SAMPLE QUESTION ANSWER FOR MCQ EXAMINATION

&

Effective Preparation for Various Interview Questions

For

Programming Language (C,C++)

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1. C programming language was developed by:
A) Dennis Ritchie
B) James Gosling
C) Bjarne Stroustrup
D) Ken Thompson
Answer: A) Dennis Ritchie

2. C language was developed in which year?
A) 1970
B) 1972
C) 1979
D) 1985
Answer: B) 1972

3. Which of the following is a valid C variable name?
A) int
B) case
C) _value
D) 123value
Answer: C) _value

4. Which of the following is not a valid C data type?
A) int
B) float
C) string
D) char
Answer: C) string

5. Which symbol is used to denote a preprocessor directive?
A) $
B) #
C) &
D) @
Answer: B) #

6. What is the default return type of the `main()` function in C?
A) float
B) void
C) int
D) char
Answer: C) int

7. Which format specifier is used to print integers in C?
A) %c
B) %f
C) %d
D) %s
Answer: C) %d

8. Which operator is used to access the value at the address stored in a pointer?
A) *
B) &
C) ->
D) %
Answer: A) *

9. What will `printf("%d", 10 + 5 * 2);` output?
A) 30
B) 20
C) 15
D) 25
Answer: B) 20

10. The keyword `break` is used to:
A) End the program
B) Exit a loop
C) Skip current iteration
D) Create a new line
Answer: B) Exit a loop

11. Which of the following is not a loop structure in C?
A) for
B) while
C) do-while
D) repeat-until
Answer: D) repeat-until

12. What is the size of an `int` on a 32-bit system?
A) 2 bytes
B) 4 bytes
C) 8 bytes
D) 1 byte
Answer: B) 4 bytes

13. Which operator is used to get the address of a variable?
A) *
B) %
C) &
D) @
Answer: C) &

14. The function `scanf()` is used for:
A) Output
B) Input
C) Looping
D) Compilation
Answer: B) Input

15. Which one is a logical operator in C?
A) &
B) &&
C) |
D) ++
Answer: B) &&

16. What does `sizeof(char)` return?
A) 2
B) 4
C) 1
D) Depends on system
Answer: C) 1

17. Which of the following is used for comments in C?
A) // comment
B) # comment
C) ** comment **
D) <!-- comment -->
Answer: A) // comment

18. Which header file is required for `printf()`?
A) stdio.h
B) conio.h
C) string.h
D) math.h
Answer: A) stdio.h

19. Which of the following is a user-defined data type?
A) int
B) float
C) struct
D) double
Answer: C) struct

20. The statement `a += 5;` is equivalent to:
A) a = a + 5
B) a = a + a
C) a = 5
D) a = 5 + 5
Answer: A) a = a + 5

21. What does `return 0;` mean in `main()`?
A) Error
B) Success
C) Loop exit
D) Function call
Answer: B) Success

22. What is the value of `5 % 2`?
A) 1
B) 2
C) 2.5
D) 0
Answer: A) 1

23. Which keyword is used to define a constant in C?
A) static
B) const
C) #define
D) both B and C
Answer: D) both B and C

24. In C, array index starts from:
A) -1
B) 0
C) 1
D) depends on declaration
Answer: B) 0

25. Which of the following is used to stop compilation in preprocessor?
A) #error
B) #stop
C) #halt

D) #end

Answer: A) #error

26. What is the correct syntax to declare a function in C?
A) function int();
B) int function();
C) declare int function;
D) int function[];
Answer: B) int function();

27. What is recursion?
A) Looping in main
B) Calling one function from another
C) A function calling itself
D) A repeated variable
Answer: C) A function calling itself

28. Which keyword is used to return a value from a function?
A) get
B) return
C) send
D) exit
Answer: B) return

29. A function declared inside another function is called:
A) Sub function
B) Local function
C) Nested function (Not allowed in standard C)
D) Inline function
Answer: C) Nested function (Not allowed in standard C)

30. Which function is used to find the length of a string?
A) strlen()
B) strcpy()

C) strcat()
D) strcmp()
Answer: A) strlen()

31. Which operator is used for dereferencing a pointer?
A) &
B) *
C) ->
D) =
Answer: B) *

32. What is a pointer in C?
A) A data type
B) A keyword
C) A variable that stores address
D) An operator
Answer: C) A variable that stores address

33. What is the value of `*(ptr + 1)`?
A) Value of next element
B) Address of ptr
C) Value of ptr
D) Pointer to pointer
Answer: A) Value of next element

34. Which of the following accesses the value of a structure member?
A) structure.member
B) structure->member
C) structure&member
D) structure*member
Answer: A) structure.member

35. Which keyword is used to define a structure?
A) define
B) struct

C) typedef
D) class
Answer: B) struct

B) strcomp()
C) strcheck()
D) strdiff()
Answer: A) strcmp()

36. Which of the following is used to pass an array to a function?
A) By reference
B) By value
C) By copying
D) By pointer
Answer: D) By pointer

41. Which keyword is used to define a macro?
A) const
B) macro
C) #define
D) typedef
Answer: C) #define

37. Array elements are stored in:
A) Random order
B) Reverse order
C) Sequential memory locations
D) Separate memory blocks
Answer: C) Sequential memory locations

42. What is a NULL pointer?
A) A pointer that points to 0
B) A void pointer
C) A garbage pointer
D) An uninitialized pointer
Answer: A) A pointer that points to 0

38. How many elements are in `int arr[10];`?
A) 9
B) 10
C) 11
D) 0
Answer: B) 10

43. What is the purpose of `calloc()`?
A) Allocate memory dynamically and initialize to zero
B) Free memory
C) Allocate memory statically
D) Allocate pointer
Answer: A) Allocate memory dynamically and initialize to zero

39. What is the index of the last element in `int a[5];`?
A) 4
B) 5
C) 6
D) 1
Answer: A) 4

44. Which header is used for dynamic memory allocation?
A) stdio.h
B) malloc.h
C) stdlib.h
D) memory.h
Answer: C) stdlib.h

40. Which function is used to compare two strings?
A) strcmp()

45. Which function is used to release allocated memory?
A) delete()
B) remove()
C) free()
D) clear()
Answer: C) free()

46. Which format specifier is used to print a character?
A) %d
B) %f
C) %s
D) %c
Answer: D) %c

47. Which of these is a correct syntax for a `for` loop?
A) for(i = 0; i < 10; i++)
B) for i in range(10)
C) for(i < 10; i++)
D) loop(i = 10)
Answer: A) for(i = 0; i < 10; i++)

48. The loop that executes at least once is:
A) for
B) while
C) do-while
D) foreach
Answer: C) do-while

49. What is the output of `sizeof('A')`?
A) 1
B) 2
C) 4
D) Implementation dependent
Answer: A) 1

50. Which function is used to copy one string to another?
A) strcopy()
B) copy()
C) strcpy()
D) strdup()
Answer: C) strcpy()

MCQ 51–75: Advanced Concepts

51. Which function is used to read a line of text?
A) scanf()
B) gets()
C) read()
D) fread()
Answer: B) gets()

52. What does `fopen()` return on failure?
A) -1
B) 0
C) NULL
D) EOF
Answer: C) NULL

53. Which is used to write a character to a file?
A) putc()
B) fwrite()
C) putchar()
D) fputc()
Answer: D) fputc()

54. What is a correct declaration of a pointer to a function?
A) int *f();
B) int (*f)();
C) int f();
D) (*int)();
*Answer: B) int (*f)();*

55. What is the output of `printf("%d", 10 == 10);`?
A) 0
B) 1
C) 10

D) true
Answer: B) 1

56. Which is not a storage class in C?
A) auto
B) static
C) dynamic
D) register
Answer: C) dynamic

57. How many keywords are there in C (ANSI C)?
A) 32
B) 30
C) 28
D) 40
Answer: A) 32

58. Which statement is true about `const`?
A) Value can change
B) Cannot be initialized
C) Must be initialized at compile time
D) Value cannot change
Answer: D) Value cannot change

59. Which is used for reading from a file?
A) scanf()
B) read()
C) fscanf()
D) input()
Answer: C) fscanf()

60. The scope of a variable defined inside a function is:
A) Global
B) Local
C) Static
D) Extern
Answer: B) Local

61. Which of the following keywords is used to define a global variable?
A) auto
B) static
C) extern
D) global
Answer: C) extern

62. Which function is used to find the square root of a number in C?
A) sqrt()
B) power()
C) sqr()
D) pow()
Answer: A) sqrt()

63. Which header file is needed to use `pow()` and `sqrt()` functions?
A) stdio.h
B) conio.h
C) math.h
D) stdlib.h
Answer: C) math.h

64. What is the output of: `printf("%d", sizeof('A'));`
A) 1
B) 2
C) 4
D) Implementation dependent
Answer: C) 4
(Because 'A' is treated as an int in `sizeof('A')` in C)

65. What will be the output of: `int a = 5; printf("%d", a++);`
A) 5
B) 6
C) Error
D) Undefined
Answer: A) 5
(Post-increment prints the value first, then increases it)

66. What does the `typedef` keyword do in C?
A) Defines a function
B) Creates a new data type alias
C) Defines constant
D) Allocates memory
Answer: B) Creates a new data type alias

67. Which operator has the highest precedence in C?
A) +
B) *
C) =
D) ()
Answer: D) ()

68. What will `printf("%d", 4 && 0);` display?
A) 1
B) 4
C) 0
D) Error
Answer: C) 0

69. Which of these functions is used to get a character from the user without pressing Enter?
A) getchar()
B) gets()
C) getch()
D) scanf()
Answer: C) getch()

70. Which loop is guaranteed to execute at least once?
A) for
B) while
C) do-while
D) switch
Answer: C) do-while

71. What is the maximum number of `else if` blocks you can have in C?
A) 1
B) 2
C) Unlimited
D) 10
Answer: C) Unlimited

72. What is the output of: `printf("%d", 10 != 10);`
A) 1
B) 0
C) 10
D) Error
Answer: B) 0

73. A pointer that is not initialized is called:
A) Null pointer
B) Dangling pointer
C) Wild pointer
D) Static pointer
Answer: C) Wild pointer

74. Which of the following is used to dynamically allocate memory in C?
A) malloc()
B) alloc()
C) calloc()
D) Both A and C
Answer: D) Both A and C

75. What will be the output of `printf("%d", 5 == 5 == 1);`?
A) 1
B) 0
C) Error
D) 5
Answer: A) 1
(5 == 5 → 1, and then 1 == 1 → 1)

76. What is a segmentation fault?
A) Syntax error
B) Infinite loop
C) Accessing invalid memory
D) Compiler error
Answer: C) Accessing invalid memory

77. Which symbol is used for conditional operator?
A) ? :
B) & |
C) && ||
D) ~
Answer: A) ? :

78. `extern` keyword is used to:
A) Declare external functions or variables
B) Free memory
C) Exit program
D) Allocate memory
Answer: A) Declare external functions or variables

79. Which function is used to convert a string to an integer?
A) atoi()
B) int()
C) convert()
D) val()
Answer: A) atoi()

80. Which one is a ternary operator?
A) ++
B) &&
C) ?:
D) !=
Answer: C) ?:

81. Which header file includes memory allocation functions?
A) alloc.h
B) mem.h
C) stdlib.h
D) string.h
Answer: C) stdlib.h

82. C is a:
A) High-level language
B) Assembly language
C) Low-level language
D) Hardware language
Answer: A) High-level language

83. Which of the following is not a loop in C?
A) for
B) while
C) repeat
D) do-while
Answer: C) repeat

84. What is the extension of a C file?
A) .c
B) .exe
C) .cpp
D) .java
Answer: A) .c

85. Which function is used to write formatted output to a file?
A) fprintf()
B) printf()
C) fputs()
D) fwrite()
Answer: A) fprintf()

86. Which keyword is used to create a macro with parameters?
A) const
B) define
C) #define
D) macro
Answer: C) #define

87. The `continue` statement:
A) Exits the loop
B) Skips current iteration
C) Restarts the program
D) Terminates the function
Answer: B) Skips current iteration

88. In which header file is `malloc()` defined?
A) math.h
B) memory.h

C) stdlib.h
D) malloc.h
Answer: C) stdlib.h

89. Which of the following is not a valid data type in C?
A) double
B) int
C) bool
D) float
Answer: C) bool (Note: `bool` requires `stdbool.h` in C99)

90. `a = b++` means:
A) a = b and then b = b + 1
B) b = b + 1 and then a = b
C) a = b - 1
D) b = a + 1
Answer: A) a = b and then b = b + 1

91. The function `strcat()` is used to:
A) Copy strings
B) Compare strings
C) Concatenate strings
D) Count characters
Answer: C) Concatenate strings

92. `static` keyword is used to:
A) Make variable globally accessible
B) Allocate memory
C) Retain value between function calls
D) Deallocate memory
Answer: C) Retain value between function calls

93. Which of the following is not a preprocessor directive?
A) #include
B) #define
C) #if
D) #main
Answer: D) #main

94. What is the return type of `main()`?
A) int
B) void
C) char

D) float
Answer: A) int

95. `void` keyword indicates:
A) Loop
B) No return value
C) Integer
D) Class
Answer: B) No return value

96. In C, `printf()` returns:
A) Nothing
B) Number of characters printed
C) ASCII value
D) Address
Answer: B) Number of characters printed

97. The ASCII value of 'A' is:
A) 90
B) 97
C) 65
D) 66
Answer: C) 65

98. Which function is used to find a character in a string?
A) strchr()
B) strstr()
C) strcmp()
D) strrev()
Answer: A) strchr()

99. Which operator is used to compare two values in C?
A) =
B) :=
C) ==
D) equals
Answer: C) ==

100. Which keyword is used to prevent modification of a variable?
A) final
B) lock
C) const
D) static
Answer: C) const

101. Who developed the C++ programming language?
A) Dennis Ritchie
B) Bjarne Stroustrup
C) James Gosling
D) Brian Kernighan
Answer: B) Bjarne Stroustrup

102. C++ is an extension of which programming language?
A) Java
B) C
C) Python
D) Pascal
Answer: B) C

103. What type of programming language is C++?
A) Object-Oriented
B) Procedural
C) Functional
D) All of the above
Answer: D) All of the above

104. Which of the following is used to define a class in C++?
A) object
B) class
C) structure
D) define
Answer: B) class

105. Which operator is used to create an object of a class?
A) new
B) class
C) object
D) alloc
Answer: A) new

106. What is the extension of a C++ file?
A) .c
B) .cpp
C) .cp
D) .cplus
Answer: B) .cpp

107. Which of the following is not a basic data type in C++?
A) int
B) float
C) string
D) bool
Answer: C) string
(*Note:* `string` *is a class in C++, not a basic data type.*)

108. What does OOP stand for?
A) Object-Oriented Programming
B) Open Object Programming
C) Object Open Program
D) Oriented Object Protocol
Answer: A) Object-Oriented Programming

109. Which of the following is not an OOP concept in C++?
A) Encapsulation
B) Abstraction
C) Polymorphism
D) Compilation
Answer: D) Compilation

110. Which of the following allows defining multiple functions with the same name but different parameters?
A) Inheritance
B) Overloading

C) Encapsulation
D) Overriding
Answer: B) Overloading

A) void
B) int
C) char
D) string
Answer: B) int

111. Which keyword is used to define a constant in C++?
A) #define
B) const
C) final
D) static
Answer: B) const

☐ OOPs, Functions, Constructors (116–130)

116. What is a constructor?
A) A method used to destroy objects
B) A function that initializes an object
C) A function used to define a class
D) A function that returns void
Answer: B) A function that initializes an object

112. Which access specifier makes members accessible from outside the class?
A) private
B) protected
C) public
D) internal
Answer: C) public

117. What is the name of the function that destroys an object in C++?
A) finalizer
B) destroy()
C) destructor
D) object_down
Answer: C) destructor

113. Which symbol is used to declare a pointer in C++?
A) &
B) *
C) #
D) @
Answer: B) *

118. Which symbol is used to define a destructor in C++?
A) ~
B) !
C) #
D) @
Answer: A) ~

114. What will `cout << "C++";` output?
A) Print C++ to screen
B) Return C++ to variable
C) Scan user input
D) Compile program
Answer: A) Print C++ to screen

119. Which concept allows a class to inherit features from another class?
A) Polymorphism
B) Inheritance
C) Abstraction
D) Encapsulation
Answer: B) Inheritance

115. What is the return type of `main()` function in C++?

C) Superclass object
D) Next object
Answer: A) Current object address

120. Which keyword is used to inherit a class?
A) using
B) new
C) extends
D) : (colon)
Answer: D) : (colon)

121. Which constructor is invoked when an object is created without any arguments?
A) Parameterized constructor
B) Default constructor
C) Copy constructor
D) Destructor
Answer: B) Default constructor

122. What is function overloading in C++?
A) Using multiple functions with same name but different return types
B) Using multiple functions with same name but different parameter list
C) Reusing the same function
D) Defining too many functions
Answer: B) Using multiple functions with same name but different parameter list

123. Which of the following is used to define a function outside a class?
A) :: (scope resolution operator)
B) . (dot operator)
C) ->
D) &
Answer: A) ::

124. What does the `this` pointer represent in C++?
A) Current object address
B) Class name

125. Which concept provides the ability to take many forms?
A) Inheritance
B) Encapsulation
C) Polymorphism
D) Abstraction
Answer: C) Polymorphism

126. What is dynamic binding in C++?
A) Binding that occurs at compile time
B) Binding functions at runtime using virtual functions
C) Binding variables at global level
D) Binding templates
Answer: B) Binding functions at runtime using virtual functions

127. Which keyword is used to declare a virtual function?
A) abstract
B) virtual
C) dynamic
D) void
Answer: B) virtual

128. Which type of inheritance involves one base class and multiple derived classes?
A) Single
B) Multiple
C) Multilevel
D) Hierarchical
Answer: D) Hierarchical

129. What is abstraction?
A) Showing only essential features
B) Hiding implementation details
C) Both A and B
D) Creating base class
Answer: C) Both A and B

130. Which of these allows data hiding in C++?
A) Private access modifier
B) Public access modifier
C) Constructors
D) Destructors
Answer: A) Private access modifier

131. What is multiple inheritance?
A) Inheriting multiple classes into one class
B) A class with multiple constructors
C) Having multiple main functions
D) Creating multiple objects of a class
Answer: A) Inheriting multiple classes into one class

132. Which operator is used to access members of a class using a pointer?
A) . (dot)
B) -> (arrow)
C) * (asterisk)
D) & (ampersand)
Answer: B) -> (arrow)

133. What is a virtual function in C++?
A) A function defined in a virtual class
B) A function that is declared with the virtual keyword
C) A global function
D) A function with no return type
Answer: B) A function that is declared with the virtual keyword

134. Which keyword is used to prevent overriding of a virtual function?
A) static
B) final
C) const
D) protected
Answer: B) final

135. Which of the following is not a type of constructor in C++?
A) Copy constructor
B) Default constructor
C) Friend constructor
D) Parameterized constructor
Answer: C) Friend constructor

136. Which concept restricts access to some of the object's components?
A) Inheritance
B) Encapsulation
C) Polymorphism
D) Overloading
Answer: B) Encapsulation

137. What is the correct syntax of a class template?
A) `template <class T>`
B) `template <T>`
C) `class <template>`
D) `template T`
Answer: A) `template <class T>`

138. Which operator can't be overloaded in C++?
A) +
B) =
C) ::
D) <<
Answer: C) ::

D) internal
Answer: B) private

139. What is the output of: `int a = 5; cout << ++a;?`
A) 5
B) 6
C) Error
D) 0
Answer: B) 6

144. Which stream class is used for both reading and writing to files?
A) fstream
B) ifstream
C) ofstream
D) iostream
Answer: A) fstream

140. Which of the following is true about destructors?
A) Can be overloaded
B) Can take arguments
C) No return type
D) Static
Answer: C) No return type

145. Which operator is used to open a file?
A) >>
B) <<
C) ::
D) .open()
Answer: D) .open()

141. Which header file is required for file handling in C++?
A) stdio.h
B) file.h
C) fstream
D) io.h
Answer: C) fstream

146. Which file mode is used to append data at the end of file?
A) ios::trunc
B) ios::in
C) ios::app
D) ios::ate
Answer: C) ios::app

142. What is the object used to write to a file in C++?
A) ifstream
B) ofstream
C) filewrite
D) stream
Answer: B) ofstream

147. Which function reads a line of text from a file?
A) getline()
B) readln()
C) inputline()
D) gets()
Answer: A) getline()

143. What is the default access specifier for members of a class?
A) public
B) private
C) protected

148. What is the correct way to close a file in C++?
A) file.close()

B) close(file)
C) end(file)
D) file.end()
Answer: A) file.close()

149. What is the default value returned by `main()` if not specified?
A) 0
B) 1
C) -1
D) Undefined
Answer: A) 0

150. What is the correct syntax for defining a namespace in C++?
A) namespace name {};
B) using namespace name {};
C) define namespace name {};
D) package name {};
Answer: A) namespace name {};

151. Which of the following can be overloaded?
A) Member function
B) Constructor
C) Operator
D) All of the above
Answer: D) All of the above

152. Which keyword is used to prevent a class from being inherited?
A) const
B) static
C) final
D) sealed
Answer: C) final

153. What is the size of a `bool` type in C++?
A) 4 bytes
B) 2 bytes
C) 1 byte
D) Depends on compiler
Answer: C) 1 byte

154. Which class is used to handle errors in C++?
A) exception
B) try
C) catch
D) All of the above
Answer: A) exception

155. What is the output of `cout << sizeof(char);`?
A) 2
B) 4
C) 1
D) Depends on OS
Answer: C) 1

156. What is `new` operator used for?
A) Create object
B) Free memory
C) Allocate memory dynamically
D) Return pointer
Answer: C) Allocate memory dynamically

157. Which of the following is a loop structure in C++?
A) for
B) while
C) do-while
D) All of the above
Answer: D) All of the above

158. Which one is used for exception handling?
A) if-else
B) try-catch
C) goto
D) throw-catch
Answer: B) try-catch

159. Which is the correct way to handle a division by zero exception?
A) try { ... } catch(...) { ... }
B) try { ... } if(...) { ... }
C) catch { ... } try { ... }
D) throw { ... }
Answer: A) try { ... } catch(...) { ... }

160. What will be the output of `cout << 10 / 4;`?
A) 2
B) 2.5
C) 2.0
D) Error
Answer: A) 2

161. Which of the following is not a valid STL container in C++?
A) vector
B) list
C) hashmap
D) map
Answer: C) hashmap

162. Which header file is needed for using `vector` in C++?
A) vector.h
B) stl.h
C) <vector>
D) containers.h
Answer: C) <vector>

163. What does STL stand for in C++?
A) Standard Type Library
B) System Template Library
C) Standard Template Library
D) Static Type Library
Answer: C) Standard Template Library

164. Which STL container uses key-value pairs?
A) list
B) vector
C) map
D) queue
Answer: C) map

165. Which function is used to insert elements in a vector?
A) add()
B) insert()
C) push_back()
D) append()
Answer: C) push_back()

166. How to remove the last element of a vector?
A) pop()
B) remove()
C) erase()
D) pop_back()
Answer: D) pop_back()

167. What is the default underlying container for queue in C++ STL?
A) list
B) vector
C) deque
D) stack
Answer: C) deque

168. Which function is used to access the first element of a vector?
A) get()
B) front()
C) top()
D) begin()
Answer: B) front()

169. What is the time complexity of accessing an element in a vector by index?
A) O(1)
B) O(n)
C) O(log n)
D) O(n log n)
Answer: A) O(1)

170. Which keyword is used to handle memory allocation errors?
A) malloc_error
B) bad_alloc
C) memory_error
D) std_error
Answer: B) bad_alloc

171. How do you declare a constant pointer to an integer?
A) int const *ptr;
B) int *const ptr;
C) const int *ptr;
D) int *ptr const;
Answer: B) int const ptr;

172. What does `delete` keyword do in C++?
A) Deallocates memory
B) Creates a pointer
C) Clears cache
D) Removes a file
Answer: A) Deallocates memory

173. What is the output of `cout << (true && false);`?
A) true
B) false
C) 0
D) 1
Answer: C) 0

174. Which of the following is a preprocessor directive?
A) #include
B) import
C) using
D) namespace
Answer: A) #include

175. What does the following line do?
`int *p = new int;`
A) Declares a pointer
B) Allocates memory for an integer
C) Initializes the pointer
D) All of the above
Answer: D) All of the above

176. How do you define a function template?
A) template <typename T>
B) function <T>
C) template function(T)
D) typename<T> function()
Answer: A) template <typename T>

177. Which type of polymorphism does function overloading exhibit?
A) Dynamic
B) Static
C) Late binding

D) Virtual
Answer: B) Static

B) Prints a tab
C) Prints a newline and flushes output
D) Clears the screen
Answer: C) Prints a newline and flushes output

178. Which type of polymorphism is achieved using virtual functions?
A) Compile-time
B) Early binding
C) Static
D) Run-time
Answer: D) Run-time

183. What does `friend` keyword do?
A) Shares memory
B) Grants access to private members
C) Inherits private members
D) Encrypts class
Answer: B) Grants access to private members

179. Which of these allows the same operator to have different meanings?
A) Operator overloading
B) Function overloading
C) Inheritance
D) Encapsulation
Answer: A) Operator overloading

184. Can constructors be virtual in C++?
A) Yes
B) No
C) Only in abstract classes
D) Only for static classes
Answer: B) No

180. Which operator is overloaded for output in C++?
A) <<
B) >>
C) ==
D) =
Answer: A) <<

185. Which data structure follows LIFO?
A) Queue
B) Stack
C) Array
D) Linked list
Answer: B) Stack

181. What does `cin.fail()` return when an input error occurs?
A) true
B) false
C) 0
D) -1
Answer: A) true

186. Which data structure follows FIFO?
A) Stack
B) Queue
C) Tree
D) HashMap
Answer: B) Queue

182. What does `std::endl` do?
A) Terminates program

187. What is the output of:
```
int a = 5; cout << ++a << a++;
```
A) 56
B) 65

C) 66
D) 55
Answer: C) 66

---

188. Which of the following is a user-defined data type in C++?
A) int
B) float
C) enum
D) char
Answer: C) enum

---

189. What is the size of `int` on most 64-bit compilers?
A) 2 bytes
B) 4 bytes
C) 8 bytes
D) Depends
Answer: B) 4 bytes

---

190. Which is not a loop control statement?
A) break
B) continue
C) switch
D) goto
Answer: C) switch

---

191. Which function is used to allocate memory in C++?
A) malloc()
B) allocate()
C) new
D) calloc()
Answer: C) new

---

192. Which is the correct syntax to deallocate a single dynamically allocated object?

A) delete p;
B) free(p);
C) remove(p);
D) dispose(p);
Answer: A) delete p;

---

193. Which of the following supports exception handling in C++?
A) try
B) throw
C) catch
D) All of the above
Answer: D) All of the above

---

194. What will be the output of `cout << 'A' + 1;`?
A) A
B) 66
C) B
D) Error
Answer: B) 66

---

195. Which of the following best describes a class?
A) Blueprint of object
B) Memory allocation
C) A header
D) A function
Answer: A) Blueprint of object

---

196. Which type of member functions are not inherited?
A) public
B) protected
C) private
D) all are inherited
Answer: C) private

197. Can we have pointers to objects?
A) No
B) Yes
C) Only with dynamic allocation
D) Only with STL
Answer: B) Yes

198. A reference variable is declared using which symbol?
A) *
B) &
C) ->
D) #
Answer: B) &

199. What will this code output?
```
int x = 10; cout << (x == 10 ? "yes" :
"no");
```
A) yes
B) no
C) 10
D) Error
Answer: A) yes

200. C++ was standardized by ISO in which year?
A) 1995
B) 1998
C) 2000
D) 2003
Answer: B) 1998