

**2021**

Time : 3 Hours

Full Marks : 80

**BH-250**

Candidates are required to give their answers in their own words as far as practicable.

The questions are of equal value.

Answer any five questions in which

**Q. No.-1 Compulsory.**

1. Choose the correct alternatives of the following:
  - (i) How many Bytes are stored by 'Long' Data type in C# .net?
    - (a) 8
    - (b) 4
    - (c) 2
    - (d) 1

(ii) correct Declaration of Values to Variables 'a' and 'b'?

- (a) `int a = 32, b = 40.6;`
- (b) `int a = 42; b = 40;`
- (c) `int a = 32; int b = 40;`
- (d) `int a = b = 42;`

(iii) Arrange the following data type in order of increasing magnitude sbyte, short, long, int.

- (a) `long < short < int < sbyte`
- (b) `sbyte < short < int < long`
- (c) `Short < sbyte < int < long`
- (d) `Short < int < sbyte < long`

(iv) Correct way to assign values to variable 'c' when `int a = 12, float b = 3.5, int c;`

- (a) `c = a + b;`
- (b) `c = a + int(float(b));`
- (c) `c = a + convert.ToInt32(b);`
- (d) `c = int(a + b);`

(v) Default Type of number without decimal is?

- (a) Long Int
- (b) Unsigned Long
- (c) Int
- (d) Unsigned Int

(vi) A float occupies 4 bytes. If the hexadecimal equivalent of these 4 bytes are A, B, C and D, then when this float is stored in memory in which of the following order do these bytes gets stored?

- (a) ABCD
- (b) DCBA
- (c) 0 \* ABCD
- (d) Depends on big endian or little-endian

architecture

(vii) Correct statement about strings are?

- (a) a string is created on the stack
- ~~(b)~~ a string is primitive in nature
- ~~(c)~~ a string created on heap
- (d) created of string on a stack or on a heap depends on the length of the string

(viii) The following C# codes are?

- 1. 1. MyClassclass;
  - 2. MyClass class2 = null;
  - 3. 2. int l;
  - 4. int j = 0;
- (a) True for (1); False for (2)
  - ~~(b)~~ True for (2); False for (1)
  - ~~(c)~~ Both (1) and (2) are equivalents
  - (d) Both (1) and (2) are not equivalents

2. write short notes on:

- (a) Invocation of a method mean, and
- (b) Hierarchy of operators

3. Differentiate between Constructors and Destructors in the context of C# using suitable programming example?

4. Write a C# program to find the roots of Quadratic equation  $ax^2+bx+c=0$ , take input of the coefficients a, b and c from the user?

- 5. (a) What is associability related to evaluation of expression?
- (b) Differentiate between? Formal Parameters and Actual Parameters?

6. What is Object Lifetime? Explain the sequence of events involved in finalization process using proper diagram and suitable example.

7. (a) What is the difference between static polymorphism and dynamic polymorphism in C#? Explain in using a C# Code?

(b) What is the difference between System. Application Exception class and System. System Exception class?

8. (a) Explain in detail about CLR Debugger.

(b) What is inheritance? Explain the various forms of inheritance with examples in C#.

9. (a) Write a program to initialize strings using constructors? Also read values of all primitive data type from keyboard and print the same

(b) Write a program to print weekdays using enum data type?

10. (a) What is a structure and enumeration in C#?

(b) Write a program to initialize strings using constructors. Also read values of all primitive data type from keyboard and print the same.

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