

Name

SECOND YEAR B.Sc. DEGREE EXAMINATION, APRIL/MAY 2005**Part III—Subsidiary****Computer Science (Subsidiary to Statistics Main)****Paper II—INTRODUCTION TO PROGRAMMING WITH NET WORKING
CONCEPTS AND DBMS**

Time : Three Hours

Maximum : 50 Marks

*Answer any ten questions from Part A, any five questions from Part B
and any five questions from Part C.***Part A***Each question carries 1 mark.*

1. Define algorithm. List the properties of a good algorithm.
2. Explain the library functions floor (x) and ceil (x).
3. What is meant by a pointer ?
4. How are symbolic constants defined in C++ ?
5. Explain the increment and decrement operations in C++ with examples.
6. What is meant by a pre-processor directive ? Give an example.
7. Write assignment statements corresponding to :

(a) $\text{Area} = \pi r^2 + 2\pi r h.$

(b) $\text{Side} = \sqrt{a^2 + b^2 - 2 ab \cos (\theta)}.$

(c) $T = \frac{2m_1 m_2}{m_1 + m_2} \times g$

8. What will the output of the following for loop ?

```

for (i = 1 ; i < 3 ; i ++ )
{
  for (j = 1 ; j <= 3 ; j ++ )
    if (i == j) cout << "1" ; else cout << "0" ;
  Cout << endl ;
}

```
9. State what is a database with an example.
10. What is the Form View in ACCESS ?
11. What is a macro ?
12. Give the difference between radio button and check box.
13. Give the fullforms of (a) WWW ; (b) http.

14. What is meant by video-conferencing ?
15. State the difference between "internet" and "intranet". What are the main advantages of using the internet.

(10 × 1 = 10 marks)

Part B*Each question carries 3 marks.*

16. Using the while loop write a program to find the sum $S = 1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{5000}$.
17. What is a user-defined function ? Write a user-defined function for finding the factorial of a number.
18. Explain the concepts of classes and objects with an example.
19. Explain the following (a) Inline function ; (b) Function prototype.
20. What are the differences between static, automatic and external variables ?
21. What are controls ? How to use them ? Give examples for controls.
22. Explain the field datatypes available in ACCESS.
23. Explain network topology and protocol.

(5 × 3 = 15 marks)

Part C*Each question carries 5 marks.*

24. Write a C++ program to get the sum of the digits of an integer number.
25. Write a program to find the A.M and S.D of a set of 20 numbers.
26. Distinguish between do loop and do-while loop with examples.
27. Explain various arithmetic, logical and relational operation used in C++.
28. (a) Explain the switch statement in C++. (3 marks)
(b) What are manipulators ? Give two examples. (2 marks)
29. (a) Explain the following (i) Web browser ; (ii) Search engine ; and (iii) I.S.P. (3 marks)
(b) What are the different types of connections available in Internet ? (2 marks)
30. (a) Describe the objects of a Relational database. (3 marks)
(b) Explain the different types of queries used in ACCESS. (2 marks)
31. (a) Explain the terms "Master Table" and "Transaction Table" with examples. (3 marks)
(b) Differentiate between list box and combo box. (2 marks)