2016

MCA

3rd Semester Examination

OBJECT ORIENTED PROGRAMMING LAB.

PAPER—MCA-306

(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). 2×35

1. Write a C++ program to read a square matrix and display its transpose.

2. Write a C++ program to create virtual functions in a class and use it in your program to show its functionality.

3. Write a C++ program to multiply two matrices using operator overloading.

4. Write a C++ class 'complex' and overload +, *, >>, << operators for adding, multiplying, input and output complex numbers.

5. Write a C++ program to implement default constructor, copy constructor and overload = operator.

6. Write a C++ program to show how exception is handled in C++.

7. Write a C++ class and overload =, ( ) and [ ] operators. Use these operators in the program.

8. Wrie a C++ class 'string' and overload +, >>, << operators for concatenating, input and display character strings.

9. Write a 'student' class in C++ having data members name, roll and marks. Write the student records in a file and retrieve the records from the file.

10. Write a C++ program to implement your own namespace and show the usability of 'using declaration' and 'using directive'.

11. Write a C++ program to implement hybrid inheritance.

12. Write a C++ program to overload new and delete operators in a class and use these operators in the program.

13. Write a C++ program to find the number of characters, words and lines in the given text as input.

14. Write a C++ program to implement 'Time' class that has separate data members for hours, minutes and seconds. Overload + operator to add two times (objects) and ++ operator to increment time by one second.

15. Write a C++ program to copy the contents of one file to another file. Provide the names of the source and destination files through command line arguments.

16. Write a C++ program to implement a class 'Account' having data members account number, name of depositor, account type and balance amount.

Create suitable member functions to deposit, withdraw and display name and balance.

17. Write a C++ program to implement a 'Date' class with member functions as next and previous which return next date and previous date.

18. Write a program in C++ to create a function template and a class template. Use the templates in your program.

19. Write a program to show the use of virtual base class.

20. Write a program in C++ to create a smart pointer and use it in your program.

Viva — 20

PNB — 10

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