



UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 2 Examination in Engineering,  
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Module No: EE2201    Module Name: Object Oriented Programming - REPEAT

Part-A

[ One Hour ]

**Instructions for candidates**

- Write your index number on top of the 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. Which data type can represent the largest integer number?  
(a) int  
(b) uint  
(c) short  
(d) byte  
(c) double  
(d) float
2. Which of the following data types is an Integer?  
(a) decimal  
(b) long  
(c) float  
(d) double
3. Which of the following data types has largest size in bits?  
(a) int  
(b) decimal
4. Which of the following are not C# value types?  
(a) char  
(b) short  
(c) string  
(d) struct
5. How many values does a Method returns?  
(a) 0  
(b) 2  
(c) 1  
(d) any number of values
6. 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.
7. What is the output of following code segment?
- ```
int i = 1, j;
do
{
  for (j = 2; ; j++)
  {
    if (j > 3) break;
    if (i == j) continue;
    Console.Write(i + " " + j + " ");
  }
  i++;
} while (i < 3);
```
- (a) 1 2 1 3 2 3  
 (b) 1 2 2 3  
 (c) 1 2 1 3  
 (d) none of the above.
8. 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
9. Which of the following statements are correct about the C# code snippet
- ```
int[] A = {1, 2, 4, 5, 6};?
```
- (a) A[0] = 5 gives an compilation error.  
 (b) Whether the array elements are stored in the stack or heap depends upon the size of the array.  
 (c) A is a reference type variable.  
 (d) Reference A is created on the stack.
10. What is correct about following code segment?
- ```
int N = 1000000;
string s="";
for (int i = 0; i < N; i++)
s += "number" + i + " \n";
```
- (a) Final string will contain a single line.  
 (b) Initial string will be modified N times.  
 (c) N + 1 number of strings will be created  
 (d) compilation error occurs.
11. What is the possible answer of following code segment?
- ```
DateTime t = DateTime.Now;
string date = t.ToString("d");
Console.WriteLine(date);
```
- (a) 12/17/2015  
 (b) Thursday, December 17, 2015  
 (c) 12/17/2015 12:00 AM  
 (d) compilation error occurs.
12. 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.

13. Which of the following statements is correct about constructors?

- (a) If we provide a one-argument constructor then the compiler still provides a zero-argument constructor.
- (b) If we do not provide a constructor, then the compiler provides a zero-argument constructor.
- (c) Constructors can not be declared as **static**.
- (d) Constructors cannot be overloaded.

14. Which of the following is the correct way to create an object of the class Circle?

- (a) `Circle s = new circle();`
- (b) `Circle s;`
- (c) `var s; s = new Circle();`
- (d) `var s = new Circle();`

15. A Rectangle class has a property called Height. Variable rect which is a reference to a Rectangle object and we want the statement `var h = rect.Height` to fail. Which of the following options will ensure this functionality?

- (a) Declare Height property without a set accessor.
- (b) Declare Height property without get accessor.
- (c) Declare Height property with both get and set accessors.
- (d) None of the above.

16. What is correct about following code segment?

```
void Swap<T>(ref T lhs, ref T rhs)
{
    T temp;
    temp = lhs;
```

```
    lhs = rhs;
    rhs = temp;
}
```

- (a) It can't be used to swap value types variable.
- (b) It can't be used to swap reference types variable.
- (c) It swaps both value type and reference types.
- (d) A compilation error occurs.

17. Which of the following is NOT an Arithmetic operator in C#?

- (a) %
- (b) ++
- (c) /
- (d) +

18. Which of the following statements is correct about an Exception?

- (a) It occurs during linking.
- (b) It occurs during loading of the program.
- (c) It occurs at run-time.
- (d) It occurs during compilation.

19. Which of the following statements is valid about generic procedures in C#?

- (a) Generic procedures can take at the most one generic parameter.
- (b) All procedures in a Generic class are generic.
- (c) Generic methods can not be static.
- (d) Generic procedures must take at least one generic type parameter.

20. 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;
Console.Write(sum);
```

- (a) 35  
(b) 16  
(c) 20  
(d) 22
21. Which of the following statements is correct about properties used in C#?
- (a) A property can be either read only or write only.  
(b) A write only property will have only get accessor.  
(c) A property can simultaneously be read only or write only.  
(d) A write only property will always return a value.
22. 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
23. Which of the following can not be declared in an interface?
- (a) Properties  
(b) Methods  
(c) Indexers  
(d) Structures
24. Which of the following statements is correct about an interface used in C#?
- (a) One class can implement only one interface.  
(b) Properties can be declared inside an interface.  
(c) In a program if one class implements an interface then no other class in the same program can implement this interface.  
(d) Interfaces cannot be inherited.
25. 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**
26. What is the output of the following code?
- ```
int i = 1, j = 1;
while (++i <= 10)
{
    j++;
}
Console.WriteLine(i + " " + j);
```
- (a) 10, 10  
(b) 11, 11  
(c) 11, 10  
(d) 10, 9
27. What is the output of the following code segment?
- ```
int i = 2, j = 4;
switch (i + j * 2)
{
    case 1:
    case 2:
        Console.WriteLine("1 and 2");
        break;
    case 3 to 10:
        Console.WriteLine("3 to 10");
        break;
}
```
- (a) "1 and 2"  
(b) "3 to 10"  
(c) Compilation error.  
(d) none of the above.

28. What is correct after executing the following C# code?

```
String str1 = "Hello";  
String str2 = str1;  
str1 = str1 + " World";
```

- (a) str1 contains string "HelloWorld".
- (b) str2 contains string "Hello World".
- (c) str2 contains string "Hello".
- (d) str1 contains string "Hello".

29. What is true about a namespace in C#?

- (a) namespace is a part of a class.
- (b) namespace create directory structure according to its hierarchy.
- (c) namespace is a logical grouping of components.
- (d) none of the above is correct.

30. **foreach** loop can not be used to iterate

- (a) array elements.
- (b) lists elements.
- (c) structure elements.
- (d) can be used with all of the above.

31. What is true about an indexer in C#?

- (a) It converts an object to an array.
- (b) It allows to treat an object instance as an array.
- (c) Indexer does not have a return type.
- (d) All of the above is not correct.

32. Which of the following data types is most suitable for financial calculations?

- (a) float
- (b) int
- (c) double
- (d) decimal

33. What is the use of **try** and **catch** block?

- (a) It is used to manually handle the exception
- (b) It helps to fix the errors
- (c) It prevents automatic terminating of the program in cases when an exception occurs
- (d) All of the mentioned

34. What is the output of the following C# code?

```
class Program  
{  
    static void Main()  
    {  
        int a = 5;  
        int b = 10;  
        int c;  
        Console.Write(c= ++a + b++);  
        Console.Write(b);  
    }  
}
```

- (a) 1110
- (b) 1610
- (c) 1611
- (d) 1511

35. What is correct about **internal** access modifier in C#?

- (a) It can be accessed only by derived classes.
- (b) It can be accessed only within the same class.
- (c) It can be accessed only within the assembly.
- (d) None of the above.

36. What is the output of the following code?

```

class Program
{
    static void Main()
    {
        int a, b, c, x;
        a = 90;
        b = 15;
        c = 3;
        x = a - b / 3 + c * 2 - 1;
        Console.WriteLine(x);
        Console.ReadLine();
    }
}

```

- (a) 92
- (b) 89
- (c) 90
- (d) 88

37. What is the output of following C# code?

```

public class Output
{
    static void Main()
    {
        int a = 5;
        int s = 0, c = 0;
        Power23(a, ref s, c);
        Console.WriteLine(s + " " + c);
        Console.ReadLine();
    }

    static void Power23(int x,
        ref int x2, int x3)
    {
        x2 = x * x;
        x3 = x * x * x;
    }
}

```

- (a) 0 125

(b) 25 125

(c) 0 0

(d) 25 0

38. 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 created will be exactly same.
- (d) The two objects will always be created in adjacent memory locations.

39. Which among the following cannot be used as a data type for an enum in C#.NET?

- (a) short
- (b) double
- (c) int
- (d) byte

40. Correct method to define + operator the in Samaple class is ?

- (a) `public void operator +(Sample a, Sample b)`
- (b) `public abstract Sample operator +(Sample a, Sample b)`
- (c) `public static Sample operator +(Sample a, Sample b)`
- (d) `public abstract Sample operator +(Sample a, Sample b)`