

# VTU B.E/B.TECH QUESTION PAPER SET

## CBCS SEMESTER VI

# MOBILE APPLICATION DEVELOPMENT

*Use bookmarks to easily navigate between question papers*

Visit [Studentmap.in](http://Studentmap.in)! Get access to all VTU resources for free!



Question Papers



Notes



Syllabus



Exams/Timetable



News



Results

# CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

15CS661

## Sixth Semester B.E. Degree Examination, June/July 2018 Mobile Application Development

Time: 3 hrs.

Max. Marks: 80

*Note: Answer any FIVE full questions, choosing one full question from each module.*

### Module-1

- 1 a. What is Android? Discuss why to develop apps for android and list atleast 4 latest android versions with their names and supported API levels. (06 Marks)
- b. Explain with a neat diagram the android development architecture. (06 Marks)
- c. Justify the need for AndroidManifest.xml and write the basic structure for the same. (04 Marks)

OR

- 2 a. Discuss views in android and list the predefined views in android system. (06 Marks)
- b. Elaborate on the resource file in android system (contents of res directory). (06 Marks)
- c. Write Xml program to create an activity with Linear Layout and vertical orientation with the following views/UI elements in it. (04 Marks)
  - (i) 2 Text views : One to display Login ID and other to display password.
  - (ii) 2 Edit Text : One to accept login ID and other to accept password.
  - (iii) 2 Buttons : One for login with Onclick attribute and other to cancel.

### Module-2

- 3 a. Define intent. Discuss types of intents and explain in detail how to pass data between activities with intent. (06 Marks)
- b. With neat diagram explain the activity life cycle and life cycle callback methods. (06 Marks)
- c. Demonstrate with an example program how to start an activity for getting results using intents. (04 Marks)

OR

- 4 a. Differentiate between option menu and contextual menu. Explain how to create option menu with necessary call back methods using an example program. (06 Marks)
- b. List and explain the steps involved in creating contextual action bar menu. (06 Marks)
- c. Explain how to share data in your app with social networks and other apps using ShareCompat.IntentBuilder. (04 Marks)

### Module-3

- 5 a. Judge with suitable reasoning why it is important to process some tasks in the background or off the UI thread. (06 Marks)
- b. Discuss the use of AsyncTask to create background processing with necessary call back methods. (06 Marks)
- c. Discuss the limitations of AsyncTask. (04 Marks)

OR

- 6 a. What are broadcast receivers? Explain how to create broadcast receiver with an example program. (06 Marks)
- b. Describe how to do static and dynamic registration of custom broadcast. (06 Marks)
- c. Distinguish between started services and bounded services. (04 Marks)

**Module-4**

- 7 a. Design and develop a simple app which stores the key-value pair using shared preferences [.xml and .java files has to be written]. (06 Marks)
- b. Explain processing of cursors in SQLiteDB with an example program segment. (06 Marks)
- c. List and explain the call back methods of SQLiteOpenHelper class. (04 Marks)

OR

- 8 a. Explain the relationship between content provider and content resolver with a neat diagram. (06 Marks)
- b. List the components/items required to implement content provider. (06 Marks)
- c. Suggest the required permission in AndroidManifest.xml to make content provider visible and available to other apps. (04 Marks)

**Module-5**

- 9 a. Discuss android permission with example. (06 Marks)
- b. Explain how to monitor the performance of running app. (06 Marks)
- c. Explain how to make app secure user data safely. (04 Marks)

OR

- 10 a. Discuss Google Firebase database and its structure. (06 Marks)
- b. Explain Google firebase push notifications. (06 Marks)
- c. Explain how to generate the signed APK for release. (04 Marks)

\*\*\*\*\*

USN

--	--	--	--	--	--	--	--	--	--

15CS661

**Sixth Semester B.E. Degree Examination, June/July 2019**  
**Mobile Application Development**

Time: 3 hrs.

Max. Marks: 80

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

Module-1

- 1 a. What is Android? With a neat diagram, explain the major components of Android stack. (06 Marks)  
 b. List and explain the steps to run the Android app on virtual device. (06 Marks)  
 c. Explain XML attributes taking TextView as an example. (04 Marks)

OR

- 2 a. Define Activity. Explain the steps for creating an activity in Android studio. (06 Marks)  
 b. Explain the steps for sending the implicit intents. (08 Marks)  
 c. List out the steps for running the debugger. (02 Marks)

Module-2

- 3 a. What is focus? Explain the algorithm used for focus movement. (06 Marks)  
 b. How do you write espresso tests with Ham Crest matches? (04 Marks)  
 c. Explain how material design color pallete is used. (06 Marks)

OR

- 4 a. Explain the designing of floating action button. (06 Marks)  
 b. How do you code in XML, the Navigation drawers. (06 Marks)  
 c. Explain, how do you make use of UI animator for tests that span multiple apps. (04 Marks)

Module-3

- 5 a. Explain AsyncTask usage with an example. (06 Marks)  
 b. What are Broadcast Intents? Explain system Broadcast intents and custom broadcast intents. (06 Marks)  
 c. What is job scheduler? Explain its components. (04 Marks)

OR

- 6 a. What is a loader? How do you start and restart a loader? (05 Marks)  
 b. Explain with a neat diagram, lifecycle of a started service VS bound service. (04 Marks)  
 c. Explain scheduling of single use alarm. Also explain doze mode and App standby mode. (07 Marks)

Module-4

- 7 a. Explain about external storage and Internal storage. (06 Marks)  
 b. What is SQLite? Explain the steps for implementing SQLite database. (06 Marks)  
 c. How do you implement a CursorLoader? (04 Marks)

OR

- 8 a. Differentiate between shared preferences versus shared instance state. (05 Marks)  
b. What is content provider? With a neat diagram, explain App Architecture with a content provider. (06 Marks)  
c. Explain the following database operation: insert( ), delete( ), update( ). (05 Marks)

Module-5

- 9 a. What is permission? Explain its importance. (05 Marks)  
b. Explain how data is stored in firebase real-time database. (05 Marks)  
c. Explain how do you monitor the performance of running app. (06 Marks)

OR

- 10 a. What is firebase? How do you get started with fire base? (06 Marks)  
b. What is an APK? How do you prepare your app for release? (06 Marks)  
c. Write a note on Firebase Analytics. (04 Marks)

\*\*\*\*\*

USN

--	--	--	--	--	--	--	--	--	--

15CS661

**Sixth Semester B.E. Degree Examination, Aug./Sept. 2020**  
**Mobile Application Development**

Time: 3 hrs.

Max. Marks: 80

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

**Module-1**

- 1 a. What is Android? Explain Android Architecture with neat diagram. (08 Marks)  
 b. What are the Challenges of Android App development? (04 Marks)  
 c. Explain the Layout View Groups. (04 Marks)

OR

- 2 a. What is an Activity? Explain the Activity Life Cycle. (08 Marks)  
 b. What is an Intent? Explain two types of Intents and also explain Intent Objects and Fields. (04 Marks)  
 c. How do you debug an App? (04 Marks)

**Module-2**

- 3 a. Which are the android user Input controls? Explain any two user Input controls in detail. (05 Marks)  
 b. Which are the different types of Menus? Explain any two types of Menus in detail. (07 Marks)  
 c. What is a Recyclerview? Explain Recyclerview components? (04 Marks)

OR

- 4 a. What is a Drawable? Explain Several types of Drawables. (06 Marks)  
 b. What is a Material Design? Explain Colors, Typography, Layout, Motion, Animations with respect to Material design. (07 Marks)  
 c. Explain the following with respect to Testing the User Interface  
 i) Manual Testing  
 ii) Automated Testing. (03 Marks)

**Module-3**

- 5 a. Explain UI Thread and AsyncTask. (05 Marks)  
 b. Write short notes on :  
 i) Broadcast Intents  
 ii) Broadcast Receivers. (06 Marks)  
 c. What is a Service? Explain the different types of Services. (05 Marks)

OR

- 6 a. Explain the Service Life Cycle of started service and bound service with neat diagrams. (08 Marks)  
 b. What are the Notification Design guidelines? (03 Marks)  
 c. Explain the two general types of Alarms. (05 Marks)

1 of 2

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
 2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

**Module-4**

- 7 a. What are the data storage options? Explain briefly any four data storage options. (05 Marks)  
b. How do you Create, Save, Restore, Clear Shared preferences. (05 Marks)  
c. Write short notes on :  
i) SQL database  
ii) SQLite  
iii) Transactions  
iv) Cursor. (06 Marks)

**OR**

- 8 a. What is a Content Provider? And what is a Content Resolver? Explain. (04 Marks)  
b. Explain the content provider architecture with neat diagram. (06 Marks)  
c. Explain the Loader architecture with neat diagram. (06 Marks)

**Module-5**

- 9 a. What are the two types of permissions? Explain. (04 Marks)  
b. Explain four types of monitors that measure the performance of an android app. (06 Marks)  
c. What are the security best practices? Explain in detail. (06 Marks)

**OR**

- 10 a. Write short notes on :  
i) Firebase Analytics  
ii) Firebase Notifications  
iii) Firebase Realtime database  
iv) AdMob (12 Marks)  
b. How do you publish Android App in the Google play store? (04 Marks)

\*\*\*\*\*