

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, December 2019**

**Programme Name: BTech-CS-Mobile Computing**  
**Course Name : Mobile Application Development using IOS**  
**Course Code : CSMC3003**  
**Nos. of page(s) : 02**

**Semester : V**  
**Time : 03 hrs**  
**Max. Marks: 100**

**SECTION A**

S. No.		Marks	CO
Q 1	Derive the formulation for usage of Controller Object in UI Application.	05	CO5
Q 2	Illustrate the usage and functionality of Keyboard with the help of an example	05	CO3
Q 3	Compare and summarize different swift pattern matching techniques.	05	CO2
Q 4	Compare App ID and Bundle ID. What do you mean by unnamed category?	05	CO4

**SECTION B**

Q 5	Derive the expression using XCode for convenience initializer, which allows the user to initialize a protocol to conform its standard by the reserved 'required' keyword.	10	CO4
Q 6	Analyze and explain the output of following XCode		

**(a)**

```
let status = "shiny"
```

```
for (position, character) in status.reversed().enumerated() where position % 2 == 0 {  
    print("\(position): \(character)")  
}
```

10 CO5

**(b)**

```
struct TaylorFan {  
    static var favoriteSong = "Shake it Off"  
    var name: String  
    var age: Int  
}  
let fan = TaylorFan(name: "James", age: 25)
```

```
print(fan.favoriteSong)
```

- Q 7 Illustrate the usage of protocol composition in Swift, which allows multiple protocols to be called at once with the help of XCode. 10 CO3

**OR**

Analyze and compare Notification and NSNotification with the help of X Code. 10 CO3

- Q 8 (a) Given the code below, what data type will be assigned to test?

```
enum Planet: Int {  
    case Mercury = 1  
    case Venus  
    case Earth  
    case Mars  
}  
let test = Planet(rawValue: 3)
```

10 CO4

- (b) When this code is executed, what will example2 be set to?

```
var names = [String]()  
names.append("Amy")
```

```
let example1 = names.popLast()  
let example2 = names.popLast()
```

### SECTION-C

- Q 9 Interpret the process to restrict access to code blocks, modules and abstraction in swift. Demonstrate the process for the user to specify minimum access levels to access the type constraints on its type parameters using XCode. 20 CO4

**OR**

Illustrate the options for implementing storage and persistence on iOS. How and when the data would needs to be serialized and mapped on iOS. Derive an expression on the options for laying out UI on iOS. 20 CO4

- Q 10 Illustrate the Swift process which allows associated types to be declared inside the protocol definition by the keyword 'associatedtype' using XCode. 20 CO5