

24164

B.Tech. 4th Semester (CSE) Examination, May-2016

OBJECT-ORIENTED PROGRAMMING USING C++

Paper-(IT-202-F)

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt any five questions, one from each section.

Question No. 1 is compulsory.

1. (a) What do you mean by dynamic binding ? How is it useful in OOPs ?
- (b) What is the need of declaring a member of class static ?
- (c) Explain controlling access function and utility function with example.
- (d) What is the use of scope resolution operator ?

4×5=20

Section-A

2. (a) What are pre-processor directives, why are they used ? Explain any two preprocessor directives.
12
- (b) Explain the concept of reusability with example.
8
3. (a) Differentiate between procedural and object-oriented languages.
10
- (b) What do you mean by library files ? Explain with suitable examples.
10

24164-P-3-Q-9(16)

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Section-B

4. (a) What are inline functions ? What is the need of making function inline ? Also write the situations where inline expansion may not work ? 10
- (b) What is Constructor ? Explain various types of Constructor with example. 10
5. (a) What are the advantages of using new and delete operators as compared to the malloc () and calloc () ? 10
- (b) What are proxy classes ? How proxy classes are helpful in separating the interface from the implementation ? Explain with suitable examples. 10

Section-C

6. (a) What is operating overloading ? Explain the conditions where operator overloading is necessary ? Also write a program to overload << and >> operators using both member functions and friend functions. 12
- (b) What are virtual base classes ? Explain with example. 8
7. (a) Define Inheritance. Explain various types of inheritance with example. 10
- (b) What is polymorphism ? How run-time polymorphism is achieved ? 10

Section-D

8. (a) What do you mean by exception handling ? How exceptions are handled in C++ ? Illustrate with example. 10
- (b) Define stream manipulators. How they are different from I/O streams ? Explain any three stream manipulators. 10
9. (a) How templates are helpful in generic programming ? Differentiate between overloaded functions and function templates. 10
- (b) What is file ? Write a program to update the contents using random access. 10