2016

BCA

4th Semester Examination

C++ LAB

PAPER—2296 (SET-1)

(Practical)

Full Marks : 100

Time : 3 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer any *two* questions (*on Lottery Basis*) :   2×25

1. Write a program to convert degree to radian using class to class type.

2. Write a C++ program to find the volume of cube, rectangle and cylinder using function overloading.

3. Write a C++ program to implement stack using array.

(Turn Over)

4. Write a C++ program to display the student details using class and object as array.

5. Write a C++ program to read/write the contents to/from a file.

6. Write a C++ program to add two complex numbers using object as argument.

7. Given a string S("A B C D E F G H I"). Write a C++ program to print the following :

```
            A
          B C B
        C D E D C
      D E F G F E D
    E F G H I H G F E
```

8. Write a C++ program to add two values using IO stream operator overloading.

9. Write a C++ program that takes a number and print the number digit by digit in words using inline member functions :

   [Ex. 2 3 6 → two three six]

10. Write a C++ program for matrix multiplication using dynamic memory allocation, copy construction and overloading of assignment operator.

11. Write a C++ program to convert a decimal number into an hexadecimal number.

12. Write a C++ program to implement pure virtual function.

13. Write a C++ program that uses functions :

    (a) to swap two integers ;

    (b) to swap two characters.

14. Write a C++ program to implement the functionalities of a copy constructor.

15. Write a C++ program to display student details using virtual base class.

16. Write a program to calculate the compound interest in a bank using default arguments.

17. Write a program in C++ to implement hybrid inheritance.

18. Write a C++ program to add two private data members using friend functions.

19. Write a program in C++ that reads the name :

Venugopal Ravishankar Rajkumar from the keyboard into three separate string objects and then concatenates them into a new string object using :

(i) '+' operator and (ii) append () function.

20. Write a C++ program to read a two dimensional matrix and display its transpose.

21. Write a C++ program to draw rectangle, square and circle using multiple inheritance with virtual function.

22. Write a C++ program to overload operator ++ and operator -- using friend functions.

23. Write a C++ program to manipulate complex numbers using operator overloading and type conversions.

24. Write a C++ program to remove negative numbers from an array. Use constructor and destructor.

25. Write a C++ program to implement stack using array.

26. Write a C++ program to find the sum of individual digits of a positive integer.

27. Make a vector holding the ten strings 'zero', 'one' ..., 'nine'. Use that in a program that converts a digits to its corresponding spelled out values e.g. the input 6 gives the output six. Have the same program, using the same input loop, convert spelled out numbers into their digit form e.g., the input six gives the output 6.

28. Write a C++ program to display the student details using classes and object as array.

29. Write a C++ program for bubble sort using template.

INSTRUCTIONS

Distribution of Marks —

Practical Note Book	:	**05**
Viva-Voce	:	**15**

Experiments —

Any two	:	**50**
Internal Assessment	:	**30**
TOTAL	:	**100**

1. Each candidates have to perform two experiments.

2. Selection of experiment will be done by lottery or drawing cards.

3. Normally two changes will be given for each candidate for drawing card, but not at a time (by rotation).

4. Third and the last chance may be given by deducting 2 marks (for each group).

5. Marks on PNB will be given proportionately to the number of experiments performed properly.

6. In case of any ambiguity relating to questions or evaluation, Examiners should contact to Head Examiner.

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C/16/BCA/4ᵗʰ Seme. (Prac.)/2296(Set-1)

TB—360