**Q-1. Attempt any 2 of the following: [14] ch-1**

1. Write a short note on Optionals in Swift. —

2. Explain Protocols and Extensions in iOS with examples. –

3. Write a short note on the Foundation framework.--

**Q-2. Answer the following: [14] ch-2**

1. Write a short note on Application Life Cycle in iOS.

2. Write a short note on Gestures in iOS.

2. Write a short note on UIView, UlWindow, and UlViewController with examples.

**Q-3. Attempt any 2 of the following: [14] ch-3**

1. Write a short note on Scroll View and Picker View in iOS with examples.

2. Write a short note on Collection View with examples.

3. Write a short note on AlertController and Container View in iOS with examples.

**Q-4. Attempt any 2 of the following: [14] ch-4**

1. Explain how to update and delete a file using FileManager in iOS with examples.--

2. Write a short note on Core Data with examples.

3. Explain how to parse JSON and XML data in iOS with examples.

**Q-5. Attempt any 2 of the following: [14] ch-5**

1 Write a short note on MapView and Annotation in iOS with examples.

2 Explain how to get user location in iOS with examples.

3 Write a short note on Push Notifications and explain how to publish the iOS app to AppStore.

**Q-2 Answer the following question**

1 iOS architecture in detail. –

2 UITableView with its delegate methods with an eg

3 note NsDictionary and NSMutableDictionary by providing an appropriate example.--

**Q-3 Answer the following question in detail.**

1. Explain the configurations and frameworks involved in finding the current location of the user in the iOS Application.

OR

1. Explain UlPickerView with its delegate methods by providing an appropriate example with more than one component.

2. Explain the methods of SQLite Framework and also write code for Database and Table Creation using SQLite Framework.

3. Write a note on Navigation Techniques supported by UlINavigationController

**Q-4 Answer the following question in detail. [8]**

1. Explain Gestures and their types with an appropriate example.

2. Who is responsible to manage the files in iOS Application and how? Also, provide an appropriate example.--

OR

2. Explain NSXMLParser and its importance with an appropriate example.

3. Explain the syntax to create a method in Objective C and also explain Class Method and Instance Method.

**Q-4 Answer the following question in detail.**

1. Explain the significance of SQLite with its methods in data persistence also draft an example to create a database and Student Table with appropriate fields.

2. Explain UIView and UlWindow with its method also write a snippet of code to provide fad-in and fad-out animation.

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2. Write a note on NSFileManager by providing examples to read and write string from a “StringData.txt” file.

3 Write a note on NSDictionary and NSMutableDictionary.

**Q-1 Answer the following question in brief. [Any 8] [16]**

1. Define Smart Device and also state its features.

2. In how many parts do XCode IDE is bifurcated and which are they? Also, draw an appropriate figure –

3. Which file stores the configuration details of the iOS Application and in which format?--

4. Explain the “Super”, “Self” and “id” keywords of Objective C. –

5. What is the use of UllmageView and how to change the shape of UllmageView to a perfect circle?

6. Explain @property and @synthesize in Objective C. –

7. In how many layers does iOS Architecture is divided? And which are they?--

8. State different execution states of the iOS Applications.

9. How many datatypes are supported by SQLite Framework and which are they?

10. What is the importance of category class in Objective C? –

**Q-2 Answer the following question in detail. [18]**

1. Explain the lifecycle of ViewController in detail.

OR

1. Write a note on iCloud and its features.

2. Explain UITableView with its delegate methods with an appropriate example.

3. Explain the Class Method and instance Method with an appropriate example. –

**Q-3 Answer the following question in detail. [18]**

1. How to fetch the current location of the user by making use of the core location framework?

OR

1. Explain UlPickerView with its delegate methods by providing an appropriate example with more than one component.

2. What are Gestures? Also, explain its type by providing an appropriate example.

3. Explain the role of UINavigationController in Navigation Techniques with

4. Explain the delegate and data source method to implement UIPickerView with 3 components and also explain UIDatepicker in iOS Application

**Q-1 Answer the following questions : [Any Two]**

1 Life Cycle with all its Events.

2 UIImageView Explain which properties of image view are responsible to clip the imageview to make it perfectly circular. How to add animation to UIImageView and UIView?

3 Explain UlAlertController and its type with an example.

4. Explain in detail about Xcode IDE. –

**Q-1 Answer the following questions : [Any Two]**

1 Explain the significance of CLLocation and CLLocation Manager and also draft an example to show the current location of the user on a map view with appropriate callout in zoomed form.

2 What is SQLite? Write a program to perform the creation of a database, insert, update, delete, and show operations for the "Student Database".

3 What is iCloud? What are the advantages and disadvantages of iCloud? Also, Explain how iCloud features are beneficial for users.

**Q-3 Answer the following questions : (any ts**

(1) What is SQLite? List out its features. Explain abt important functions of it.

(2) What is a custom view? Write steps to create a custom View using xib file.

(3) What are gesture recognizers? List them. Write steps to recognize any two types of gestures.

(4) What is NSMutableArray? Write steps to sort the elements of a static table.

**Q-4 Answer the following questions : (any three) 18**

(1) Write steps to implement a dynamic table with navigation between scenes.

(2) What is ARC? How does it work? Explain any four attributes of @ property directive. –

(3) What is a protocol? Explain about Category and Protocol with examples. –

(4) Differentiate core animation and view the animation. Write steps to show view animation.

**Q-1 Answer the following questions in short : [Any Four] 16**

1. Explain the Execution states for iOS Application.

2 How Event Handling happens for button tap in i0S Application? Explain with examples.

3. Explain Category with its characteristic and also draft an example of Category for NSString Class.

4. Explain the attributes of @property and also Explain the significance of @ synthesize. What role does NSXMILParser play in parsing? Also, explain XML Tag Structure.

**Q-2 Answer the following questions : [Any Three] 18**

1. Explain all the Navigation Techniques provided in iOS Application also draft an example to transfer information between two view controllers for respective techniques.

2. What is File Manager? How one can write a string to a text file and read the same to display in UlLabel? Explain with an example.--

3. What is Gesture? Explain the types available in i0S with an example.

**Q-3 Answer the following questions © (any three)**

(1) What are the advantages of run time polymorphism? Explain the implementation of run time polymorphism with examples. –

(2) Explain core OS services and media layer of i0S architecture in detail.--

(3) Differentiate static and dynamic tables. Write steps to implement a dynamic table with navigation.

(4) Write an objective C program for distance unit conversion like metre to kilometer, etc.--

**Q-4 Answer the following questions : (any three) 18**

(1) What are declared properties? Explain any four attributes of (@ property directive. –

(2) Write steps to implement MapView with annotation.

(3) What are gesture recognizers? Write steps to recognize tap and long press gestures.

(4) What is a custom view? Write small code to draw a rectangle and display a label in front of it.

**Q-1 Answer the following question in brief. [Any 8] [16]**

1. Define Smart Device and also state its features.

2. In how many parts does XCode IDE bifurcated and which are they? Also, draw an appropriate figure to depict the same. –

3. What is the significance of the “Super” and “Id” Keywords in Objective C? –

4. Describe the importance of NSLog in objective C.

5. Write a snippet of code to change the shape of UIView to a perfect Circle.

6. Which file stores the configuration details of the iOS Application and in which format?--

7. Explain @property and @synthesize. –

8. Explain the Class Structure of Objective C class and its importance. –

9. How many data types are supported by SQLite Framework and which are they?

10 In how many layers does iOS Architecture is divided? And which are they? –

**Q-1 Answer the following questions in short: 16**

(1) What is pervasive computing? Explain the MVC concept with respect to iOS.

(2) Differentiate NSArray and NSMutableArray. Explain the advantages of NSMutableArray over NSArray with an example.

(3) What is the class protocol? Explain with an example. –

(4) Write steps to implement pickerView with two components.

**Q-2 Answer the following questions : (any three) 18**

(1) What are InterfaceBuilder and IBOutlet? Write steps to show event handling in objective C.

(2) Write steps to implement the alert dialog and action sheet dialog.

(3) List out cocoa touch data types and explain the use of any two data types with an example in objective C. –

(4) What is segue? Write steps to show communication between seen with event handling,

**Q-1 Answer the following questions in short: 16**

(1) What are View and Window? Explain Bonjour and DNS service.

(2) Explain about different types of methods and method structures in Objective-C.--

(3) Explain the use of self and super keywords in Objective-C with examples.--

(4) What are IBOutlet and IBAction? Write steps to implement TabBar control.

**Q-2 Answer the following questions : (any three) 18**

(1) What is Segue? Write steps to share data between scenes.

(2) Write steps to implement mapView with annotation.

(3) Write an objective C program to sort the given integer values. The program should accept any five arbitrary integers the user types. –

(4) Explain the significance of the "id" data type in runtime polymorphism with an example.--