these errors? **[1]**

   (b) How can it be solved? **[1]**

5. Write any four C++ statements to add 1 to the variable **x** ? **[2]**

6. Rewrite the following statement using **while** and **do while** loops.
   ```
   for (i = 1; i<=10; i++) cout << i;
   ```
   [2]

7. What will be the size of the following constants? **[2]**

   (i) `'\a'`   (ii) `"\a"`   (iii) `"rema\'s"`   (iv) `'\"'`

8. How many bytes will be allocated for an integer array, AR[20]? Give reason. **[2]**

9. Explain the two methods of writing comments in C++ programs. **[2]**

10. Language processors can translate the programs written in high level language to machine level language.

    (a) Name two such language processors. **[1]**

    (b) How do they differ? **[2]**

11. The marks of two subjects of Balu are 45 and 46. His total is 91 and his grade is A+. Here identify the data and information. **[1]**

12. Express the number -23 in 2's compliment form. **[1]**

13. Find the value of x in the following:

    $(80C)_{16} = (x)_8$ **[2]**

14. It is decided to network all the computers in your school.

    (a) Identify the type of network formed in the lab. **[1]**

    (b) Suggest the most suitable geometrical arrangement of computers with diagram. Also write its advantages. **[2]**

15. Categorize the different software into different types and explain each category.

    Windows 7, Red hat Linux, Win Zip, Open Office, ATM, Billing software used in Super markets. **[3]**

16. Suggest a solution to use required software without paying money to anybody. **[1]**

17. Differentiate between access time and seek time. **[1]**

18. (a) Suggest the most suitable method to search a particular word from the dictionary. **[1]**

    (b) Write an algorithm for the same. **[4]**

19. What output will be produced by the following code fragment?

```
int val, res, n=1000;
cin>>val;
res = n+val > 1750 ? 400 : 200;
```
[2]

    (a) If the input is 2000

    (b) If the input is 500

20. Consider the following cases and identify which value of information is lost.

    (a) A candidate received the call letter just after the interview date. **[2]**

    (b) A man submitted his application for a job without using the prescribed format.

21.

22.

23.