GOVERNMENT COLLEGE WOMEN UNIVERSITY FAISALABAD

COURSE TITLE: OBJECT ORIENTED PROGRAMMING (OOP)

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CLASS : ADP CS 2ND MA

QUIZ NO. : 2

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Polymorphism

1. Static binding in C++ occurs during:
   a) Runtime
   b) Compile time
   c) Linking phase
   d) Execution

2. Function overloading is an example of:
   a) Dynamic polymorphism
   b) Static polymorphism
   c) Virtual functions
   d) Late binding

3. Ambiguity in function overloading can occur due to:
   a) Default arguments
   b) Automatic type conversion
   c) Both a and b
   d) None of the above

4. Dynamic polymorphism is achieved using:
   a) Function overloading
   b) Operator overloading
   c) Virtual functions
   d) Templates

5. Object slicing happens when:
   a) A derived class object is assigned to a base class object
   b) A base class pointer points to a derived class
   c) A virtual function is overridden
   d) An abstract class is instantiated

6. Late binding refers to:
   a) Resolving function calls at compile time
   b) Resolving function calls at runtime
   c) Early optimization
   d) Static type checking

7. A pure virtual function is declared using:
   a) = 0
   b) = virtual

c) = abstract
d) override

8. Abstract classes cannot:
   a) Have member functions
   b) Be inherited
   c) Be instantiated
   d) Have constructors

9. Which is **not** true about virtual functions?
   a) They enable runtime polymorphism
   b) They use the virtual keyword
   c) They are resolved at compile time
   d) They require a base class pointer

10. Method overriding requires:
    a) Same function name and parameters
    b) Inheritance
    c) Both a and b
    d) Operator overloading

Operator Overloading

11. The this pointer refers to:
    a) Current object
    b) Parent class
    c) Global variables
    d) Static members

12. To overload the + operator as a member function, the syntax is:
    a) returnType operator+(arguments)
    b) returnType operator+() const
    c) friend returnType operator+(arguments)
    d) returnType +operator(arguments)

13. Which operator cannot be overloaded?
    a) +
    b) ::
    c) <<
    d) ==

14. Overloading << for output requires:
    a) A member function
    b) A friend function
    c) A static function
    d) A virtual function

15. The -> operator is overloaded to:
    a) Access class members
    b) Dereference pointers
    c) Allocate memory
    d) Perform arithmetic

16. Which is true about non-member operator functions?
    a) They can access private members
    b) They must be declared as friend
    c) They use the this pointer
    d) They replace member functions

17. The correct way to chain function calls using this is:
    a) Return void
    b) Return *this by reference
    c) Return a new object
    d) Use static casting

18. Which operator is overloaded for array indexing?
    a) ()
    b) []
    c) ->
    d) *

19. To overload the pre-increment operator, use:
    a) operator++()
    b) operator++(int)
    c) ++operator()
    d) operator+()

20. When overloading =, you should:
    a) Handle self-assignment
    b) Return by value
    c) Use default parameters
    d) Make it a friend function

Exception Handling

21. The try block is followed by:
    a) catch
    b) throw
    c) finally
    d) except

22. Exceptions are thrown using:
    a) raise
    b) throw
    c) catch
    d) try

23. If a derived class exception is caught by a base class catch block:
    a) It works due to polymorphism
    b) It causes a compilation error
    c) It results in object slicing
    d) Both a and c

24. The correct order of catch blocks should be:
    a) Base class first
    b) Derived class first
    c) Alphabetical order
    d) Doesn’t matter

25. A function declaration void foo() noexcept means:
    a) It throws no exceptions
    b) It throws all exceptions
    c) It catches exceptions
    d) It rethrows exceptions

26. Rethrowing an exception is done using:
    a) throw;
    b) throw exception;
    c) catch(...)
    d) try

27. Resource Acquisition Is Initialization (RAII) is used to:
    a) Allocate memory
    b) Manage resources via object lifetimes

c) Handle syntax errors
d) Overload operators

28. Which is **not** a standard exception?
    a) std::runtime_error
    b) std::logic_error
    c) std::file_error
    d) std::bad_alloc

29. The catch(...) block:
    a) Catches all exceptions
    b) Catches no exceptions
    c) Catches syntax errors
    d) Is invalid syntax

30. If an exception is not caught, it results in:
    a) Compilation error
    b) Runtime termination
    c) Memory leak
    d) Silent failure

Answer Key

1. b) Compile time
2. b) Static polymorphism
3. c) Both a and b
4. c) Virtual functions
5. a) A derived class object is assigned to a base class object
6. b) Resolving function calls at runtime
7. a) = 0
8. c) Be instantiated
9. c) They are resolved at compile time
10. c) Both a and b
11. a) Current object
12. a) returnType operator+(arguments)
13. b) ::
14. b) A friend function
15. a) Access class members
16. b) They must be declared as friend
17. b) Return *this by reference
18. b) []
19. a) operator++()
20. a) Handle self-assignment
21. a) catch
22. b) throw
23. d) Both a and c
24. b) Derived class first
25. a) It throws no exceptions

26. a) throw;

27. b) Manage resources via object lifetimes

28. c) std::file_error

29. a) Catches all exceptions

30. b) Runtime termination