







Federal Board HSSC-II Examination  
Computer Science Model Question Paper  
(Curriculum 2000 – NBF)

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. Answer any SEVEN parts from each section 'B' and 'C' and any three questions from section 'D'. Use supplementary answer sheet i.e., sheet B if required. Write your answers neatly and legibly.

**SECTION – B (7 × 3 = 21)**

**Note: Section – B consists of Part-I (Programming Using C Language)**

Q.2 Attempt any SEVEN parts from the following:

- i. Differentiate between assembly language and high level language.
- ii. Write down the purpose and syntax of 'include' directive. (1 + 2)
- iii. Consider the following C-Language statements: (1 + 2)  
`int x = 556; float y = 5.63;`
  - a. Why is the floating type value 5.63 stored in variable y and not in variable x?
  - b. If x is assigned to y and y is assigned to x, what will be the values stored in each variable respectively?
- iv. What is debugging? Why is a logical error difficult to detect as compared to a syntax error? Give an example. (1 + 2)
- v. Use equivalent if-else statement to produce the same output of the following piece of code: (3)  
`int x = 10, y = 20;`  
`(x > y) ? printf( "%d",x) : printf( "%d",y);`
- vi. If there is a function named 'factorial' of integer type and has an integer parameter 'n' then: (1+1+1)
  - a. Write down the prototype for this function.
  - b. What will be the header of its function definition?
  - c. Write down the function call.
- vii. Find the value of: (1+1+1)
  - a.  $(i > 0) \&\& (j < 5)$  where  $i = 8, j = 5$
  - b.  $(x + y) / x - y$  where  $x = 2, y = 4$
  - c.  $a * 3 / b * a$  where  $a = 4, b = 2$
- viii. Write down the 'for' loop to print first ten natural numbers in reverse order. (3)
- ix. Write down the purpose of following functions:
  - a. `putc()`
  - b. `fgets()`
  - c. `fscanf()`

- x. What will be the output of the following program?

```
#include <stdio.h>
void main(void)
{
    int a = 15, b;
    b = a % 9;
    a = ++a - (--b);
    printf("value of a = %d\n",a);
    printf("value of b = %d\n",b);
}
```

### SECTION – C (7 × 3 = 21)

**Note:** Section – C consists of Part-II (Database)

- Q.3 Attempt any SEVEN parts from the following:

- i. Draw an ER-Diagram for the following scenario. (3)  
In a firm there are many employees working on three projects named “design”, “development” and “testing”. Some employees are working on two projects at a time and some are working on only one project. There are eight departments and each employee belongs to one department only.
- ii. How indexing is useful in Database? Also write drawback of indexing. (3)
- iii. What is the purpose of following Data types in MS-Access? (3)  
a. Memo      b. Date/Time      c. Auto Number
- iv. Define referential integrity with the help of cascade update and delete. (3)
- v. Write down the steps to search a specific name in a table. (3)
- vi. List three advantages of forms in MS-Access. (3)
- vii. Write down the steps to create a query to extract the records where marks less than 33. (3)
- viii. Differentiate between tabular and columnar report by giving example. (3)
- ix. Write down any three tasks performed by DBA. (3)
- x. Give examples of any three types of relationships. (3)

### SECTION – D (Marks 18)

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

- Q.4 Read the following scenario to make a program for taking temperature as an input and print an appropriate activity accordingly: (4 + 2)

Temperature	Activity
Greater than 60	Swimming
Greater than >40 and less than or equal 60	Tennis
Greater than >30 and less than or equal 40	Golf
Greater than >0 and less than or equal 30	Skiing
Less than 0	Ice-skating

- a. Write down a program using any one of selection structures.
  - b. Which selection structure do you think is more appropriate and state the reason?
- Q.5 Write a C program to print the table of any number entered through the keyboard. (6)
- Q.6 Define DBMS and Database. Explain the advantages of Database approach. (1+1+4)
- Q.7 What are the uses of queries in database? Explain any two types of queries. (2 + 4)