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B.E. (Computer Science Engineering) Fifth Semester (C.B.S.)

Object Oriented Programming

P. Pages : 2 **NRJ/KW/17/4489**

Time : Three Hours * 0 4 1 3 * Max. Marks : 80

Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Differentiate between object oriented and procedural programming. **6**

b) Write a program having class Account with data members account_number and balance_amount. Accept data for n accounts and display the data of accounts having balance less than 5000/- **7**

OR

2. a) Differentiate between static & non-static data members of a class. Can we access non-static data members without using object. **3**

b) Write a program to demonstrate copy constructor. Also differentiate between copy constructor and assignment operator with object. **6**

c) Explain various ways of declaring & defining member function of a class. **4**

3. a) State the use of :: operator in c++ with example. **6**

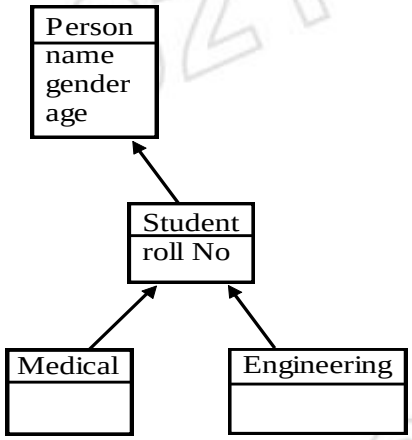
b) What is the difference between pointer to constant and constant pointer? **3**

c) Write the use of new and delete operators in C++

OR

4. Write a program to overload extraction operator (≫) and insertion operator (≪). **13**

5. a) Identify the following inheritance and write a program by assuming proper member functions and data members. **10**



b) Explain the difference between inheritance and containership. Which one is preferable? **4**

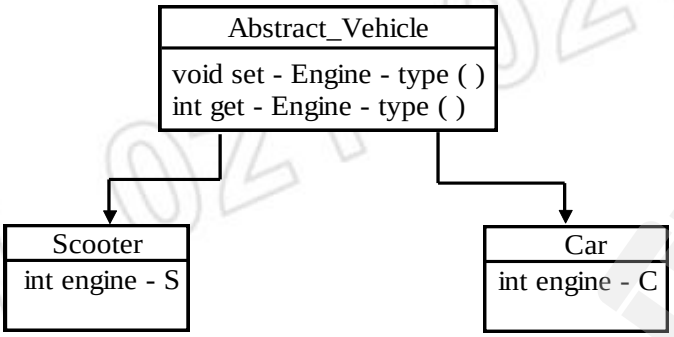
OR

6. a) Describe pure virtual function with suitable example. **8**

b) Differentiate between function overloading and overriding. **6**

7. a) What is static function and dynamic type information? **6**

b) Define Abstract class. Why to use Abstract class? **7**



OR

8. a) Explain pointer to object with example. **6**

b) What is the use of pure virtual functions? Explain with example. **7**

9. a) Explain C++ stream class hierarchy in detail. **7**

b) What is file pointer? Explain following file functions with example. **7**

i) Seekg ( ) ii) Seek P

iii) tellg ( ) iv) tellp ( )

10. a) How to handle various errors during file operation? **4**

b) Write about various ios manipulators. **4**

c) Write a C++ program to copy contents of a binary file to another binary file. **6**

11. a) What is exception? How to handle exception in C++. **6**

b) Write a C++ program consist of a template function sort ( ) that can sort sequence of element in ascending order Elements may be of type int, char or float. **7**

OR

12. a) Discuss iterators & specialized iterator. **4**

b) Write short notes on. **9**

i) Sequential Container

ii) Associate container

iii) Standard template library.

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The secret of getting ahead is getting started.

~ Mark Twain