

[35]

## Sardar Patel University

## External Examination

## MCA Semester - III

## PS03CMCA31: Web Application Frameworks

Monday, 18<sup>th</sup> October, 2021

Time: 2:00 PM to 4:00 PM

Max. Marks: 70

## Q-1 [A] Choose the most appropriate option for each question. [08]

- (i) In HTML5, \_\_\_\_\_ element is used to draw graphics.  
 A) <figcaption>      B) <mark>  
 C) <canvas>      D) <header>
- (ii) Which jQuery method is used to hide selected elements?  
 A) hide()      B) visible(false)  
 C) disable()      D) diplay(false)
- (iii) MVT stands for  
 A) Model View Transfer      B) Model View Template  
 C) Model View Table      D) Map View Template
- (iv) By default, Flask application runs on port \_\_\_\_\_ in development mode.  
 A) 5000      B) 8000  
 C) 8080      D) 5080
- (v) Which architectural model is used by the Angular framework?  
 A) MVC      B) MVVM  
 C) MVMV      D) MVVC
- (vi) Which keyword is not used for declaring a data item in TypeScript?  
 A) var      B) let  
 C) const      D) None of these
- (vii) To run an Angular app, we use the command -  
 A) ng serve      B) ng open  
 C) ng --open      D) ng --serve
- (viii) Which is the default port used by the Angular development server?  
 A) 80      B) 8080  
 C) 4200      D) 21

## Q-1 [B] Do as Directed.

[16]

- I. \_\_\_\_\_ is the replacement for cookies in HTML5.
- II. How can we write comment in .css file?
- III. Which symbol does jQuery use as a shortcut for jQuery?
- IV. Is the Flask framework open source?
- V. Which CSS property is useful, if we want to use a nice looking green dotted border around an image?
- VI. What is the purpose of settings.py in Django?
- VII. Why is Flask called a Microframework?

(1)

P.T.O.

- VIII. When we run a Django project, the default host is localhost, and the port number is \_\_\_\_\_.
- IX. Angular is a \_\_\_\_\_ side framework. (client / server)
- X. Which programming language is used by the Angular framework?
- XI. Which programming language is used by the CodeIgniter framework?
- XII. Which architectural pattern is used by the CodeIgniter framework?
- XIII. What is asynchronous execution?
- XIV. Which company developed the TypeScript programming language?
- XV. What is the main difference between JavaScript and TypeScript?
- XVI. What is the disadvantage of the MVVM pattern?

**Q.2 Answer ANY SEVEN from the following**

[14]

- I. Explain HTML5 document structure in brief.
- II. What is jQuery? Explain any one jQuery function with an example.
- III. What is Bootstrap? State the benefits of using Bootstrap.
- IV. Compare : Flask and Django.
- V. What is the default host port and port of Flask?
- VI. What is RxJS? Which class from RxJS is commonly used in the Angular framework?
- VII. Which file receives all the requests first in CodeIgniter? What is routing in CodeIgniter?
- VIII. What is the full form of VS Code? Which type of development tool is it?
- IX. How do we add support for Angular development to VS Code?

**Q.3 What is CSS? Explain different types of CSS with an example.**

[08]

**OR**

What is HTML5? List down various benefits of using HTML5. Explain any three semantic elements added in HTML5.

**Q.4 What is 'Web Application Frameworks'? List down names of various Python based frameworks. Explain ANY ONE of them in detail.** [08]

**OR**

What is Django? Explain various features of Django and Django project directory structure.

**Q.5 Write a short note on data binding in Angular.**

[08]

**OR**

Explain the MVC pattern as used by the CodeIgniter framework.

**Q.6 Describe CodeIgniter at a glance.**

[08]

**OR**

Write a short note on dependency injection.

(2)



Seat No. [30]

Total No. of Printed Pages: 2

**Sardar Patel University**  
**MCA 3<sup>rd</sup> Semester Examinations**  
**PS03CMCA32 Mobile Application Development**  
**Wednesday, 20<sup>th</sup> October, 2021**

Time: 2:00 PM to 4:00 PM

Max. Marks: 70

**Q-1**

- [A] Choose the most appropriate option for each question. [08]
- (i) Android is based on a modified -  
A) Linux GUI      B) Linux shell  
C) Linux kernel    D) None of these
- (ii) Which of the following is used to support multiple languages in Android?  
A) Activities      B) Resources  
C) Intents          D) None of these
- (iii) Which of the following is not a valid dpi qualifier in Android?  
A) ldpi            B) mdpi  
C) xxhdpi         D) None of these
- (iv) Which is the first parameter to the various log.\* methods?  
A) Context        B) Activity  
C) Tag            D) Message
- (v) Which of the following method can be used to create instance of Shared Preferences class?  
A) getSharedPreferences()    B) getPreferences()  
C) Both A and B      D) None of these
- (vi) \_\_\_\_\_ offers a generic, well-defined interface for using and sharing data, and provides a consistent abstraction from the underlying data source.  
A) Content Provider    B) View  
C) Intent            D) None of these
- (vii) \_\_\_\_\_ class can be used to play music in our app.  
A) MultiMedia        B) AudioPlayer  
C) MusicPlayer      D) All of these
- (viii) Which of the following cannot be used for storing data using the Android SDK?  
A) Shared Preferences    B) Files  
C) SQLite            D) MySQL

**Q-1**

- [B] Do as Directed. [16]
- (i) Which company develops the Android operating system?
- (ii) Who manages an Android application's lifecycle?
- (iii) Which class represents a single screen in the Android user interface?
- (iv) Which class is used to navigate from one screen to another in the Android UI?
- (v) Name the folder(s) that contain images and icons in an Android app.
- (vi) Which view determines the sizes and positions of its child views?
- (vii) What is the full form of dp (a unit of dimensions)?
- (viii) Which class is used to show a message for a short duration on the screen?
- (ix) List different ways of data persistence in Android.

(1)

P.T.O.

- (x) Which object can be used for capturing an image from the camera in Android?
- (xi) ContentValues class enables you to insert keys with values of different data types. [True/False]
- (xii) Which permission is needed to access accurate location in an Android app?
- (xiii) \_\_\_\_\_ class can be used to play a video in an Android app.
- (xiv) Android uses the \_\_\_\_\_ class as a return value for SQL queries.
- (xv) Differentiate between URI and URL.
- (xvi) Resources are stored in Android in \_\_\_\_\_ folder.

[14]

**Q-2 Answer ANY SEVEN from the following**

- (i) Differentiate between implicit intents and explicit intents.
- (ii) Explain Android version number, code name and API level with an example.
- (iii) Where is a string resource defined? How can we use a string resource as a label on a button?
- (iv) List the advantages of using resources.
- (v) List the contents of the Android manifest file.
- (vi) Write any two characteristics of SQLite.
- (vii) Which is the preferred method for storing information like application settings in Android? Which method is preferable for storing large amount of tabular data?
- (viii) What is VideoView? What is the use of MediaController class with VideoView?
- (ix) Which class is required for our app to be notified of incoming SMS messages? Name any one method of this class.

**Q.3 Write a short note on intents and intent filters in Android.**

[08]

**OR**

Write a short note on adapters in Android. Give an example of using an adapter in our Android app with code.

**Q.4 Explain with a figure the Android activity lifecycle. Explain each event in the activity lifecycle.**

[08]

**OR**

Explain toasts, alert dialogs and notifications with short code snippets.

**Q.5 Briefly explain the features of SQLite. Explain SQLiteOpenHelper and SQLiteDataBase classes along with any two methods of each class with examples.**

[08]

**OR**

Explain storing and retrieving the data to the file by giving suitable example.

**Q.6 Write a short note on LBS (Geolocation and location aware apps).**

[08]

**OR**

Explain the mechanism of sending and receiving SMS programmatically from our app.



**Sardar Patel University**  
**Master of Computer Applications (M C A) III Semester Examinations**  
**PS03EMCA38 : Machine Learning**

[30]

Date: 23/10/2021

Time: 2.00 pm to 4.00 pm

Marks: 70

**Q1 A Choose the most appropriate option.**

[8]

1 In machine learning, update of knowledge is done by \_\_\_\_\_.

- a. Knowledge engineer
- b. Inference engine
- c. Itself
- d. Expert

2 \_\_\_\_\_ is a characteristic, property, or attribute of data.

- a. Feature
- b. Self data
- c. Big data
- d. None of these

3 To train a model, along with the model \_\_\_\_\_ are required.

- a. Operations
- b. Data
- c. Procedures
- d. None of these

4 \_\_\_\_\_ consists of many decision trees.

- a. ANN
- b. Random forest
- c. Regression
- d. Perceptron

5 The margin between the support vectors and the hyper plane needs to be \_\_\_\_\_ for the effective classification.

- a. As large as possible
- b. As small as possible
- c. Zero
- d. Negative

6 \_\_\_\_\_ is an example of binary classification.

- a. To select any one job from given three jobs
- b. To distinguish between red dots and blue dots
- c. To select one mobile from given five mobiles
- d. To select one elective course from many

7 In K nearest neighbourhood, distance between test data and each row of training data can be calculated using \_\_\_\_\_ distance.

- a. Euclidean
- b. Connection
- c. K factor
- d. Random

8 In \_\_\_\_\_ learning, model keeps on increasing its performance using a reward/feedback to learn the behaviour or pattern.

- a. Supervised
- b. Unsupervised
- c. Reinforcement
- d. Deep

P.T.O.,

**Q1 B Fill in the Blank/True/False or Answer in Brief. (1 Mark Each) [16]**

- 1 \_\_\_\_\_ is cleaning, structuring, and formatting of acquired data.
- 2 \_\_\_\_\_ is a process of extracting features from raw data.
- 3 \_\_\_\_\_ is a technique of un-supervised learning.
- 4 Give one difference between supervised and un-supervised learning.
- 5 State True or False: Supervised machine learning is more accurate than the unsupervised machine learning.
- 6 Give an application of reinforcement learning.
- 7 List any two tools of machine learning.
- 8 Define random forests.
- 9 Give full form of CNN.
- 10 Give full form of RNN.
- 11 State True or False: Typical MLP (ANN) uses supervised learning.
- 12 Give an example of a multi class classification.
- 13 Combining two or more learning technologies or modern machine learning strategies is known as \_\_\_\_\_ learning.
- 14 \_\_\_\_\_ systems hybridizes genetic system and fuzzy systems.
- 15 List name of two clustering methods.
- 16 List components of a typical decision tree.

**Q2 Answer in Brief (ANY SEVEN - 2 Marks Each). [14]**

- 1 List two limitations of the traditional AI based systems.
- 2 List various types of machine learning.
- 3 List two applications of machine learning.
- 4 Define deep learning. What is the difference between deep learning and shallow learning?
- 5 What is training data? What is testing data?
- 6 What should be the ratio of training data and testing data?
- 7 Give full forms of GAN. Also describe it in one line.
- 8 How a root node is decided for making a decision tree from the training data?
- 9 What is neuro-fuzzy system?

Q3 Draw and explain machine learning cycle in brief. [8]

Q3 Explain supervised learning in detail. Also list techniques of  
the supervised learning. [8]

Q4 Explain linear regression in detail by taking an example. [8]

Q4 Explain decision tree in detail by taking an example. [8]

Q5 Divide the given data set W containing ages of people into two  
clusters using K means algorithms.  $W = \{2, 4, 5, 6, 8, 9, 13,$   
 $16, 18, 27, 29, 31\}$ . [8]

Q5 Discuss hierarchical clustering in detail by taking an example. [8]

Q6 Draw a diagram showing various constituents of soft  
computing and explain it in detail. [8]

Q6 Write a short note on hybrid soft computing systems. [8]



**P. G. Department of Computer Science and Technology**  
**Sardar Patel University**  
**Master of Computer Applications**  
**MCA-III Internal Examinations**  
**PS03CMCA32 Mobile Application Development**  
**Friday, 24<sup>th</sup> September, 2021**

**Time: 1 Hour 30 Minutes**

**Max. Marks: 30**

**Note: 1 hour is for Q-1 to Q-3 and 30 minutes are for Q-4 (Open Book Test)**

**Q-1 Choose the most appropriate option for each question: [4]**

1. AOSP is an acronym of \_\_\_\_\_.  
A) Android Open Source Project    B) Android Operating System Project  
C) Android Open System Project    D) None of these
2. Which of the following API level information is NOT required while building new Android application?  
A) Target API level                      B) Minimum API level  
C) Maximum API level                 D) None of These
3. Which of the following is NOT an argument of makeText() method of class Toast?  
A) Context                              B) Text  
C) Duration                            D) Source
4. The \_\_\_ method of SQLiteDatabase class, lets you execute any non-query SQL statement on your database tables.  
A) execute()                            B) execSQL()  
C) executeSQL()                        D) exec()

**Q-2 Answer the following questions (ANY THREE): [6]**

1. What is an AVD? What is it used for?
2. What is an adapter? Describe with a figure.
3. Differentiate between options menu and context menu.
4. Which are the methods in the SQLiteDatabase class? Write their use in one sentence each.

**Q-3**

- A. Draw the Android activity life cycle. Explain in brief each event. [5]
- B. What is a layout. List the layouts available for Android. Explain any one layout with example. [5]

**OR**

**Q-3**

- A. Draw and explain the Android system architecture. [5]
- B. What is intent? Define different types of intents. Explain any one of them by giving appropriate example. [5]

**Q-4 Open Book Test question in a separate sheet [10]**

**Post Graduate Department of Computer Science & Technology  
SARDAR PATEL UNIVERSITY  
MCA - THIRD Semester (Internal Test)  
PS03CMCA34: Computer Graphics  
27<sup>th</sup> September 2021**

**Time: 1 Hour and 30 Minutes**

**Marks: 30**

**Q-1 Choose the most appropriate answer from the given options. [4]**

- (i) Which of these is a characteristic of midpoint circle algorithm?
  - (a) Produces pixel points for an semicircle.
  - (b) Produces pixel points for an quadrant.
  - (c) Produces pixel points for an octant.
  - (d) None of the given
- (ii) Which of the following is a basic attribute for the character?
  - (a) Font (b) Color (c) Orientation (d) All of these
- (iii) The physical distance between two actual picture elements ( Pixels) is known as \_\_\_\_\_.
  - (a) Video pitch (b) Dot pitch (c) Pix Dist (d) None of given
- (iv) \_\_\_\_\_ is not an audio card.
  - (a) Sound card (b) MIDI card (c) Wave synthesis card (d) None of given

**Q-2 Write answers for the following questions: [ Attempt any THREE] [6]**

- (i) Write the applications of computer graphics.
- (ii) Discuss the rotation geometric transformation in brief.
- (iii) Explain briefly important characteristics to design multimedia text.
- (iv) Define: Dithering, Multimedia

**Q-3 Do as directed. [5]**

- [a] Discuss DDA algorithm for line drawing.
- [b] Explain briefly the steps to develop 3-dimensional animation. [5]

**OR**

**Q-3 Do as directed. [5]**

- [a] Discuss the midpoint circle algorithm.
- [b] Discuss the different authoring methodologies with example(s) of authoring tool. [5]

**Q-4 Open Book Test [10]**

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**POST GRADUATE DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY**  
**MASTER OF COMPUTER APPLICATIONS (MCA)**  
**PS03CMCA31 (WEB APPLICATION FRAMEWORK) SEMESTER - III**  
**QUIZ-1 (23<sup>RD</sup> SEPTEMBER, 2021)**

**Time : 10 Minutes**

**Marks : 10**

**PID :** \_\_\_\_\_

**Name :** \_\_\_\_\_

*Note : Write your answer in the following boxes for 1 to 10.*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

**MCQs** (10)

- (1) HTML5 document begin with -  
[a] <html>      [b] <!doctype>      [c] <header>      [d] <start>
- (2) HTML5 element <canvas> can be used to  
[a] Draw graphics      [b] Photo compositions  
[c] Animations      [d] All the mentioned above
- (3) jQuery method to set one or more style properties for selected elements?  
[a] style()      [b] css()      [c] html()      [d] setCSS()
- (4) What does the selector \$("nav") do?  
[a] It selects **all nav** elements from HTML page  
[b] It selects **first nav** elements from HTML page  
[c] It selects **last nav** elements from HTML page  
[d] It selects **first nav** within **section** element from HTML page
- (5) The \_\_\_\_\_ is the most popular CSS Framework for developing responsive and mobile-first websites.  
[a] Bootstrap      [b] Bulma      [c] Pure      [d] Ulkit
- (6) Which software architectural pattern is followed by the Angular framework?  
[a] MVC      [b] MVMV      [c] MVVM      [d] None of these
- (7) Which of the following is not a type of data binding in Angular?  
[a] String interpolation      [b] Property binding  
[c] Click binding      [d] Event binding
- (8) The Angular framework is developed using -  
[a] TypeScript      [b] Node .js      [c] RxJS      [d] None of these
- (9) The command to create a new Angular app is -  
[a] ng new <app-name>      [b] ng generate <app-name>  
[c] new new app <app-name>      [d] ng generate app <app-name>
- (10) An Angular service class is identified by \_\_\_\_\_ decorator.  
[a] @Service      [b] @Injectable      [c] @Route      [d] @Component

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DST GRADUATE DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY  
MASTER OF COMPUTER APPLICATIONS (MCA)  
SARDAR PATEL UNIVERSITY  
SEMESTER - III  
PS03CMCA31 (WEB APPLICATION FRAMEWORK)  
23<sup>RD</sup> SEPTEMBER, 2021

Time : 11:00 a.m. to 12:30 p.m.

Marks : 30

Note : 1 Hour for Questions 1, 2 and 3; 30 minutes for Question-4.

**Q-1 Choose the most appropriate one. (04)**

- (i) DOM stands for -  
[A] Document Object Model      [B] Document Oriented Model  
[C] Data Object Model      [D] Direct Object Model
- (ii) Which one of the followings is the correct CSS syntax?  
[A] body {color:black;}      [B] body {color=black; }  
[C] body = {Color:black;}      [D] body (color=black; )
- (iii) The command ng stands for -  
[A] new generate      [B] Angular  
[C] Angular generate      [D] None of these
- (iv) Which of the following feature is provided by the RxJS library?  
[A] Dependency injection      [B] Observables  
[C] Data binding      [D] HTTP client

**Q-2 Attempt ANY THREE from the following: (06)**

- I. Explain in brief the structure of HTML5 document.
- II. What is jQuery? Write an example of jQuery function.
- III. Explain two-way data binding in Angular in 2-3 sentences with syntax.
- IV. Explain the syntax of the \*ngFor directive with an example.

**Q-3 (a) What is CSS? Explain different types of CSS with an example. (05)**

OR

**(a) What is Bootstrap? How can we use it? Write features and advantages of Bootstrap. (05)**

**Q-3 (b) Write a short note on dependency injection. (05)**

OR

**(b) Explain the use of Angular Component. Describe the use of files in an Angular Component. (05)**

**Q-4 Open book Questions in Separate Sheet (10)**

**Post Graduate Department of Computer Science And Technology**  
**Sardar Patel University**  
**MCA Third Semester**  
**PS03CMCA32 Mobile Application Development QUIZ**

**Max. Marks: 10**

**Max. Time: 10 Minutes**

Sr. No.	Question	Your Answer
1	_____ is a kernel on which Android is based. [A] MS DOS [B] Linux [C] Windows [D] macOS	
2	Android mobile operating system is currently owned by _____. [A] Android Inc. [B] Google [C] Microsoft [D] Netscape	
3	What is the name of the manifest file of an Android app? [A] AndroidManifest.MF [B] Manifest.MF [C] AndroidManifest.xml [D] Manifest.xml	
4	Almost every application has at least one _____. [A] activity [B] intent [C] widget [D] All of these	
5	An activity in ____ state is completely obscured (hidden behind) by another activity. [A] Paused [B] Stopped [C] Running [D] Destroyed	
6	Which of the following is NOT a view? [A] Button [B] RadioGroup [C] RadioButton [D] None of These	
7	Each Android device runs on exactly one API level, True or False? [A] True [B] False	
8	Which of the following mobile hand set DOES NOT use android operating system? [A] Nokia [B] Samsung [C] iPhone [D] Lenovo	
9	The DVM executes ____ files. [A] .java [B] .apk [C] .dex [D] .xml	
10	____ folder in project tool window, stores graphics resources that can be painted on the screen. [A] strings [B] layout [C] drawable [D] values	

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**SARDAR PATEL UNIVERSITY**  
**MASTER OF COMPUTER APPLICATIONS**  
**SEMESTER - IV**

**PS04EMCA22 - Application Development for the Android Platform**  
**Monday 15<sup>th</sup> April 2019**

**Max. Marks: 70****Time: 2:00 pm to 5:00 pm**

[8]

**I Choose the most appropriate option for each question:**

1. Which of the following java packages is not available in the Android SDK?
 

A) javax.swing	B) java.util
C) java.net	D) javax.xml
2. Which of the following is an example of a ViewGroup?
 

A) TextView	B) Button
C) Layout	D) None of these
3. Which of the following can be used to send data from one app to another?
 

A) Database	B) Broadcast receiver
C) Adapter	D) Intent
4. Which of the following cannot be used as part of intent filters?
 

A) Category	B) LAUNCHER_MAIN
C) URI	D) MIME type
5. Which of the following is a method of the SQLiteOpenHelper class?
 

A) onWrite()	B) onInsert()
C) onUpgrade()	D) onRead()
6. Which of the following is used by content providers to identify resources?
 

A) Id	B) Primary key
C) WHERE clause	D) URI
7. Which command is used to debug Android applications?
 

A) adb	B) abd
C) dba	D) bda
8. Which permission is required to access the network from an Android app?
 

A) NETWORK	B) INTERNET
C) ACCESS_NETWORK	D) CONNECT_INTERNET

[14]

**Q-2 Answer the following questions (Any Seven):**

1. Name the two runtimes used for executing Android code.
2. List the drawable subfolders of the resource folder.
3. What is the full form of APK? What does an APK file contain?
4. Explain the LinearLayout in brief.
5. Which class in an Android app holds the ids defined in the app? Write a code statement showing how we can obtain a reference to a view using its id.
6. List the abstract methods in the LoaderCallbacks interface.
7. Differentiate between implicit and explicit intents.
8. List the types of animations in Android.
9. List the classes used to play audio and video under Android.

(1)

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**Q-3**

- A.** Write a short note on the use of resources in Android.  
**B.** Explain how to use Toast, AlertDialog and Log.

**OR**

- B.** Explain the following concepts in Android development in brief: AVD, Activity, Service, Broadcast Receiver, Context, the UI thread

**Q-4**

- A.** Explain any three Android activity lifecycle events.  
**B.** Assuming there is a TextView, an EditText and a Button with ids tvMessage, etName and btClick respectively, write the onCreate() handler so that when the user presses the button, the contents of the EditText are transferred to the TextView.

**OR**

- B.** Describe the class in the Android SDK used for performing operations in the background.

**Q-5**

- A.** Describe the use of adapters and ListView in Android.  
**B.** Explain notifications in Android with an overview of the code to generate them.

**OR**

- B.** Write a short note on the SQLite database. Explain the characteristics in which it differs from typical RDBMS systems.

**Q-6**

- A.** Write a short note on location access and its applications in Android.  
**B.** List the contents of the Android manifest file.

**OR**

- B.** Write a short note on content providers. Also explain the use of different standard storage directories used by Android apps.

— X —  
 (2)

SARDAR PATEL UNIVERSITY

M.Sc. in Information Technology

Semester III External Examination, October 2018

ke : 10

PS03EINT24 : Mobile Application Development using Android &amp; Windev

Date: 02-11-2018

Time: 02:00PM to 05:00PM

Total Marks: [70]

Friday

## 1 Answer the following multiple choice questions: 08

1. Who is founder of Android?

- [A]. James Gosling      [C]. Bill Gates  
[B]. E. Balagurusamy      [D]. Andy Rubin

(10)

2. Which folder contains R.java file?

- [A]. src      [B]. res      [C]. bin      [D]. gen

3. What is the base class for SQLite?

- [A]. SQLiteOpenHelper      [C]. SQLiteDatabase  
[B]. SQLiteOpenHelper      [D]. None

4. Android is developed by \_\_\_\_.

- [A]. Google      [B]. Microsoft      [C]. Samsung      [D]. Nokia

Which method is used on activity diagram when user interacts with

5. the activity?

- [A]. onStart()      [B]. onResume()      [C]. onCreate()      [D]. onStop()

6. \_\_\_\_ is an extension of Android application file.

- [A]. dll      [B]. cpp      [C]. exe      [D]. apk

7. Which method field is useful when dialog method is carrying?

- [A]. showDig()      [C]. showStart()  
[B]. showDisplay()      [D]. showDialog()

8. \_\_\_\_ is very light-weight database which comes with Android OS.

- [A]. SQL      [B]. SQLite      [C]. Sybase      [D]. None

(P.T.O.)

①

- Q-3**
- A. W  
B. E
- B. E**
- Q-4**
- A. E  
B. A  
b  
c
- B. I**
- Q-5**
- A. I  
B. I
- B. t**
- Q-6**
- A.  
B.]
- B.**
- Q.2** Write the answers in short: [Attempt Any 7]  
1. List various Windev Mobile Application Features.  
2. What is cursor in Android?  
3. Explain query() function in short.  
4. What is Intent?  
5. Define toast in Android.  
6. What is WLanguge? Explain in brief.  
7. Explain the term SQLite? List standard SQLite commands.  
8. What is Android? List various versions of Android.  
9. List various applications which can be developed using Windev Mobile Software.
- Q.3 Answer the following questions in detail**
- [A] Write a note on Android Architecture with diagram.  
[B] Write a program to find maximum of two numbers in Android. [Only MainActivity.java]
- [B] Write a note on components of Android.** OR
- Q.4 Answer the following questions in detail**
- [A] List UI components and Explain any three with its method & properties.  
[B] Write a note on Life Cycle of Android activity with diagram.
- [B] List & explain various resource types.** OR
- Q.5 Answer the following questions in detail**
- [A] Write a note on layouts in Android.  
[B] Explain Content Provider class in detail.  
[B] Write a note on SQLite Architecture in Android. OR
- Q.6 Answer the following questions in detail**
- [A] List & explain Android Dialogs.  
[B] Write a note on Windev Mobile IDE.  
[B] Explain structure of Android Application in detail.

— X —  
②

75/A.18]

**SARDAR PATEL UNIVERSITY****M.Sc. (INFORMATION TECHNOLOGY)****SEMESTER - III || COURSE: PS03EINT04****Subject : Mobile Application Development Using Android and Windows**

Date: 28/10/2016

Time : 3 Hours : 2.00 to 5.00 p.m. Total Marks: 70

ke : 10

**Q.1 Multiple Choice Questions.**

[08]

- 1 Android is Developed by \_\_\_\_\_
 

A. Google	B. Apple
C. Microsoft	D. IBM
- 2 \_\_\_\_\_ is the extension of Android application file.
 

A. .apk	B. .akp
C. .exe	D. .java
- 3 \_\_\_\_\_ method is called only once in the lifecycle of an activity.
 

A. onDestroy()	B. onStart()
C. onCreate()	D. onStatus()

(10)
- 4 \_\_\_\_\_ is a very lightweight database which comes with AndroidOS.
 

A. SQL	B. Sybase
C. SQLite	D. None of these
- 5 \_\_\_\_\_ is an extension of Windev project file.
 

A. wdv	B. wpp
C. frm	D. None of these
- 6 What is the base class for SQLite
 

A. SQLiteOpenHelper	B. SQLiteOpenHelper
C. SQLiteDatabase	D. None of these
- 7 \_\_\_\_\_ is the extension use for hyperfile databases.
 

A. .accdb	B. .dbf
C. .mdb	D. .fic
- 8 Windev Mobile enable you to manage data files in \_\_\_\_\_
 

A. SQL	B. HyperFileOracle
C. Sybase	D. HyperFileSQL

**Q.2 Answer the following Short Questions. (Attempt any Seven)**

[14]

/e

- 1 What is Android?
- 2 List Android versions with its code name.
- 3 Explain in brief about the important file and folder when you create new Android Application.
- 4 Write a short note on Lifecycle of a Dialog.
- 5 What is SQLite?
- 6 What is Windev?
- 7 List various applications which can be developed by using Windev Mobile Software.
- 8 Explain Query() and RowQuery() function.
- 9 What is HyperFileSQL?

**Q.3 Do as Directed.**

**Q-3**

[A] Explain Android Architecture with diagram.

A. V

B. I

[B] Write a note on Components of Android.

OR

B. I

I

[B] What do you mean by Resources? Explain various resources types.

**Q-4**

**Q.4 Do as Directed.**

A. F

B. A

t

c

[A] Explain SQLite Architecture.

[B] Write a note on Android Activity Life Cycle.

OR

[B] Explain various types of Dialogs supported in Android.

B. I

**Q.5 Do as Directed.**

**Q-5**

A. I

B. I

[A] Write the advantages of Windev and characteristics of WLanguage.

[B] List various Windev mobile application features.

OR

B. I

[B] What is Operators? List and explain any three operators used in WLanguage.

**Q-6**

**Q.6 Do as Directed.**

A.

B.

[A] List any six datatype used in Windev. Explain any three with example.

B.

[B] Explain Windev IDE.

OR

B.

[B] Explain the following Database functions.

1. HAdd()
2. HDelete()
3. HModify()

=O=O=O=X=X=X=O=O=O=

**POST GRADUATE DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY**  
**MASTER OF COMPUTER APPLICATIONS (MCA)**  
**PS03CMCA31 (WEB APPLICATION FRAMEWORK) SEMESTER - III**  
**QUIZ-1 (23<sup>RD</sup> SEPTEMBER, 2021)**

**Time : 10 Minutes**

**Marks : 10**

**PID :** \_\_\_\_\_

**Name :** \_\_\_\_\_

*Note : Write your answer in the following boxes for 1 to 10.*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

**MCQs**

**(10)**

- (1) HTML5 document begin with -  
 [a] <html>      [b] <!doctype>      [c] <header>      [d] <start>
- (2) HTML5 element <canvas> can be used to  
 [a] Draw graphics      [b] Photo compositions  
 [c] Animations      [d] All the mentioned above
- (3) jQuery method to set one or more style properties for selected elements?  
 [a] style()      [b] css()      [c] html()      [d] setCSS()
- (4) What does the selector \$("nav") do?  
 [a] It selects **all nav** elements from HTML page  
 [b] It selects **first nav** elements from HTML page  
 [c] It selects **last nav** elements from HTML page  
 [d] It selects **first nav** within **section** element from HTML page
- (5) The \_\_\_\_\_ is the most popular CSS Framework for developing responsive and mobile-first websites.  
 [a] Bootstrap      [b] Bulma      [c] Pure      [d] Ulkit
- (6) Which software architectural pattern is followed by the Angular framework?  
 [a] MVC      [b] MVMV      [c] MVVM      [d] None of these
- (7) Which of the following is not a type of data binding in Angular?  
 [a] String interpolation      [b] Property binding  
 [c] Click binding      [d] Event binding
- (8) The Angular framework is developed using -  
 [a] TypeScript      [b] Node.js      [c] RxJS      [d] None of these
- (9) The command to create a new Angular app is -  
 [a] ng new <app-name>      [b] ng generate <app-name>  
 [c] new new app <app-name>      [d] ng generate app <app-name>
- (10) An Angular service class is identified by \_\_\_\_\_ decorator.  
 [a] @Service      [b] @Injectable      [c] @Route      [d] @Component

35]

**Sardar Patel University  
External Examination  
MCA Semester – III**

**PS03CMCA31: Web Application Frameworks****Monday, 18<sup>th</sup> October, 2021**

Time: 2:00 PM to 4:00 PM

**Max. Marks: 70****arks: 70****Q-1 [A] Choose the most appropriate option for each question.****[08]****[8]**

- (i) In HTML5, \_\_\_\_\_ element is used to draw graphics.
  - A) <figcaption>
  - B) <mark>
  - C) <canvas>
  - D) <header>
- (ii) Which jQuery method is used to hide selected elements?
  - A) hide()
  - B) visible(false)
  - C) disable()
  - D) display(false)
- (iii) MVT stands for
  - A) Model View Transfer
  - B) Model View Template
  - C) Model View Table
  - D) Map View Template
- (iv) By default, Flask application runs on port \_\_\_\_\_ in development mode.
  - A) 5000
  - B) 8000
  - C) 8080
  - D) 5080
- (v) Which architectural model is used by the Angular framework?
  - A) MVC
  - B) MVVM
  - C) MVMV
  - D) MVVC
- (vi) Which keyword is not used for declaring a data item in TypeScript?
  - A) var
  - B) let
  - C) const
  - D) None of these
- (vii) To run an Angular app, we use the command -
  - A) ng serve
  - B) ng open
  - C) ng --open
  - D) ng --serve
- (viii) Which is the default port used by the Angular development server?
  - A) 80
  - B) 8080
  - C) 4200
  - D) 21

**Q-1 [B] Do as Directed.****[16]****[14]**

- I. \_\_\_\_\_ is the replacement for cookies in HTML5.
- II. How can we write comment in .css file?
- III. Which symbol does jQuery use as a shortcut for jQuery?
- IV. Is the Flask framework open source?
- V. Which CSS property is useful, if we want to use a nice looking green dotted border around an image?
- VI. What is the purpose of settings.py in Django?
- VII. Why is Flask called a Microframework?

(1)

P.T.O.

- VIII. When we run a Django project, the default host is localhost, and the port number is \_\_\_\_\_.
- IX. Angular is a \_\_\_\_\_ side framework. (client / server)
- X. Which programming language is used by the Angular framework?
- XI. Which programming language is used by the CodeIgniter framework?
- XII. Which architectural pattern is used by the CodeIgniter framework?
- XIII. What is asynchronous execution?
- XIV. Which company developed the TypeScript programming language?
- XV. What is the main difference between JavaScript and TypeScript?
- XVI. What is the disadvantage of the MVVM pattern?

**Q.2 Answer ANY SEVEN from the following**

- I. Explain HTML5 document structure in brief.
- II. What is jQuery? Explain any one jQuery function with an example.
- III. What is Bootstrap? State the benefits of using Bootstrap.
- IV. Compare : Flask and Django.
- V. What is the default host port and port of Flask?
- VI. What is RxJS? Which class from RxJS is commonly used in the Angular framework?
- VII. Which file receives all the requests first in CodeIgniter? What is routing in CodeIgniter?
- VIII. What is the full form of VS Code? Which type of development tool is it?
- IX. How do we add support for Angular development to VS Code?

**Q.3 What is CSS? Explain different types of CSS with an example.**

[08]

**OR**

What is HTML5? List down various benefits of using HTML5. Explain any three semantic elements added in HTML5.

**Q.4 What is 'Web Application Frameworks'? List down names of various Python based frameworks. Explain ANY ONE of them in detail.**

[08]

**OR**

What is Django? Explain various features of Django and Django project directory structure.

**Q.5 Write a short note on data binding in Angular.**

[08]

**OR**

Explain the MVC pattern as used by the CodeIgniter framework.

**Q.6 Describe CodeIgniter at a glance.**

[08]

**OR**

Write a short note on dependency injection.

(2)

[42/A-33]

SEAT No. \_\_\_\_\_

No. of Printed Pages : 02

No. of PAGES : 2

pages: 2

# SARDAR PATEL UNIVERSITY

## MASTER OF COMPUTER APPLICATIONS (MCA)

SEMESTER - IV

PS04CMCA24 (WEB APPLICATION DEVELOPMENT TECHNOLOGY)

12<sup>TH</sup> APRIL, 2019, Friday

Time : 2:00 p.m. to 5:00 p.m.

Marks : 70

marks: 70

[8]

Note : Answers of all the questions (including multiple choice questions) should be written in the provided answer book only.

-1 Pick up the most appropriate answer from the given alternatives and write in your answer book. (8)

(i) Which property of Page object's, determines if a Web page is being requested without data being submitted to server?

[A] IsCallback [B] IsReusable [C] IsValid [D] IsPostBack

(ii) In ASP.NET, which one of the followings is a client-side statement management technique?

[A] Hidden Field [B] Session [C] Application [D] Profile

(iii) Read the following two statements and then select most appropriate option from the given alternatives:

I. HotSpotMode is a valid method name in ASP.NET.

II. Execute is a valid method name in ASP.NET.

[A] Statement (I) is correct [B] Both statements are not correct

[C] Statement (II) is correct [D] Both statements are correct.

(iv) You want to make a configuration setting change that will affect only the current Web application. Which file will you change?

[A] Global.asax [B] Web.config (root level)

[C] Both A and B [D] None of these

(v) \_\_\_\_\_ is a kind of looping structure in PHP used to access array elements only.

[A] for() [B] do...while() [C] while() [D] None of these

(vi) \_\_\_\_\_ function in PHP used to define array variable in PHP.

[A] array() [B] file() [C] print\_r() [D] None of these

(vii) \_\_\_\_\_ is a PHP function used to encrypt data.

[A] sha1() [B] md5() [C] Both A and B [D] None of these

(viii) \_\_\_\_\_ is a server-side scripting language.

[A] JavaScript [B] PHP [C] Both A and B [D] None of these

[14]

Q-2 Attempt the following: (ANY SEVEN)

(14)

i. What is ASP.NET? List down any four ASP.NET directives.

ii. Differentiate : Authentication and Authorization.

iii. Define the term 'Session' in the context of ASP.NET and state various Session state modes.

(1)

(P.T.O.)

(Contd./2)

2

- iv. What is jQuery? Give an example of jQuery.
- v. Write down the full-form of : CSS, IIS, ASP, XML.
- vi. List various types of operators in PHP. Explain each one in brief.
- vii. Distinguish between echo and die().
- viii. Explain about blogs in brief.
- ix. Explain PHP functions: (i) md5() and (ii) file()
- x. Write JavaScript code for validating input sequence of characters.

**Q-3** (a) Explain ASP.NET page life cycle in detail.

(b) Explain ImageMap, Radio Button and Check box controls with an example.

OR

(b) Explain Wizard and Panel controls of ASP.NET.

**Q-4** (a) Discuss in detail use of ADO.NET in ASP.NET with example.  
(b) List names of ASP.NET validation controls along with their purpose and explain any two of them with an example.

OR

(b) Explain Query string and Application state techniques of ASP.NET with an example.

**Q-5** (a) Define: Array in PHP. Discuss various types of array in PHP.  
(b) List and explain any three PHP file handling functions taking suitable examples.

OR

(b) Explain following functions taking suitable examples:  
(i) mysqli\_connect() and (ii) mysqli\_query()

**Q-6** (a) Explain sessions in PHP taking suitable examples.  
(b) Write a short note on cookies in PHP.

OR

(b) Discuss JavaScript DOM taking suitable examples.

—X—  
②

[101/A11]

SEAT No. \_\_\_\_\_

No. of Printed Pages : 02

pages: 2

Sardar Patel University  
Master of Computer Application  
SEMESTER - V Examination  
PS05CMCA24: Computer Graphics  
23<sup>rd</sup> November, 2019, Saturday Max Marks: 70

Time: 02:00 PM to 05:00 PM

[8]

Marks: 70

[8]

Q1. Choose the most appropriate option for each question.

- i. In Bresenham's line algorithm, if the distances  $d_1 < d_2$  then decision parameter  $P_k$  is \_\_\_\_\_  
a. Positive b. Equal c. Negative d. Option a or c
- ii. The Cartesian slope-intercept equation for a straight line is \_\_\_\_\_  
a.  $y = x \cdot x + b$  b.  $y = b \cdot x + m$  c.  $y = m \cdot x + b$  d. None of given
- iii. \_\_\_\_\_ line cap is obtained by adjusting the end positions of the component parallel lines so that the thick line is displayed with square ends that are perpendicular to the line path.  
a. Projecting square b. Butt c. Round d. None of given
- iv. \_\_\_\_\_ table contains pointers back into vertex table to identify the vertices of each polygon edge.  
a. Polygon b. Vertex c. Edge d. None of given
- v. The photoreceptor cells called \_\_\_\_\_ are responsible for color identification of the object.  
a. Fovea b. Rods c. Cones d. None of given
- vi. The television industry uses \_\_\_\_\_ color model.  
a. YIQ b. YCbCr c. CMY d. None of given
- vii. The process of blocking selected portions of the image for a particular editing operation is known as \_\_\_\_\_  
a. Masking b. Dithering c. Splicing d. None of given
- viii. The process of assigning different color to every intensity value available in a grayscale image is known as \_\_\_\_\_ processing.  
a. Multi-spectral b. Pseudo coloring c. False coloring d. None of given

[14]

Q2. Answer the following questions (Any seven):

- i. Differentiate: Random Scan & Raster Scan
- ii. List out the method to generate font and explain one of them briefly.
- iii. Differentiate: LED Display & LCD Display.
- iv. Differentiate clearly parallel projection and perspective projection.
- v. Define Image Restoration and Splicing.
- vi. Define multimedia and list out its facets.
- vii. State the features of PNG file format.
- viii. State the authoring methodology used by following authoring tools: Macromedia director and Authorware.
- ix. List out at least two application areas with at least 2 applications for image processing & analysis.

[14]

**Q3. Answer the following questions:**

- Write the steps to draw circle using Midpoint Circle Algorithm.
- Explain briefly the shadow-mask method to display the color on CRT monitor.

**OR**

- What do you mean by inside-outside test? Explain briefly the odd-even rule.

**Q4. Answer the following questions:**

- List out different geometric transformation and explain any two of them with example.
- Write short note on visible surface detection algorithm. Explain Depth-buffer method.

**OR**

- Explain briefly the 3-D viewing pipeline.

**Q5. Answer the following questions:**

- Define Image processing & Analysis and explain briefly the different stages of it.
- List out the different types of audio cards and write short note on any one of them.

**OR**

- Explain briefly the steps to design multimedia project.

**Q6. Answer the following questions:**

- Consider the following figure where each small rectangle represents a pixel and the value inside it is gray level at that pixel. Hence, whole array represents a digital image  $g(r,c)$  of size  $5 \times 5$ . Smooth the centre pixel  $g(2,2)$ , which is underlined in  $3 \times 3$  neighborhood using: Mean filter

0	1	0	6	7
2	0	2	6	5
1	3	<u>7</u>	4	6
1	0	6	6	5
2	5	6	7	6

- Define animation and explain briefly the steps to generate 3-D animation..

**OR**

- Do as directed.

- Write the steps to convert YCbCr color value in CMY.
- List out the different categories of animation.

- 27 -

**SARDAR PATEL UNIVERSITY**  
**MASTER OF COMPUTER APPLICATIONS**  
**SEMESTER – V**

**PS05EMCA03 - Application Development for the Android Platform****Tuesday 26<sup>th</sup> November 2019****Time: 2:00 pm to 5:00 pm****Max. Marks: 70****[8]****Q-1 Choose the most appropriate option for each question:**

1. Android is based on -
 

A) Linux compiler	B) Linux interpreter
C) Modified Linux kernel	D) None of these
2. Which virtual machine is not used by any version of Android?
 

A) ART	B) Dalvik virtual machine
C) JVM	D) None of these
3. An Android application is only visible to the user between -
 

A) onStart() and onStop()	B) onResume() and onStop()
C) onResume() and onRestart()	D) onStart() and onPause()
4. Which of the following is not typically defined in XML files?
 

A) Layouts	B) Menus
C) Strings	D) Drawables
5. Which is the preferred unit for specifying sizes of views in Android?
 

A) dp	B) px
C) pt	D) None of these
6. Which tag is used in the Android manifest file for declaring the requirement of permissions?
 

A) <seeks-permission>	B) <needs-permission>
C) <uses-permission>	D) <permission>
7. Which class is used to make a network request in the background?
 

A) AsyncTask	B) HTTPGetRequest
C) AsyncGetTask	D) HTTPTask
8. Which of the following is not declared in the Android manifest file?
 

A) Application icon id	B) SQLiteOpenHelper
C) Broadcast receiver	D) Activity

**Q-2 Answer the following questions (Any Seven):****[14]**

1. Give at least two examples of Android versions with version number, version name and API level.
2. What controls an Android app's lifecycle? Why is it so?
3. Which data structure holds the recently used activities? Which activity among these can interact with the user?
4. What is saving and restoring of state? Object of which class is used to store the state?
5. List and explain the use of any two subfolders of the values folder.
6. What is a content provider? How does it identify resources?
7. List commonly used views in Android.
8. List permissions related to location access.
9. List motion sensors in Android.

**Q-3**

- A.** Explain with a figure the Android activity lifecycle events.
- B.** List and explain in brief different types of resources in Android.

**OR**

- B.** What is an intent? Describe different types of intents. Specify different intent filter criteria.

**Q-4**

- A.** Write a short note on the SQLite database. Explain the characteristics in which it differs from typical RDBMS systems.
- B.** Explain Cursor, CursorLoader, LoaderManager and LoaderCallbacks.

**OR**

- B.** Explain the use and significance of the Event Dispatch Thread (UI Thread). Why should we run long running operations on that thread? What are the options available for running such operations in a separate thread?

**Q-5**

- A.** Explain with examples logging, Toast and AlertDialog.
- B.** Explain how to define views in the layout file as well as how to access them in the code.

**OR**

- B.** Write a short note on list views and adapters.

**Q-6**

- A.** Explain how to play audio and video in Android.
- B.** Explain how to generate notifications in Android.

**OR**

- B.** Write a short note on location access in Android.

—X—

No. : \_\_\_\_\_

5/A-29

**SARDAR PATEL UNIVERSITY**  
**MASTER OF COMPUTER APPLICATIONS (MCA)**

SEMESTER - V

PS05EMCA23 (WEB APPLICATION FRAMEWORKS)

26<sup>TH</sup> NOVEMBER, 2019, TUESDAY

Marks : 70

Time : 2:00 p.m. to 5:00 p.m.

Note : Answers of all the questions (including multiple choice questions) should be written in the provided answer book only.

**Q-1 Pick up the most appropriate answer from the given alternatives and write in your answer book. (8)**

- (i) When a new Angular component is created, which of the following file is not created automatically?  
 [A] .js      [B] .html      [C] .css      [D] .ts
- (ii) In the MVVM pattern, there is a two-way binding between \_\_\_\_\_  
 [A] Model and view      [B] Model and view model  
 [C] View and view model      [D] None of these
- (iii) Which of the following is a helper function in CodeIgniter?  
 [A] convert\_url()      [B] site\_url()      [C] change\_url()      [D] make\_url()
- (iv) What is the format of CodeIgniter URL?  
 [A] Method/Controller/Id      [B] Controller/Id/Method  
 [C] Method/Id/Controller      [D] Controller/Method/Id
- (v) \_\_\_\_\_ contains the navigation menu, or other navigation functionality for the page?  
 [A] section      [B] nav      [C] header      [D] aside
- (vi) Which of the following feature is a part of HTML5?  
 [A] Audio & Video      [B] Canvas  
 [C] Geolocation      [D] All of these
- (vii) \$.foo() is equivalent to  
 [A] javascript.foo()      [B] document.foo()  
 [C] jQuery.foo()      [D] None of these
- (viii) Which relational database does WordPress use?  
 [A] MySQL      [B] Oracle      [C] PostgreSQL      [D] MySQL

**Q-2 Attempt the following: (ANY SEVEN) (14)**

- i. Which syntax is used to access values of variables in an Angular template? Which directive is used to loop over a set of data rows in an Angular template?
- ii. Write the purpose of the ng new and ng serve commands in the Angular CLI.
- iii. What is the purpose of the input->post() and show\_404() methods in CodeIgniter?

(P.T.O) (Contd..)

- iv. Explain the following in CodeIgniter:  
    \$route['(:any)'] = 'pages/view/\$1';  
    \$config['index\_page'] = '';
- v. What is jQuery? Give an example of jQuery.
- vi. What is WordPress? What is the prefix of WordPress tables by default?
- vii. What is the role of Content Management Software? List out names of any four popular CMS.
- viii. Differentiate : blogger and forum.
- ix. Write the full-form of: MVVM, CSS, CDN, DOM.

**Q-3** (a) Write a short note on the MVVM design pattern.  
(b) Explain different types of data binding in Angular.

OR

- (b) Write a short note on dependency injection.

**Q-4** (a) Explain the MVC architecture of CodeIgniter.  
(b) Describe the directory structure in a CodeIgniter application. Also explain routing in CodeIgniter.

OR

- (b) Explain creation of forms and form validation in CodeIgniter.

**Q-5** (a) What is HTML5? Write down the advantages of HTML5? Explain <article> and <aside> tags with an example.  
(b) What is CSS3? How can we define style rule? Explain with an example different types of styles.

OR

- (b) Explain the concept of DOM in jQuery with an example.

**Q-6** (a) Explain various sections of WordPress main screen.  
(b) Explain – Wordpress Plugins.

OR

- (b) What is Blog? What is Blogger? Write various advantages of using Blog.

— X —  
    (2)



Seat No. \_\_\_\_\_

[30]

Total No. of Printed Pages: 2

**Sardar Patel University**  
**MCA 3<sup>rd</sup> Semester Examinations**  
**PS03CMCA32 Mobile Application Development**  
**Wednesday, 20<sup>th</sup> October, 2021**

Time: 2:00 PM to 4:00 PM

Max. Marks: 70

**Q-1****[A] Choose the most appropriate option for each question. [08]**

- (i) Android is based on a modified - [10]  
A) Linux GUI      B) Linux shell  
C) Linux kernel      D) None of these
- (ii) Which of the following is used to support multiple languages in Android? [5]  
A) Activities      B) Resources  
C) Intents      D) None of these
- (iii) Which of the following is not a valid dpi qualifier in Android? [5]  
A) ldpi      B) mdpi  
C) xxhdpi      D) None of these
- (iv) Which is the first parameter to the various log.\* methods? [5]  
A) Context      B) Activity  
C) Tag      D) Message
- (v) Which of the following method can be used to create instance of SharedPreferences class? [5]  
A) getSharedPreferences()      B) getPreferences()  
C) Both A and B      D) None of these
- (vi) \_\_\_\_\_ offers a generic, well-defined interface for using and sharing data, and provides a consistent abstraction from the underlying data source. [5]  
A) Content Provider      B) View  
C) Intent      D) None of these
- (vii) \_\_\_\_\_ class can be used to play music in our app. [5]  
A) MultiMedia      B) AudioPlayer  
C) MusicPlayer      D) All of these
- (viii) Which of the following cannot be used for storing data using the Android SDK? [5]  
A) Shared Preferences      B) Files  
C) SQLite      D) MySQL

**Q-1****[B] Do as Directed. [16]**

- (i) Which company develops the Android operating system?  
(ii) Who manages an Android application's lifecycle?  
(iii) Which class represents a single screen in the Android user interface?  
(iv) Which class is used to navigate from one screen to another in the Android UI?  
(v) Name the folder(s) that contain images and icons in an Android app.  
(vi) Which view determines the sizes and positions of its child views?  
(vii) What is the full form of dp (a unit of dimensions)?  
(viii) Which class is used to show a message for a short duration on the screen?  
(ix) List different ways of data persistence in Android.

(1)

P.T.O.

- (x) Which object can be used for capturing an image from the camera in Android?
- (xi) ContentValues class enables you to insert keys with values of different data types. [True/False]
- (xii) Which permission is needed to access accurate location in an Android app?
- (xiii) \_\_\_\_\_ class can be used to play a video in an Android app.
- (xiv) Android uses the \_\_\_\_\_ class as a return value for SQL queries.
- (xv) Differentiate between URI and URL.
- (xvi) Resources are stored in Android in \_\_\_\_\_ folder.

**Q-2 Answer ANY SEVEN from the following**

- (i) Differentiate between implicit intents and explicit intents.
- (ii) Explain Android version number, code name and API level with an example.
- (iii) Where is a string resource defined? How can we use a string resource as a label on a button?
- (iv) List the advantages of using resources.
- (v) List the contents of the Android manifest file.
- (vi) Write any two characteristics of SQLite.
- (vii) Which is the preferred method for storing information like application settings in Android? Which method is preferable for storing large amount of tabular data?
- (viii) What is VideoView? What is the use of MediaController class with VideoView?
- (ix) Which class is required for our app to be notified of incoming SMS messages? Name any one method of this class.

**Q.3 Write a short note on intents and intent filters in Android.**

[08]

**OR**

Write a short note on adapters in Android. Give an example of using an adapter in our Android app with code.

**Q.4 Explain with a figure the Android activity lifecycle. Explain each event in the activity lifecycle.**

[08]

**OR**

Explain toasts, alert dialogs and notifications with short code snippets.

**Q.5 Briefly explain the features of SQLite. Explain SQLiteOpenHelper and SQLiteDatabase classes along with any two methods of each class with examples.**

[08]

**OR**

Explain storing and retrieving the data to the file by giving suitable example.

**Q.6 Write a short note on LBS (Geolocation and location aware apps).**

[08]

**OR**

Explain the mechanism of sending and receiving SMS programmatically from our app.

**P. G. Department of Computer Science and Technology  
Sardar Patel University  
Master of Computer Applications  
MCA-III Internal Examinations  
PS03CMCA32 Mobile Application Development  
Friday, 24<sup>th</sup> September, 2021**

**Time: 1 Hour 30 Minutes**

**Max. Marks: 30**

**Note: 1 hour is for Q-1 to Q-3 and 30 minutes are for Q-4 (Open Book Test)  
(Open Book Test)**

**Q-4**

- A. Design and draw a user login activity with username, password and a login button. Write the layout xml file for the activity. [5]**
- B. Explain the methods in the SQLiteOpenHelper class with their arguments. [5]**

**POST GRADUATE DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY  
MASTER OF COMPUTER APPLICATIONS (MCA)  
SARDAR PATEL UNIVERSITY  
SEMESTER - III  
PS03CMCA31 (WEB APPLICATION FRAMEWORK)  
23<sup>RD</sup> SEPTEMBER, 2021**

Time : 11:00 a.m. to 12:30 p.m.

**Marks : 30**

**Note : 1 Hour for Questions 1, 2 and 3; 30 minutes for Question-4.**

Q-4

**(05)**

- [A] You are given responsibility of developing ONLINE EXAMINATION SYSTEM for post graduate students of XYZ university. Students can appear for the examination from his/her location. Assume that there are 100 different subjects and 50,000 students appearing in each subject.  
University wants to minimize/reduce the time required for question paper setting and evaluation. After completion of the examination, the result of the student should be accessible to their laptop or desktop or mobile devices.

As a developer, suggests your view for the following questions:

1. Discuss the tools to be used for the development.
2. Discuss the security mechanism required in order to avoid copy case and maintaining security of question papers.
3. How will you reduce the overall development cost?

- [B] Answer in detail. (Open Book)

**(05)**

Assume that you are developing an Angular app for selling a single product online. The app has a "product" component. Write code for the following files (you may omit auto-generated code like imports and decorators).

- (i) **product.ts** should contain product interface / class (as per your choice, should have the structure (productId integer, name text, price float, quantity integer))
- (ii) **product.component.html** should display all the information about the product. Try to make the quantity editable by the user.
- (iii) **product.component.ts**
- (iv) **product.component.css** should contain at least one style used in the HTML template

\*\*\* The End \*\*\*

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(05)

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\*\*\* The End \*\*\*

[72/A23]

**SARDAR PATEL UNIVERSITY****MASTER OF COMPUTER APPLICATIONS (MCA)**

SEMESTER - III

PS03CMCA22 (THE .NET TECHNOLOGY)

27<sup>TH</sup> NOVEMBER, 2019, WEDNESDAY

Marks : 70

Time : 2:00 p.m. to 5:00 p.m.

Note : Answers of all the questions (including multiple choice questions) should be written in the provided answer book only.

**Q-1 Pick up the most appropriate answer from the given alternatives and write in your answer book. (8)**

- (i) The full form of BCL is \_\_\_\_\_.  
 [A] Base Code Library      [B] Base Class Library  
 [C] Basic Code Library      [D] Basic Class Library
- (ii) \_\_\_\_\_ Class cannot be inherited  
 [A] const      [B] sealed      [C] static      [D] None of these
- (iii) \_\_\_\_\_ property of form is set to true, in order to make it a MDI parent form.  
 [A] IsMdiContainer      [B] IsMdiParent      [C] IsMdiChildren      [D] IsParent
- (iv) The \_\_\_\_\_ namespace is required in order to create SqlConnection object.  
 [A] System.Data.SqlClient      [B] System.sqlData.Client  
 [C] System.Sql.SqlConnection      [D] System.Data
- (v) Consider the following C#.NET code:  

```
StringBuilder s1 = new StringBuilder("Satyam*Shivam*Sundaram");
s1.Replace("am", "$");
```

 What will be the content of string s1 after the execution of above code?  
 [A] Saty\$\*Shiv\*\$Sundar\$      [B] Saty\$\*Shiv\$\*Sundar\$  
 [C] Satyam\$\*Shivam\$\*Sundaram\$      [D] None of these
- (vi) Which ONE of the following properties is used to set the title of a Window's form object?  
 [A] Text      [B] Caption      [C] Label      [D] Title
- (vii) DataAdapter can traverse data in \_\_\_\_\_ approach.  
 [A] backward      [B] forward      [C] both A & B      [D] None of these
- (viii) \_\_\_\_\_ is the extension of WPF Window Form.  
 [A] .XAML      [B] .WPF      [C] .CTS      [D] .FRM

(14)

**Q-2 Attempt the following: (ANY SEVEN)**

- I. What is Visual C#.NET? State the major advantages of using Visual-C#.
- II. Differentiate : class and strut.
- III. Define the terms 'Boxing' and 'Unboxing'.
- IV. Explain any four C#.NET operators with its purpose and example.
- V. Explain foreach loop with an example.