

# KADI SARVA VISHWAVIDYALAYA

## B.E. Semester VII Examination – November – 2016

### CE 703-2 / IT 703-2 – MOBILE APPLICATION DEVELOPMENT WITH ANDROID

DATE: 12/11/2016

TIME: 10.30 AM to 1.30 PM

TOTAL MARKS: 70

#### Instructions:

- 1 Answer each section in separate answer sheet.
- 2 Use of scientific calculator is permitted.
- 3 All questions are **Compulsory**.
- 4 Indicate **clearly**, the options you attempt along with its respective question number.
- 5 Use the last page of main supplementary for **rough work**.

#### SECTION-I

Marks

- |     |   |
|-----|---|
| Q-1 | (A) List out Android life cycle activities. Is it mandatory to implement onSaveInstanceState() and onRestoreInstanceState()? Justify your answer. [5] |
|     | (B) How to play video in Android App? [5]   |
|     | (C) Write an Android code to send email using Android App. [5]  |
|     | OR  |
|     | (C) Demonstrate the use of RadioGroup and RadioButton with an example. [5]  |
| Q-2 | (A) Write a program for including custom Toast in Android App. [5]  |
|     | (B) Write an android program to send SMS using Android App. [5]   |
|     | OR  |
|     | (A) How to use spinner in Android App? [5]  |
|     | (B) List out the steps to display employee data (Name, Salary) in ListView. [5]   |
| Q.3 | (A) How to add notification in Android App? Explain with an example. [5]  |
|     | (B) What are the different types of intent? Explain explicit intent with an example. [5]  |
|     | OR  |
|     | (A) Implement the concept of AutoCompleteTextView in Android App. [5]   |
|     | (B) What you mean by fragment in Android? Explain fragment with an example. [5]   |

#### SECTION-II

Marks

- |     |   |
|-----|---|
| Q-4 | (A) Create JAVA file for following database functionalities. <ul style="list-style-type: none"><li>• Create table “tblStudentExam” with fields (ExamId, Name, Enrollment, Sem)</li><li>• Create method “insertExamDetails” to insert exam details in tblStudentExam</li></ul> [5] |
|     | (B) Implement the concept of WebView in Android App. [5]  |
|     | (C) Design an Android code (only JAVA file) to track user-A’s location periodically (after every 5 minutes) and notify on User-B’s android phone about it. [5]  |
|     | OR  |
|     | (C) What is the difference between ProgressBar and ProgressDialog? Write a code to display ProgressDialog in MainActivity. [5]  |
| Q-5 | (A) Create JAVA file for following database functionalities. <ul style="list-style-type: none"><li>• Update empSalary using empID in tblEmpMaster table.</li><li>• Delete Employee detail from tblEmpMaster table on the basis of empName</li></ul> [5]                           |
|     | (B) Design an Android App to incorporate Google map. [5]  |
|     | OR  |

- (A) How to handle ToggleButton and CheckBox events in Android? [5]  
(B) Write all necessary code to print name of all the files stored in DCIM folder of SD card. [5]
- Q-6** (A) Design an Android App (only JAVA file) which calls a web service. [5]  
(B) Demonstrate the use of shared preference with an example. [5]
- OR
- (A) Write a code to implement the concept of Async Task. [5]  
(B) How to play audio in Android App? [5]

# Kadi Sarva Vishwavidyalaya

B.E. Semester VII November 2016

Subject code: CE-703-3  
Date: 12/11/2015

Subject: Mobile Application Development with iOS  
Time: 10.30 am to 1.30 pm Total Marks: 70

**Instruction:**

- (1) Answer each section in separate Answer sheet
- (2) Use of Scientific calculator is permitted
- (3) All questions are compulsory.
- (4) Indicate clearly, the options you attempted along with its respective question number
- (5) Use the last page of main supplementary for rough work.

<b>Section – I</b>		
Q.1		
	[A]	Explain the MVC design pattern. Can you design an application which uses multiple MVCs? Depict your application with a suitable diagram. [5]
	[B]	Explain the concept of Protocols in Swift with example (with code). [5]
	[C]	Write Swift playground code to define a function that accepts a function as a parameter and returns another function. [5]
	<b>OR</b>	
	[C]	Write Swift playground code to define a function with variable number of arguments. [5]
Q.2		
	[A]	Explain property observers (didSet, willSet) with example (with code). [5]
	[B]	Explain stored properties and computed properties with suitable examples. [5]
	<b>OR</b>	
Q.2		
	[A]	Is swift an object oriented language or a functional language or both? Are variables in swift strongly typed? Write about optional chaining in swift. [5]
	[B]	Explain the concept of closures in Swift using a suitable example. [5]
Q.3		
	[A]	Write Swift playground code for the following problem: Selection Sort [5]
	[B]	Write a program in swift to implement Binary Search algorithm (with recursion or iteration). The numbers are 1,2,3,4,5,6,7,8 and number to be searched is 2. Assume: the code is written in swift playground. [5]
	<b>OR</b>	
Q.3		
	[A]	What do the exclamation mark (!) and question mark (?) mean in Swift ? [5]
	[B]	Explain Swift generics with a suitable example. [5]

**Section - II**

Q.4	<p>[A] For each of these questions, write one of the three options: (a) no output, (b) actual output, or (c) error (mention the cause of error)</p> <p>1.) struct Exam { var difficulty: Int = 1 }  var exam1 = Exam() ; var exam2 = exam1 ; exam2.difficulty = 2  print ("Exam 2 difficulty is \(exam2.difficulty)")</p> <p>2.) for var i ..&lt;5 { print("Hello!") }</p> <p>3.) struct aStructure{ var variable1 = 10  func function1() { variable1 = 20 } }</p> <p>4.) class aClass { let variable1 = 10  func function1() { variable1 = 20 } }</p> <p>5.) class Subject { var name = "iOS" }  var subject1 = Subject(); var subject2 = subject1  subject1.name = "Android"  print ("Subject 2 name is \(subject2.name)")</p>	[5]
	<p>[B] For each of these questions, write one of the three options: (a) no output, (b) actual output, or (c) error (mention the cause of error)</p> <p>1.) extension Int { func sayHello() { print ("hello") } }  123.sayHello()</p> <p>2.) let vocabulary = [1 : "gandhiji" , 2 : "kasturba"]  for (key, value) in dictionary { println("Key: \(key) Value: \(value)") }</p> <p>3.) var value=5; for v in 1...6{ if v == value { continue }; print(v) }</p> <p>4.) var tuple = (2,4)  switch tuple {  case( _, 5): print("It's (Something,5)")  case(5, _): print("It's (5,Something)")  case(1...3, _): print("It's (1 2 or 3, Something)")  case(1...3,3...6): print("This would have matched but Swift already found")  default: print("It's something else") }</p> <p>5.) func sayHello(name:String) { print ("Name \(name)") }  func sayHello(name:String, numberoftimes:Int) {  for _ in 1 ... numberoftimes { sayHello(name) }  }  sayHello("John", 5)</p>	[5]

	[C]	In the context of Swift functions, explain the following with suitable examples: external parameter names, default parameter names, in-out parameters.	[5]
	<b>OR</b>		
	[C]	Explain inheritance of initializers.	[5]
Q.5	*		
	[A]	Write Swift playground code to define stack data structure with associated operations.	[5]
	[B]	What are Value Types and Reference Types in Swift? Explain with suitable examples.	[5]
	<b>OR</b>		
Q.5			
	[A]	What is the difference between Swift structs and classes?	[5]
	[B]	Explain with a suitable example how to return multiple values from a Swift function.	[5]
Q.6			
	[A]	Explain access modifiers (public, internal, private) in Swift with suitable examples.	[5]
	[B]	Describe entities and relationships in swift CoreData	[5]
	<b>OR</b>		
Q.6			
	[A]	Write Swift playground code to print $n^{\text{th}}$ Fibonacci number.	[5]
	[B]	What are some new features introduced in Swift 3 ?	[5]

# KADI SARVA VISHWAVIDYALAYA

B.E.. SEMESTER – VII (CE) EXAM. November-2015

**SUB: SERVICE ORIENTED COMPUTING**

C = 703 - 1

Time: 10.30 a.m. to 1.30 p.m.

Total Marks: 70

Date: 27/11/2015

**Instructions:** (1) Figure to the right indicates full marks.

- (2) Assume suitable additional data, if necessary.
- (3) Write both sections in separate answer sheet

## **Section - I**

- |           |   |   |
|-----------|---|---|
| Q.1(a)    | An E-Mail Service that supports the operations GetEmail and SetEmail. The operation GetEmail accepts a name parameter of type String and returns a Email address of type String, whereas SetEmail accepts a name parameter of type String and Email address parameter of type String and returns nothing. Please do following | 5 |
|           | 1. Create a Web service (any language) to perform above task  |   |
|           | 2. Write a program which consume web service  |   |
| Q-1(b)    | Write SOAP Request and Response file for the above problem(Q-1(a))  | 5 |
| Q.1(c)    | Write WSDL file for Q-1(a)  | 5 |
| <b>OR</b> |   |   |
| Q.1(c)    | Explain Model Driven architecture   | 5 |
| Q-2(a)    | Explain UDDI API for registry access  | 5 |
| Q-2(b)    | What is RDF? Explain RDF document in detail   | 5 |
| <b>OR</b> |   |   |
| Q-2(a)    | Define and explain following with respect to SOC  | 5 |
|           | 1. SOA  |   |
|           | 2. RPC  |   |
|           | 3. Workflow   |   |
|           | 4. RDFS   |   |
|           | 5. OWL  |   |
| Q.2(b)    | Explain Web service architecture in detail  | 5 |

- Q.3(a) Compare XML Schema and XML DTD 5
- Q-3(b) Explain various element of WSDL file 5  
**OR**
- Q-3(a) Explain Principal Of Service Oriented Computing 5
- Q-3(b) What is ontology? Explain OWL constructor and Axioms with suitable example 5

### Section-II

- Q.4(a) Explain Service Life cycle 5
- Q-4(b) Explain Web service Orchestration in detail 5
- Q-4(c) How ACID properties are implemented in distributed transaction? Explain with an example 5  
**OR**
- Q-4(c) Discuss WS-Choreography in detail 5
- Q.5(a) Explain architecture for composed services with a suitable example 5
- Q-5(b) List the fundament services and protocols in Jini. What are the differences between Jini's discovery, join and lookup 5  
**OR**
- Q-5(a) Discuss BPEL in Detail 5
- Q-5(b) Write a note on ebXML 5
- Q-6(a) Compare Object orientation vs Service Orientation 5
- Q-6(b) List importance of BPEL4WS 5  
**OR**
- Q-6(a) Write a short note on OWL-S 5
- Q-6(b) Give importance of Agent communication language and explain Contract Net protocol 5

# Kadi Sarva Vishwavidyalaya

B.E. Semester VII November 2015

Subject code: CE-703-3

Date: 27/11/2015

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Time: 10.30 am to 1.30 pm

Total Marks: 70

## Instruction:

- (1) Answer each section in separate Answer sheet
- (2) Use of Scientific calculator is permitted
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## Section – I

Q.1

- [A] Explain lazy initialization? Support your answer with suitable example [5]  
[B] Differentiate between swift and objective c [5]  
[C] Explain optional chaining giving suitable example [5]

**OR**

- [C] What is a de-initializer? How is it written in swift? [5]

Q.2

- [A] Explain MVC. [5]  
[B] What is iOS made of? Explain the hierarchy with what is included at each level. [5]

**OR**

Q.2

- [A] Explain Cocoa and Cocoa Touch. [5]  
[B] Describe following terms:  
I. Outlet  
II. Delegate  
III. Data source in MVC  
IV. Notification in KVO [5]

Q.3

- [A] What are the features of swift programming? [5]  
[B] What is a type method and instance property? Explain giving suitable example [5]

**OR**

Q.3

- [A] What is AnyObject? Explain use of AnyObject giving suitable example. [5]  
[B] What is a property list? Compare property list with database. [5]

## Section – II

Q.4

- [A] Explain bounds and frame with respect to UIView.
- [B] Explain CGRect and its properties.
- [C] Explain the use of UserDefaults

[5]  
[5]  
[5]

**OR**

- [C] Which classes of objective C were bridged for use in swift?

[5]

Q.5

- [A] What is autolayout? What are options available with autolayout?
- [B] Consider following code:

[5]  
[5]

```
let op1: Int = 1  
let op2: UInt = 2  
let op3: Double = 3.34  
var result = op1 + op2 + op3
```

Where is the error and why? How can it be solved?

**OR**

Q.5

- [A] What are the ways to add database to your iOS application?
- [B] Consider following code:

[5]  
[5]

```
var defaults = UserDefaults.standardUserDefaults()  
var userPref = defaults.stringForKey("userPref")!  
printString(userPref)  
func printString(string: String) {  
    println(string)  
}
```

Where is the error? What does this error cause? What's the proper way to solve it?

Q.6

- [A] How does protocol help View and controller to communicate with each other?

[5]

- [B] Consider following code:

[5]

```
struct IntStack {  
    var items = [Int]()  
    func add(x: Int) {  
        items.append(x) // Compile time error here.  
    }  
}
```

Explain why a compile time error occurs. How can you solve it?

**OR**

Q.6

- [A] Write about the FMDB wrapper class
- [B] Consider following code:

[5]  
[5]

```
var array1 = [1, 2, 3, 4, 5]  
var array2 = array1  
array2.append(6)  
var len = array1.count
```

What's the value of the len variable, and why?

# KADI SARVA VISHWAVIDYALAYA

## B.E. Semester VII Examination – November – 2015

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#### SECTION-I

- |  |  | Marks |
|--|--|-------|
| Q.1  | (A) Explain explicit intent with an example.   | [5]   |
|  | (B) Create an Android App which demonstrates the concept of notification.  | [5]   |
|  | (C) Create a fragment to make addition of two numbers and call it using activity. (Write only JAVA files)  | [5]   |
|  | OR   |       |
| (C) Create an activity to display user details (username, password) in List. | [5]  |       |
| Q.2  | (A) Design an App which will perform any two arithmetic operations on button click.  | [5]   |
|  | (B) Create JAVA file for following database functionalities. <ul style="list-style-type: none"><li>• Create table “Item” with fields (Id, Name)</li><li>• Create method “insertItemDetails” to insert item details</li></ul> | [5]   |
|  | OR   |       |
|  | (A) Explain the use of shared preference with an example.  | [5]   |
| (B) Can we customize Toast? Explain with an example.                         | [5]  |       |
| Q.3  | (A) Explain the concept of ImageView with an example.  | [5]   |
|  | (B) How to consume a web service in Android App?   | [5]   |
|  | OR   |       |
|  | (A) What are the ways to send SMS using Android App? Explain any one method with an example.   | [5]   |
| (B) Write a code to send Email using Android App.                            | [5]  |       |

#### SECTION-II

- |   |  |     |
|---|--|-----|
| Q-4   | (A) Design an Android App (only JAVA file) which will track your friend's location and plot it on Google Map using marker.   | [5] |
|   | (B) Give the sequence of life cycle activities call during following operations: <ul style="list-style-type: none"><li>• When App is being launched</li><li>• When we close the App</li></ul>    | [5] |
|   | (C) How to handle RadioButton and CheckBox events in Android?  | [5] |
|   | OR   |     |
| (C) Write a code to play audio from SD card in Android App. | [5]  |     |
| Q-5   | (A) Write a code to display web page in Android App using WebView.   | [5] |
|   | (B) Create JAVA file for following database functionalities. <ul style="list-style-type: none"><li>• Create method “SelectSingleItem” to get single item from table on the basis of ID</li></ul> | [5] |

- Create method “DeleteSingleItem” to delete single item from table on the basis of ID

OR

- (A) How to incorporate spinner in MainActivity? [5]  
(B) How to implement ProgressDialog in Android App? [5]

- Q-6** (A) Write a code to implement the concept of Async Task. [5]  
(B) Write a code to play video from Android App. [5]

OR

- (A) Implement the concept of AutoCompleteTextView in Android App. [5]  
(B) How to implement following validations in Android App:  
1. EditText must not be blank (User has to enter some data)  
2. User can insert only numbers in EditText