



UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 2 Examination, November 2017.

Module No: EE2201 Module Name: Object Oriented Programming

Part-A

[One hour]

Instructions for candidates

- Write your index number on top of every page.
- Question paper contains 40 multiple choice questions.
- Answer all questions. Each question has only one answer.
- Each question carries 0.5 mark.
- Read the question and all answers before making the choice.
- For each question, put an X mark on the letter: (a), (b), (c), or (d) which corresponds to the correct answer, by using a black or blue pen.

1. What is the output of following code segment?

```
#include <iostream>
using namespace std;
int main()
{
    int numbers[] = { 2,4,5,7,1,3 };

    cout << *(numbers + 2);
    return 0;
}
```

- (a) 2
- (b) 4
- (c) 5
- (d) none of the above.

2. Which type is best suited to represent the logical values?

- (a) integer

- (b) boolean
- (c) character
- (d) double

3. What is the output of gcd(15,12) ?

```
int gcd(int n, int m)
{
    if (n % m == 0) return m;
    n = n % m;
    return gcd(m, n);
}
```

- (a) 12
- (b) 15
- (c) 5
- (d) 3

4. The value 132.54 can be represented by using data type

- (a) int
- (b) void

- (c) double
(d) bool
5. What is the output of following code segment?
- ```
#include <iostream>
using namespace std;
int main()
{
 cout << sizeof(char) << " ";
 cout << sizeof(int) << " ";
 cout << sizeof(float);
 return 0;
}
```
- (a) 8 32 32  
(b) 1 4 4  
(c) 8 23 64  
(d) none of the above.
6. What is correct about following code segment?
- ```
void swap(int & lhs, int & rhs)
{
    int temp;
    temp = lhs;
    lhs = rhs;
    rhs = temp;
}
```
- (a) It can be used to swap any two variables.
(b) It can be used to swap two integer variables.
(c) The numbers will not be swapped.
(d) A compilation error occurs.
7. Which of the following is NOT an Arithmetic operator in C++?
- (a) %
(b) ++
(c) /
(d) +
8. Which of the following statements is incorrect about constructors in C++?
- (a) Constructors cannot be overloaded.
(b) Constructors always have the name, same as the name of the class.
(c) Constructors never return any value.
(d) Constructors allocate space for the object in memory.
9. The capability of an object in C++ to take number of different forms and hence display behavior accordingly is known as:
- (a) Inheritance
(b) Encapsulation
(c) Polymorphism
(d) Abstraction
10. How many values does a function in C++ returns?
- (a) 0
(b) 2
(c) 1
(d) any number of values
11. What is the output of the following code segment.
- ```
int sum = 0;
for (int i = 1, j = 0; i < 5 && j < 9;
 i++, j = j + 2)
 sum += i + j;
cout << "sum =" << sum << endl;
```
- (a) 35  
(b) 16  
(c) 20  
(d) 22
12. What is meant by the return data type of void?

- (a) void area in memory is returned so that you can populate it.  
 (b) void is not a valid data type.  
 (c) No data type is returned.  
 (d) None of the above
13. Which of the following statements is correct about an inheritance used in C++?
- (a) One class can be inherited by only one class.  
 (b) One class can be inherited by one or more classes.  
 (c) Inherited class can use all member variables of the base class  
 (d) All of the above are wrong.
14. If a program compiles fine, but it produces an error during the execution of a program, then the program suffers a
- (a) compilation error.  
 (b) runtime error.  
 (c) logical error.  
 (d) syntax error.
15. Which access specifier will you use to make base class members accessible in the derived class and not accessible for the rest of the program?
- (a) public  
 (b) private  
 (c) protected  
 (d) static
16. What is the output of the following code?
- ```
int i = 1, j = 1;
while (++i <= 10)
{
    j++;
}
cout<<i << " " << j <<endl;
return 0;
```
- (a) 10, 10
 (b) 11, 11
 (c) 11, 10
 (d) 10, 9
17. Which of the following is a properly defined structure?
- (a) `struct {int a;}`
 (b) `struct a_struct {int a;}`
 (c) `struct a_struct int a;`
 (d) `struct a_struct {int a;};`
18. Which of the following accesses variable var in structure *b?
- (a) `b->var;`
 (b) `b.var;`
 (c) `b-var;`
 (d) `b>var;`
19. What is the output of the following code segment?
- ```
int i = 2, j = 4;
switch (i + j * 2)
{
 case 1:
 case 2:
 cout<<"1 and 2";
 break;
 case default:
 cout<<"3 to 10";
 break;
}
```
- (a) "1 and 2"  
 (b) "3 to 10"  
 (c) Compilation error.  
 (d) none of the above.
20. What term is used to describe the internal representation of an object that is hidden from view outside the object's definition?

- (a) Encapsulation  
 (b) Expandable  
 (c) Polymorphism  
 (d) Inheritance
21. Which object oriented concept is related to the derivation of a class based on another class?
- (a) Inheritance  
 (b) Data Hiding  
 (c) Encapsulation  
 (d) Polymorphism
22. What is the output of the following C# code?
- ```
int a = 5;
int b = 10;
int c = ++a + b++;
cout << c <<" " << b << endl;
```
- (a) 11 10
 (b) 16 10
 (c) 16 11
 (d) 15 11
23. What is the output of the following code?
- ```
int a, b, c, x;
a = 90;
b = 15;
c = 3;
x = a - b / 3 + c * 2 - 1;
cout << x;
```
- (a) 92  
 (b) 89  
 (c) 90  
 (d) 88
24. Which of the following statements is correct after executing the following C# code snippet given below?
- ```
Student* std1, *std2;
std1 = new Student();
std2 = new Student();
```
- (a) Contents of std1 and std2 will be exactly same.
 (b) The two objects will get created on the stack memory.
 (c) Contents of the two objects will be exactly same.
 (d) The two objects will always be created in adjacent memory locations.
25. What is the output of the following code segment?
- ```
void Func1(int& a)
{
 a = a * a;
}

int main()
{
 int k = 5;
 Func1(k);
 cout << k << endl;
}
```
- (a) 5  
 (b) 25  
 (c) 10  
 (d) Compilation error.
26. Which of the following correctly declares an array?
- (a) `int array[10];`  
 (b) `int array;`  
 (c) `array{10};`  
 (d) `array array[10];`
27. What is the output of the following code segment?

```
int arr[] = { 4, 5, 6, 7 };
int *p = (arr + 2);
cout << *arr + *p;
```

- (a) 9
- (b) 11
- (c) 10
- (d) Syntax error.

28. What is the output of the following code segment?

```
#include <iostream>
using namespace std;
int func (int a, int b)
{
 cout << a << b;
 return 0;
}
int main(void)
{
 int(*ptr)(char, int);
 ptr = func;
 func(2, 3);
 ptr(2, 3);
 return 0;
}
```

- (a) 2323
- (b) 23
- (c) 232
- (d) Compilation error.

29. What does a C++ class can hold?

- (a) data
- (b) functions
- (c) both data and functions
- (d) none of the mentioned

30. The fields in the class in C++ program are by default

- (a) protected
- (b) private

- (c) public
- (d) none of the mentioned

31. What will happen in the C++ program when **struct** is used instead of the keyword **class**?

- (a) access is public by default
- (b) access is private by default
- (c) access is protected by default
- (d) none of the mentioned

32. What is meant by pure virtual function?

- (a) Function which does not have definition of its own
- (b) Function which does have definition of its own
- (c) Function which does not have any return type
- (d) None of the mentioned

33. Pick out the correct statement.

- (a) We cannot make an instance of an abstract base class
- (b) We can make an instance of an abstract base class
- (c) We can make an instance of an abstract super class
- (d) None of the mentioned

34. How the constants are declared?

- (a) **const** keyword
- (b) **#define** preprocessor
- (c) both **const** keyword and **#define** preprocessor
- (d) none of the mentioned

35. By default how the values are passed to a function in C++?

- (a) call by value
- (b) call by reference
- (c) call by pointer
- (d) none of the mentioned

36. What is the output of the following code segment?

```
#include <iostream>
using namespace std;
void square (int *x)
{
 *x = (*x + 1) * (*x);
}
int main ()
{
 int num = 10;
 square(&num);
 cout << num;
 return 0;
}
```

- (a) 10
- (b) 121
- (c) 110
- (d) Compilation error.

37. In which type does the enumerators are stored by the compiler?

- (a) string
- (b) integer
- (c) float
- (d) none of the mentioned

38. Which value we cannot assign to reference?

- (a) integer
- (b) floating
- (c) unsigned
- (d) null

39. Which reference modifier is used to define reference variable?

- (a) &
- (b) \$
- (c) #
- (d) none of the mentioned

40. Evaluate the following

`(false && true) || false || true`

- (a) 0
- (b) 1
- (c) false
- (d) none of the mentioned