

Examination: Summer Examination 2017

Course: Visual Programming
Course Code: CS-2201
Roll No: _____
Name: _____

Allowed Time = 155 mins
Total Marks = 48

PART B: Subjective Questions

Note: Attempt any four questions

Q2. (a) What is the difference between interface and abstract class with example. **(4-marks)**

(b) Create an abstract Animal class that has private members weight and name, and abstract method Speak(), Move() and ToString(). Derive from Animal a Cat class and a Dog class that have property Name and Weight (both setter and getter for name and weight) and override the methods appropriately. Create and Animal array, populate it with Dog and Cat, and then call each member's overridden virtual methods. **(8-marks)**

Q3. (a) Explain interfaces and how it is created in C# with suitable examples? **(6-marks)**

(b) What is indexer? Explain how it is different from property in term of implementation. **(6-marks)**

Q4. (a) What is synchronization? Define this process with some coded example. **(6-marks)**

(b) Define delegates and events? Explain their interconnectivity with some coded example. **(6-marks)**

Q5. (a) For the following C# code: **(6-marks)**

```
This.inputText.Text = "20";
string inputString = inputText.text;
string outputString = "";
int n = Convert.ToInt(inputString);
for(int checkNumber = 2; checkNumber<=n; checkNumber++)
{
    bool isPrime += true;
    foreach(int i=2; i< checkNumber; i++)
    {
        if(checkNumber%i == 0)
        {
            isPrime = false;
            break;
        }
    }
    if(isPrime)
    {
        outputString += checkNumber+ " ";
    }
}
```

P.T.O

```
outputLabel.Text = outputString.Text;
```

```
}
```

- i. Identify the errors (any) in the code.
- ii. Correct the each error by giving a solid reason.
- iii. Re-write the complete code after correction.
- iv. Give the output of the code after correction.

(b) Declare and initialize a two dimensional array of order 9*9 with random values having exactly 3 digits. (6-marks)
Calculates the sum of all values and display the sum using a label.

Q6. You are required to build 3 classes named Person, Student and Teacher. The Student and Teacher class should be derived from Person. Properties: Name, Age, Address, RollNo, ClassName, Session, Qualification and Specialization should be added in appropriate classes. Declare one instance for each class in Main function and set data accordingly. Display the information for each instance using a display method for Person class that should be overridden in each child class. (12-marks)

Good luck ...

GC University Lahore

Examination: Final Examination 2017

Semester: IV
 Course: Visual Programming
 Course Code: CS-2201

Allowed Time = 25 mins
 Total Marks = 12

PART A: Objective Type Questions

Marks

1. When doing an update, which method of SqlCommand is best to use?
 a. ExecuteQuery
 b. ExecuteUpdate
 c. ExecuteNonQuery
 d. ExecuteCommand
 1
2. A delegate defines _____
 a. Class that encapsulates methods
 b. Means of passing arrays into methods
 c. Substitute for an inherited method
 d. None of the above
 1
3. A property is called read only property if and only if it has
 a. Get method
 b. Set method
 c. Both get and set method
 d. Any of get or set method
 1
4. Which of the following is not the feature of C#?
 a. Operator overloading is not allowed
 b. Multiple inheritance is not supported but interfaces are supported.
 c. Enumeration members are scoped
 d. None of above
 1
5. Static void Main(string[] args)
 {
 int a = 4;
 int b = 7;
 b+=++a+b++;
 Console.Write(b++ +",");
 Console.Write(++b);
 }
 a. 19,21
 b. 20,21
 c. 19,22
 d. 20,22
 1
6. An "object" element can have _____ type/s of children
 a. Four
 b. Three
 c. Two
 d. One
 1
7. Which of the following is not the feature of C#?
 a. Operator overloading is not allowed.
 b. Multiple inheritance is not supported but interfaces are supported.
 c. Enumeration members are scoped.
 d. Global variables or functions are not allowed.
 1
8. At the time an event is fired, the _____ methods will be invoked
 a. Registered
 b. Static
 c. Unregistered
 d. Public
 1
9. The _____ are the Graphical User Interface (GUI) components created for web based interactions.
 a. Web forms
 b. Windows forms
 c. Applications forms
 d. None of the above
 1

P.T.O

10. Select the types of threads mentioned in the concept of multithreading:
- a. Foreground
 - b. Background
 - c. Only a
 - d. Both a & b
11. Which of the following is the root of the .NET type hierarchy?
- a. System.Object
 - b. System.Type
 - c. System.Root
 - d. System.Parent
12. An interface declaration cannot contain:
- a. Properties
 - b. Indexers
 - c. Data members
 - d. Events
13. In the body of a method, C# uses the variable named _____ to refer to the current object whose method is invoked
- a. call
 - b. this
 - c. do
 - d. that
14. C# does not support _____ array:
- a. Multi-dimensional
 - b. Dynamic
 - c. Nested
 - d. Subarray

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Examination: Final Examination 2017

Semester: IV
 Course: Visual Programming
 Course Code: CS-2201
 Roll No: _____
 Name: _____

Allowed Time = 155 mins

Total Marks = 48

PART B: Subjective Questions

Note: Attempt any four questions

- Q2. (a) What is the difference between interface and abstract class with example. (5-marks)
- (b) Create an abstract Animal class that has private members weight and name, and abstract method Speak(), Move() and ToString(). Derive from Animal a Cat class and a Dog class that have property Name and Weight (both setter and getter for name and weight) and override the methods appropriately. Create and Animal array, populate it with Dog and Cat, and then call each member's overridden virtual methods. (7-marks)
- Q3. (a) Explain interfaces and how it is created in C# with suitable examples? (6-marks)
- (b) What is indexer? Explain how it is different from property in term of implementation. (6-marks)
- Q4. (a) What is synchronization? Define this process with some coded example. (6-marks)
- (b) Explain SQL, DDL, DML briefly. (4-marks)
- (c) Explain Value vs Reference parameters? (2-marks)
- Q5. (a) For the following C# code: (6-marks)

```
This.inputText.Text = "20";
string inputString = inputText.text;
string outputString = "";
int n = Convert.ToInt(inputString);
for(int checkNumber = 2; checkNumber<=n; checkNumber++)
{
    bool isPrime += true;
    foreach(int i=2; i< checkNumber; i++)
    {
        if(checkNumber%i == 0)
        {
            isPrime = false;
            brake;
        }
    }
    if(isPrime)
    {
```

p.T.O

```
        outputString += checkNumber+ " ";  
    }  
    outputLabel.Text = outputString.Text;
```

- i. Identify the errors (any) in the code.
- ii. Correct the each error by giving a solid reason.
- iii. Re-write the complete code after correction.
- iv. Give the output of the code after correction.

(b) Declare and initialize a two dimensional array of order 9*9 with random values having exactly 3 digits. Calculates the sum of all values and display the sum using a label. **(6-marks)**

Q6. Define a complete query application for the Publication database. Provide the following predefined queries: **(12-marks)**

- a) Select all authors from the Authors table.
- b) Select all journals from the Journals table.
- c) Select a specific author and list all publications for that author. Include the paper title, year and supporting authors.
- d) Select a specific journal and list all papers published by different authors in that journal. Include the paper title, author name, year and journal volume.
- e) Provide a query that insert new record of author and journal in tables

Good luck ...

ster: IV
se: (Visual Programming) Elective - I
se Code: CS-2201

Allowed Time = 25mins
Total Marks = 14

PART A: Objective Type Questions

All C# applications begin execution by calling

- a. Class()
- b. Main()
- c. Submain()
- d. Namespace

An abstract class cannot be instantiated?

- a. False
- b. True

Which of the following statements is correct about properties used in C#.NET?

- a. A property can simultaneously be read only or write only.
- b. A property can be either read only or write only.
- c. A write only property will have only get accessors.
- d. A write only property will always return a value.

Array in c# are _____ objects.

- a. Reference
- b. Logical
- c. Value
- d. Arithmetic

Parameters list is always enclosed in _____

- a. Square
- b. Semicolon
- c. Parenthesis
- d. Colon

The C# provides special methods known as _____ method to provide access to private data members.

- a. Loop
- b. Functions
- c. Methods
- d. Accessors

The theory of _____ implies that user control the access to class, methods, or variables.

- a. Data hiding
- b. Encapsulation
- c. Information hiding
- d. Polymorphism

Which of the following .NET components can be used to remove unused references from the managed heap?

- a. Common Language Infrastructure
- b. CLR
- c. Garbage Collector
- d. Class Loader

Interface can implement their member functions?

- a. False
- b. True

Namespace _____ contains special classes and interfaces for manipulating SQLServer databases in C#.

- a. System.Data
- b. System.Data.SqlClient
- c. System.ServiceModel
- d. System.Data.OleDb

All forms, components and controls are Classes.

- a. False
- b. True

In C# Thread.Sleep (time) measures time in:

- a. seconds
- b. millisecond
- c. nanosecond
- d. all of the above

WCF services can communicate with _____

- a. Multiple platform and multiple languages.
- b. Only the languages included with Visual Studio. NET.
- c. XML.
- d. All programming languages.

Which of the following is not the method of DataAdapter?

- a. get
- b. set
- c. access
- d. all of the above

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Examination: Final 2014

Semester: IV
Course: (Visual Programming) *Elective - I*
Course Code: CS-2201
Roll No: _____
Name: _____

Allowed Time = 130 mins
Total Marks = 56

PART B: Subjective Questions

Note: Attempt any four questions

- Q2. (a) What is ADO and how it is helpful in access of any data? (4 marks)
(b) Define a complete query application for the Books database. Provide a series of predefined queries with an appropriate name for each query displayed in a System.Windows.Forms.ComboBox. Provide the following predefined queries in C#: (10 marks)
- a) Select all authors from the Authors table.
 - b) Select all publishers from the Publishers table.
 - c) Select a specific author and list all books for that author. Include the title, year and ISBN number.
 - d) Select a specific publisher and list all books published by that publisher. Include the title, year and ISBN number.
 - e) Provide a query that insert new record of author and publishers in tables
- Q3. Write a short answer of following questions;
- a) What is CLR and MSIL? Why they are used? (4 marks)
 - b) What is the difference between class and interface? (4 marks)
 - c) What is inheritance and abstract class? Explain your answer with some example. (6 marks)
- Q4. (a) Define delegates, Events and their interconnectivity with some Coded Example. (10 marks)
(b) Define Endpoint and Address, Binding and Contract in WCF? (4 marks)
- Q5. Explain these concepts with the help of any example;
- a) What are Threads? (3 marks)
 - b) How Threads are use in C# code? (3 marks)
 - c) What are the functions for threads manipulation? Explain your answer with some example. (8 marks)
- Q6. Write a program using arrays that takes input of 5 subjects for three students from user. (14 Marks)
Your program should produce grade for each student on the basis of his average.

*Note: Grade range (90-100 = A+, 80-90 = A, 70-80 = B, 60-70 = C, 50-60 = D and <50 = F

Good luck ...