Federal Board HSSC-II Examination
Computer Science Model Question Paper
(Curriculum 2009 – NBF)

Version Number | | | | |

SECTION – A

Time allowed: 20 minutes Marks: 15

Note: Section-A is compulsory. All parts of this section are to be answered on the separately provided OMR Answer Sheet which should be completed in the first 25 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

Q.1 Choose the correct answer i.e. A / B / C / D by filling the relevant bubble for each question on the OMR Answer Sheet according to the instructions given there. Each part carries one mark.

1. Which of the following creates user groups and assigns privileges to them?
   A. Process management B. I/O management
   C. File management D. Network management

2. Which operating system allows execution of application software on different computers in a network?
   A. Parallel processing operating system
   B. Multi-tasking operating system
   C. Distributed operating system
   D. Multi-processor operating system

3. Which command is used to change directory in disk operating system?
   A. CD B. CHG DIR
   C. Change directory D. Replace directory

4. Which method of implementing from an old system to a new system involves a gradual introduction of the new system?
   A. Step-by-step implementation
   B. Phased implementation
   C. Parallel implementation
   D. Pilot implementation

5. Which of the following is **NOT** a reserve word in C++?
   A. exit B. break
   C. quit D. continue

6. What is the value of **a**? if a = 40 % 3
   A. 0 B. 1
   C. 13 D. 13.33

7. If x = 10, then after executing the statement **x*=++x** the value of **x** will be
   A. 100 B. 110
   C. 115 D. 120

8. Which of the following accesses the seventh element stored in array?
   A. array[6]; B. array[7];
   C. array(7); D. array;

9. We declare a function _____ if it does not have any return type.
   A. long B. bdouble
   C. void D. int

10. The operator used for dereferencing or indirection is ____
   A. * B. &
   C. -> D. –>>

11. Which is the most powerful tool to handle memory addresses?
   A. & operator B. pointer
   C. arrays D. string

12. Which of the following is a valid class declaration?
   A. class A { int x; }; B. class B { }
   C. public class A { } D. object A { int x; };

13. _____ is the ability to use a function in multiple ways.
   A. Overloading B. Polymorphism
   C. Class D. Inheritance

14. Which is header file needed to read, write and manipulate the file?
   A. if stream B. of stream
   C. i stream D. f stream

15. In which type of files data can be accessed randomly?
   A. random access file B. binary file
   C. text files D. both text and binary files

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Time allowed: 2.40 hours Total Marks: 60

Note: Sections 'B' 'C' and 'D' comprise pages 1-2 and questions therein are to be answered on the separately provided answer book. Use supplementary answer sheet i.e., sheet B if required. Write your answers neatly and legibly.

SECTION – B (Marks 21)

Note:	**Section-B consists of following topics of the syllabus:**	
1.	Operating Systems	10%
2.	System Development Life Cycle	10%
3.	Object Oriented Programming In C++	10%
4.	Control Structure	15%
5.	Pointers	05%

Q.2 Attempt any **SEVEN** parts from the following. All parts carry equal marks. (7 × 3 = 21)

i. Differentiate between single user and multi user operating system.

ii. Draw a diagram to show the states of a Process and label it.

iii. List out any six responsibilities of a system analyst.

iv. Point out valid and invalid variable names. Give reasons if a variable is invalid.

a.	name	b.	AAA	c.	9a
d	US$	e.	a_b	f.	C++

v. Evaluate the following expressions:

a.	20-2/6+4.5	b.	(2-8.5)(6/7+4.2)	c.	4/6*3.0+6

vi. Differentiate between the purpose of the following functions:
endl and ***setw***

vii. Write the output of the following program:

```
int u,  i;
for (u=1; u<=5; u++)
        {
for (i=1; i<=u; i++)
cout<<i<<''\t'';
cout<<endl;
        }
```

viii. Write a program that prints the sum of even numbers from 1-50 using a while loop.

ix. Write a program in C++ which inputs an amount in rupees and prints it in US dollars.
(1 US dollar = 120 rupees)

x. What is the difference between dereference operator '*' and reference operator '&'?

SECTION – C (Marks 21)

Note:	**Section-C consists of following topics of the syllabus:**					
	1.	Arrays and Strings	15%	2.	Functions	15%
	3.	Classes and Objects	10%	4.	File Handling	10%

Q.3 Attempt any **SEVEN** parts from the following. All parts carry equal marks. (7 × 3 = 21)

i. Write down the purpose of the following string functions:
   a. strlen b. strcat c. strcmp

ii. Write a program to declare an array of 10 integers. Input data and print sum of the numbers.

iii. Write the output of the following program:

```
#include<iostream.h>
Main()
 {
intarr[5] = {12, 43, 36, 8, 7} ;
int c, s=0;

for(c=2; c<=0; c++)
        {
if (arr[c]%3==0)
              {
cout<<arr[c]<<"\n'';
                    s+=arr[c];
              }
cout<<"Sum = "<< s ;
       }
}
```

iv. There are three scopes of variables i.e. global, local and static. Define each of them.

v. Differentiate between formal and actual parameters used in functions.

vi. Write a program in C++ to find the product of two numbers using user-defined function.

vii. How are private and public access specifiers used in C++? Give an example of each.

viii. Explain briefly the following terms:
   a. Inheritance b. Polymorphism

ix. Write down the description of the following file mode:

Mode	Description
ios::ate	
ios::app	
ios::out	

x. Create a text file using C++ and write a line of any text in it.

SECTION – D (Marks 18)

Note: Attempt any **THREE** questions. All questions carry equal marks. (3 × 6 = 18)

Q.4 Explain the different phases of SDLC. (6)

Q.5 What is function overloading? List advantages of function overloading. How is function overloading used in C++? (1+3+2)

Q.6 Write a program in C++ which inputs data in a string and prints it in reverse order. (6)

Q.7 Write a program in C++ by using a class to input two values using a member function of a class. Display the sum of two values by using another member function of the class. (6)