**1 .What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 2;

int z = x % y;

std::cout << z << std::endl;

return 0;

}

a) 1

b) 2

c) 3

d) 0

**Answer: a) 1**

**2. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int num;

std::cout << "Enter a number: ";

std::cin >> num;

int factorial = 1;

for (int i = 2; i <= num; i++) {

factorial \*= i;

}

std::cout << "Factorial: " << factorial << std::endl;

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "Enter a number: ", wait for user input, and then display the factorial of the input number.

c) The program will display "Enter a number: ", wait for user input, and then display the sum of the factorial series up to the input number.

d) The program will display "Enter a number: ", wait for user input, and

Answer: b) The program will display "Enter a number: ", wait for user input, and then display the factorial of the input number.

**3. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 3;

int z = x++;

std::cout << z << std::endl;

return 0;

}

a) 5

b) 3

c) 6

d) 4

Answer: a) 5

**4. What is the correct way to declare a constant integer named "MAX\_VALUE" in C++?**

A. const MAX\_VALUE = 10;

B. int MAX\_VALUE = 10;

C. #define MAX\_VALUE 10

D. constant MAX\_VALUE = 10;

Answer: C. #define MAX\_VALUE 10

**5. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

x += 3;

x \*= 2;

std::cout << x << std::endl;

return 0;

}

a) 16

b) 13

c) 10

d) 11

Answer: b) 13

**6. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int num;

std::cout << "Enter a number: ";

std::cin >> num;

if (num > 0) {

std::cout << "Positive" << std::endl;

} else if (num < 0) {

std::cout << "Negative" << std::endl;

} else {

std::cout << "Zero" << std::endl;

}

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "Enter a number: ", wait for user input, and then display "Positive", "Negative", or "Zero" depending on the input.

c) The program will display "Enter a number: ", wait for user input, and then display "Positive" or "Negative" depending on the input.

d) The program will display "Enter a number: ", wait for user input, and then display "Zero" only.

**Answer: b) The program will display "Enter a number: ", wait for user input, and then display "Positive", "Negative", or "Zero" depending on the input.**

**7. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int i = 0;

for (; i < 5; i++) {

std::cout << i << " ";

}

return 0;

}

A. 0 1 2 3 4 5

B. 0 1 2 3 4

C. 1 2 3 4 5

D. No output will be displayed

Answer: B. 0 1 2 3 4

**8.What will be the output of the following C++ code?**

#include <iostream>

int main() {

int year;

std::cout << "Enter a year: ";

std::cin >> year;

if (year % 400 == 0) {

std::cout << "Leap year" << std::endl;

} else if (year % 100 == 0) {

std::cout << "Not a leap year" << std::endl;

} else if (year % 4 == 0) {

std::cout << "Leap year" << std::endl;

} else {

std::cout << "Not a leap year" << std::endl;

}

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "Enter a year: ", wait for user input, and then display "Leap year" or "Not a leap year" depending on the input.

c) The program will display "Enter a year: ", wait for user input, and then display the number of leap years from the input year.

d) The program will display "Enter a year: ", wait for user input, and then display the next leap year after the input year.

Answer: b) The program will display "Enter a year: ", wait for user input, and then display "Leap year" or "Not a leap year" depending on the input.

**9. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 2;

int z = x + (y++);

std::cout << z << std::endl;

return 0;

}

a) 7

b) 6

c) 8

d) 5

Answer: a) 7

**10. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int i = 0;

while (i < 5) {

if (i == 3)

break;

std::cout << i << " ";

i++;

}

return 0;

}

A. 0 1 2 3 4

B. 0 1 2

C. 0 1 2 3 4 5

D. No output will be displayed

Answer: B. 0 1 2

**SET-2**

**1.What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 10;

int y = 3;

int z = x % y;

std::cout << z << std::endl;

return 0;

}

a) 1

b) 2

c) 3

d) 0

**Answer: a) 1**

**2. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int num;

std::cout << "Enter a number: ";

std::cin >> num;

int fib1 = 0, fib2 = 1, fib;

std::cout << "Fibonacci series: ";

std::cout << fib1 << " " << fib2 << " ";

for (int i = 2; i < num; i++) {

fib = fib1 + fib2;

std::cout << fib << " ";

fib1 = fib2;

fib2 = fib;

}

std::cout << std::endl;

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "Enter a number: ", wait for user input, and then display the Fibonacci series up to the input number.

c) The program will display "Enter a number: ", wait for user input, and then display the sum of the Fibonacci series up to the input number.

d) The program will display "Enter a number: ", wait for user input, and then display the average of the Fibonacci series up to the input number.

**Answer: b) The program will display "Enter a number: ", wait for user input, and then display the Fibonacci series up to the input number.**

Answer: a) 2

**3. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 2;

int z = ++x + y--;

std::cout << z << std::endl;

return 0;

}

a) 7

b) 6

c) 8

d) 5

Answer: c) 8

**4. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int i = 0;

while (i < 5) {

std::cout << i << " ";

i++;

if (i == 3)

break;

}

return 0;

}

A. 0 1 2

B. 0 1 2 3 4

C. 0 1 2 3

D. No output will be displayed

**Answer: A. 0 1 2**

**5. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int num;

std::cout << "Enter a number: ";

std::cin >> num;

int sum = 0;

for (int i = 1; i <= num; i++) {

sum += i;

}

std::cout << "Sum: " << sum << std::endl;

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "Enter a number: ", wait for user input, and then display the sum of numbers from 1 to the input number.

c) The program will display "Enter a number: ", wait for user input, and then display the product of numbers from 1 to the input number.

d) The program will display "Enter a number: ", wait for user input, and then display the average of numbers from 1 to the input number.

Answer: b) The program will display "Enter a number: ", wait for user input, and then display the sum of numbers from 1 to the input number.

**6. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 3;

int z = (x > y) ? x : y;

std::cout << z << std::endl;

return 0;

}

a) 5

b) 3

c) 8

d) Error

Answer: a) 5

**7. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int num;

std::cout << "Enter a number: ";

std::cin >> num;

bool isPrime = true;

for (int i = 2; i <= num / 2; i++) {

if (num % i == 0) {

isPrime = false;

break;

}

}

if (isPrime) {

std::cout << "Prime number" << std::endl;

} else {

std::cout << "Not a prime number" << std::endl;

}

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "Enter a number: ", wait for user input, and then display "Prime number" if the input number is prime, or "Not a prime number" otherwise.

c) The program will display "Enter a number: ", wait for user input, and then display the number of prime numbers up to the input number.

d) The program will display "Enter a number: ", wait for user input, and then display the next prime number after the input number.

**Answer: b) The program will display "Enter a number: ", wait for user input, and then display "Prime number" if the input number is prime, or "Not a prime number" otherwise.**

**8. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 3;

int z = (x != y) ? x : y;

std::cout << z << std::endl;

return 0;

}

a) 5

b) 3

c) 8

d) Error

Answer: a) 5

**9. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int i = 1;

while (i <= 5) {

std::cout << i << " ";

i++;

}

std::cout << std::endl;

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "1 2 3 4 5 ".

c) The program will display "1 2 3 4 ".

d) The program will display "1 2 3".

**Answer: b) The program will display "1 2 3 4 5 ".**

**10 What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 2;

switch (x) {

case 1:

std::cout << "One" << std::endl;

break;

case 2:

std::cout << "Two" << std::endl;

break;

case 3:

std::cout << "Three" << std::endl;

break;

default:

std::cout << "Other" << std::endl;

}

return 0;

}

a) One

b) Two

c) Three

d) Other

Answer: b) Two

**SET-3**

**1.What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 3;

int z = (x > y) ? (x - y) : (y - x);

std::cout << "The result is: " << z << std::endl;

return 0;

}

a) The result is: 2

b) The result is: 3

c) The result is: 5

d) The result is: 8

Answer: a) The result is: 2

**2. What will be the output of the following C++ code?**

#include <iostream>

int main() {

for (int i = 1; i <= 5; i++) {

if (i == 3) {

continue;

}

std::cout << i << " ";

}

std::cout << std::endl;

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "1 2 3 4 5 ".

c) The program will display "1 2 4 5 ".

d) The program will display "1 2 4 ".

**Answer: c) The program will display "1 2 4 5 ".**

**3. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 10;

int y = 5;

int z = x++ + --y;

std::cout << "The result is: " << z << std::endl;

return 0;

}

a) The result is: 14

b) The result is: 15

c) The result is: 16

d) The result is: 10

Answer: a) The result is: 14

**4. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 10;

int z = 15;

if (x < y && y < z) {

std::cout << "Condition is true" << std::endl;

} else {

std::cout << "Condition is false" << std::endl;

}

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "Condition is true".

c) The program will display "Condition is false".

d) The program will display "Condition is true" if x is greater than y.

**Answer: b) The program will display "Condition is true".**

**5. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

int y = 3;

int z = (x > y) ? (x += y) : (y -= x);

std::cout << "The result is: " << z << std::endl;

return 0;

}

a) The result is: 2

b) The result is: 3

c) The result is: 5

d) The result is: 8

Answer: a) The result is: 2

**6. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int num = 2;

switch (num) {

case 1:

std::cout << "One" << std::endl;

break;

case 2:

std::cout << "Two" << std::endl;

break;

case 3:

std::cout << "Three" << std::endl;

break;

default:

std::cout << "Other" << std::endl;

}

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "One".

c) The program will display "Two".

d) The program will display "Three".

Answer: c) The program will display "Two".

**7. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int i = 1;

do {

if (i % 3 == 0) {

continue;

}

std::cout << i << " ";

i++;

} while (i <= 10);

std::cout << std::endl;

return 0;

}

a) The program will compile but no output will be displayed.

b) The program will display "1 2 3 4 5 6 7 8 9 10 ".

c) The program will display "1 2 4 5 7 8 10 ".

d) The program will display an infinite loop.

Answer: c) The program will display "1 2 4 5 7 8 10 ".

**8. In the context of structures versus classes in programming, which of the following statements is true?**

a) Structures can only contain data members, while classes can have both data members and member functions.

b) Structures and classes are interchangeable and can be used interchangeably in any programming scenario.

c) Structures support inheritance, polymorphism, and encapsulation, just like classes.

d) Structures and classes are identical in every aspect and have no differences.

Answer: a) Structures can only contain data members, while classes can have both data members and member functions.

**9. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 7;

int y = 3;

int z = (x != y) ? (x -= y) : (y += x);

std::cout << "The result is: " << z << std::endl;

return 0;

}

a) The result is: 4

b) The result is: 7

c) The result is: 10

d) The result is: 3

Answer: a) The result is: 4

**10. Object-oriented programming (OOP) is characterized by the following principles, except:**

a) Encapsulation.

b) Inheritance.

c) Abstraction.

d) Sequential execution.

Answer: d) Sequential execution.

**SET-4**

**1. What will be the output of the following C++ code snippet?**

#include <iostream>

#define VALUE 10

int main() {

#if VALUE > 5

std::cout << "VALUE is greater than 5";

#else

std::cout << "VALUE is less than or equal to 5";

#endif

return 0;

}

A. VALUE is greater than 5

B. VALUE is less than or equal to 5

C. Error: Invalid syntax in preprocessor directives

D. No output will be displayed

Answer: A. VALUE is greater than 5

**2. Which of the following best describes the concept of polymorphism in object-oriented programming?**

A. The ability to define multiple methods with the same name but different parameters.

B. The ability to access private data members of a class.

C. The ability to create objects from abstract classes.

D. The ability to override a method in the parent class.

Answer: A. The ability to define multiple methods with the same name but different parameters.

**3. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int i = 0;

while (i < 5) {

if (i == 3)

continue;

std::cout << i << " ";

i++;

}

return 0;

}

A. 0 1 2

B. 0 1 2 3 4

C. 0 1 2 3

D. No output will be displayed

Answer: A. 0 1 2

**4. What will be the output of the following C++ code snippet?**

#include <iostream>

#define VALUE 10

int main() {

#ifdef VALUE

std::cout << "VALUE is defined";

#else

std::cout << "VALUE is not defined";

#endif

return 0;

}

A. VALUE is defined

B. VALUE is not defined

C. Error: Invalid syntax in preprocessor directives

D. No output will be displayed

Answer: A. VALUE is defined

**5. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int arr[] = {1, 2, 3, 4, 5};

int\* ptr = &arr[3];

std::cout << \*(ptr - 1) << std::endl;

return 0;

}

a) 1

b) 2

c) 3

d) 4

Answer: b) 2

**5. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int i = 0;

for (; i < 5; i++) {

if (i == 3)

goto skip;

std::cout << i << " ";

}

skip:

std::cout << "Skipped";

return 0;

}

A. 0 1 2 3 Skipped

B. 0 1 2 3 4 Skipped

C. 0 1 2 4 Skipped

D. No output will be displayed

Answer: C. 0 1 2 4 Skipped

**6. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int i = 5;

do {

std::cout << i << " ";

i--;

} while (i > 0);

return 0;

}

A. 5 4 3 2 1 0

B. 5 4 3 2 1

C. 4 3 2 1 0

D. No output will be displayed

Answer: A. 5 4 3 2 1 0

**7. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int arr[] = {1, 2, 3, 4, 5};

int\* ptr = arr;

std::cout << \*(ptr + 2) << std::endl;

return 0;

}

a) 1

b) 2

c) 3

d) 4

Answer: c) 3

**8. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int arr[] = {1, 2, 3, 4, 5};

int\* ptr = arr;

std::cout << ptr[3] << std::endl;

return 0;

}

a) 1

b) 2

c) 3

d) 4

Answer: d) 4

**9. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int x = 5;

int y = 5;

if (x > y) {

std::cout << "x is greater than y";

}

else if (x < y) {

std::cout << "x is less than y";

}

else {

std::cout << "x is equal to y";

}

return 0;

}

A. x is greater than y

B. x is less than y

C. x is equal to y

D. No output will be displayed

Answer: C. x is equal to y

**10. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int day = 2;

switch (day) {

case 1:

std::cout << "Sunday";

break;

case 2:

std::cout << "Monday";

case 3:

std::cout << "Tuesday";

break;

default:

std::cout << "Other day";

break;

}

return 0;

}

A. Monday

B. MondayTuesday

C. MondayTuesdayOther day

D. MondayOther day

Answer: C. MondayTuesdayOther day

**SET-5**

**1. Which of the following is an example of a preprocessor directive in C++?**

A. for loop

B. if statement

C. #include

D. switch statement

Answer: C. #include

**2. What will be the output of the following C++ code?**

#include <iostream>

void increment(int& value) {

value++;

}

int main() {

int x = 5;

increment(x);

std::cout << "The value of x is: " << x << std::endl;

return 0;

}

a) The value of x is: 4

b) The value of x is: 6

c) The value of x is: 5

d) The code will not compile

Answer: b) The value of x is: 6

**3. Which of the following is a valid C++ variable declaration?**

A. int 123var;

B. float my-var;

C. double \_value;

D. char first name;

Answer: C. double \_value;

**4. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int number = 5;

if (number > 10) {

std::cout << "Number is greater than 10";

}

else if (number > 5) {

std::cout << "Number is greater than 5";

}

else {

std::cout << "Number is less than or equal to 5";

}

return 0;

}

A. Number is greater than 10

B. Number is greater than 5

C. Number is less than or equal to 5

D. No output will be displayed

Answer: C. Number is less than or equal to 5

**5. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int i = 0;

while (i < 5) {

std::cout << i << " ";

i++;

}

return 0;

}

A. 0 1 2 3 4

B. 0 1 2 3 4 5

C. 1 2 3 4 5

D. No output will be displayed

**Answer: A. 0 1 2 3 4**

**6. Which of the following is a valid preprocessor directive in C++?**

A. #while

B. #ifdef

C. #function

D. #endif

Answer: B. #ifdef

**7. Which of the following is a valid if-else statement in C++?**

A. if (condition)

// Code block 1

else

// Code block 2

B. if (condition) {

// Code block 1

else {

// Code block 2

}

C. if (condition) {

// Code block 1

}

else

// Code block 2

D.if (condition)

// Code block 1

elseif

// Code block 2

**Answer: C.**

**8. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

for (int i = 0; i < 5; i++) {

if (i == 3)

continue;

std::cout << i << " ";

}

return 0;

}

A. 0 1 2 4

B. 0 1 2 3 4

C. 0 1 2

D. No output will be displayed

**Answer: A. 0 1 2 4**

**9. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int x = 5;

switch (x) {

case 1:

std::cout << "Value is 1";

break;

case 2:

std::cout << "Value is 2";

break;

default:

std::cout << "Value is neither 1 nor 2";

break;

}

return 0;

}

A. Value is 1

B. Value is 2

C. Value is neither 1 nor 2

D. No output will be displayed

**Answer: C. Value is neither 1 nor 2**

**10. What will be the output of the following C++ code snippet?**

#include <iostream>

int main() {

int i = 0;

do {

std::cout << i << " ";

i++;

} while (i < 5);

return 0;

}

A. 0 1 2 3 4 5

B. 0 1 2 3 4

C. 1 2 3 4 5

D. No output will be displayed

Answer: B. 0 1 2 3 4

**SET-6**

1. **Which concept of object-oriented programming (OOP) allows a class to inherit properties and behaviors from another class?**

A. Polymorphism

B. Abstraction

C. Encapsulation

D. Inheritance

Answer: D. Inheritance

**2. Which of the following statements is true about object-oriented programming (OOP)?**

A. OOP emphasizes global data and functions.

B. OOP is based on the top-down approach.

C. OOP focuses on data and behavior encapsulated within objects.

D. OOP does not support inheritance and polymorphism.

Answer: C. OOP focuses on data and behavior encapsulated within objects.

**3. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int x = 5;

if (x > 10) {

std::cout << "x is greater than 10";

}

else if (x > 5) {

std::cout << "x is greater than 5";

}

else {

std::cout << "x is less than or equal to 5";

}

return 0;

}

A. x is greater than 10

B. x is greater than 5

C. x is less than or equal to 5

D. No output will be displayed

Answer: C. x is less than or equal to 5

**4. What will be the output of the above C++ code snippet?**

#include <iostream>

int main() {

int i = 0;

while (i < 5) {

if (i == 3)

break;

std::cout << i << " ";

i++;

}

return 0;

}

A. 0 1 2

B. 0 1 2 3 4

C. 0 1 2 3

D. No output will be displayed

Answer: A. 0 1 2

**5.What will be the output of the following C++ code?**

#include <iostream>

int main() {

int arr[5] = {1, 2, 3, 4, 5};

int\* ptr = &arr[0];

std::cout << \*(ptr + 3) << std::endl;

return 0;

}

a) 1

b) 2

c) 3

d) 4

Answer: d) 4

**6. What will be the output of the follwoing C++ code snippet?**

#include <iostream>

int main() {

int day = 2;

switch (day) {

case 1:

std::cout << "Sunday";

break;

case 2:

std::cout << "Monday";

case 3:

std::cout << "Tuesday";

break;

default:

std::cout << "Other day";

break;

}

return 0;

}

A. Sunday

B. Monday

C. Tuesday

D. Other day

Answer: C. Tuesday

**7. Which of the following is an advantage of using classes over structures in C++?**

A. Classes allow for the declaration of variables with different data types.

B. Structures support inheritance and polymorphism.

C. Classes can have member functions, whereas structures cannot.

D. Structures have better memory management compared to classes.

Answer: C. Classes can have member functions, whereas structures cannot.

**8. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int arr[] = {1, 2, 3, 4, 5};

int\* ptr = arr + 2;

std::cout << \*(ptr - 1) << std::endl;

return 0;

}

a) 1

b) 2

c) 3

d) 4

Answer: b) 2

**9. What will be the output of the following C++ code?**

#include <iostream>

int main() {

int a = 2;

int b = 3;

int c = 4;

if (a < b && b < c) {

std::cout << "Condition 1";

}

else if (a == b || b == c) {

std::cout << "Condition 2";

}

else {

std::cout << "Condition 3";

}

return 0;

}

What will be the output of the above C++ code snippet?

A. Condition 1

B. Condition 2

C. Condition 3

D. Compilation Error

Answer: B. Condition 2

**10. What will be the output of the following C++ code?**

#include <iostream>

int main() {

for (int i = 1; i <= 5; i++) {

std::cout << i << " ";

if (i == 3)

break;

}

return 0;

}

A. 1 2 3

B. 1 2 3 4 5

C. 1 2 3 4

D. No output will be displayed

Answer: A. 1 2 3