

**Instructions:**

- **Figures to the right indicate Full Marks.**
- **Do not write anything on the question paper.**

**A.) Multiple Choice Questions**

- | No.   | Marks |
|---|-------|
| 1.)   | [03]  |
| Which of these is the correct way to create an empty array of strings in Swift? |       |
| A) let names = Array<String>()  |       |
| B) let names = [String]()   |       |
| C) let names = String[]   |       |
| D) Both A and B are correct   |       |
| 2.)   | [03]  |
| What is the purpose of the where clause in Swift generics?                      |       |
| A) To add constraints to type parameters  |       |
| B) To specify the location of a type  |       |
| C) To define conditional statements within generic functions                    |       |
| D) To indicate where a generic type should be used                              |       |
| 3.)   | [03]  |
| What is the correct way to declare a constant in Swift?                         |       |
| A) var name = "Apple"   |       |
| B) let name = "Apple"   |       |
| C) const name = "Apple"   |       |
| D) static name = "Apple"  |       |
| 4.)   | [03]  |
| Which data type would you use to store Decimals in Swift?                       |       |
| A) Float  |       |
| B) String   |       |
| C) Int  |       |
| D) Any  |       |

- 5.) What's wrong with the following Swift code? [03]

```
for i in 0...10 {  
    if i = 5 {  
        break  
    }  
}
```

- A) The range should be 0.. $<10$
- B) Should use `==` instead of `=` in the if condition
- C) The break statement is used incorrectly
- D) The semicolon is missing after the if statement

- 6.) What is the correct syntax for a single-line comment in Swift? [03]

- A) `# This is a comment`
- B) `// This is a comment`
- C) `/* This is a comment */`
- D) `-- This is a comment`

- 7.) What's wrong with this Swift code? [03]

```
enum Color: String {  
    case red = "RED"  
    case green = "GREEN"  
    case blue = "BLUE"  
  
    func isRed() -> Bool {  
        self = .red  
    }  
}
```

- A) Enum cases should not have raw values
- B) Cannot assign to self within a method
- C) The function should return `self == .red`
- D) String raw values should be lowercase

- 8.) [03]  
What does the following code do:  

```
guard let value = optionalValue else {  
    return  
}
```
- A) Checks if optionalValue is nil and returns if it is
  - B) Assigns optionalValue to value if it's not nil
  - C) Both A and B
  - D) None of the above
- 9.) [03]  
What's wrong with the following Swift code?
- ```
func processNumber(_ number: Int) {  
    if (number > 0) {  
        print("Positive")  
    } else if (number < 0) {  
        print("Negative")  
    } else {  
        print("Zero")  
    }  
    return  
}
```

- A) The return statement is placed incorrectly
- B) The parentheses around conditions are unnecessary but not incorrect
- C) The function should have a return type
- D) The equality check for zero should use ==

- 10.) [03]  
What does the following statement do? let message = Hello, + World!
- A) Causes a compile error
  - B) Concatenates two strings
  - C) Creates a tuple
  - D) Assigns two separate values to message

**B.) Answer in Brief:**

- 1.) What is the default access level in Swift if none is specified? [04]
  - 2.) What is the difference between weak and unowned references? [04]
  - 3.) What Swift feature allows a method to belong to a protocol rather than a type? [04]
  - 4.) What is the purpose of the @escaping attribute for closure parameters? [04]
  - 5.) What is the purpose of the inout parameter modifier in Swift? [04]
  - 6.) Which access control modifier is more restrictive: private or fileprivate? [04]
  - 7.) State the difference between Class & Struct? [08]
  - 8.) State the difference between UIKit & SwiftUI? [08]
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