

Unit 1

1. What do you mean by mobile device? Explain its features.
2. Explain different categories of mobile devices.
3. Explain about history of mobile device in detail.
4. Explain different brands, models and platforms of mobile devices in detail.
5. What do you mean by mobile programming? Explain life cycle of mobile application development.
6. List and explain any five popular programming languages used for developing mobile applications.
7. What are different mobile app development approaches? Explain in detail.

Unit 2

1. What is android platform? Explain about history of android platform in detail.
2. List and explain different versions of android in detail.
3. How we can setup environment for android? Explain.
4. What do you mean by view hierarchy? Explain with the help of suitable example.
5. Define widget. Explain different widget attributes with example.
6. How can we create string resources? Explain with the help of suitable example.
7. Write a set of codes for creating activity. Also link xml file "activity_main.xml" to this activity.
8. Explain about manifest file. How can we add activity in manifest? Explain with example.
9. What is the role of intent-filter for any activity? Explain.
10. Explain the procedure for creating an AVD. Also write steps for running application on Enumerator.

Reference: <https://developer.android.com/studio/run/managing-avds>

Unit 3

1. What do you mean by layout? List and explain different types of layout used in android with their major attributes.
2. Differentiate Linear Layout and RelativeLayout with example.
3. Differentiate RelativeLayout and ConstraintLayout with example.
4. Compare AbsoluteLayout with other types of layout.
5. Explain any five widgets with their attributes in detail.
6. What do you mean by event? Explain event handling in detail.
7. How can you use string and string array in android? Explain.
8. How can you use color in android? Explain.
9. Differentiate string and string array with example.
10. Explain the procedure for adding and displaying image in imageview. Also write code snippet to add icon to your project.
11. Design a signup form using Relative, Linear, Absolute and Constraint Layout.
12. Design a simple UI for Book Entry in library.
13. Design a simple UI for patient registration in hospital.

14. Design a simple calculator UI using TableLayout.

Chapter-4

1. What do you mean by android activity? Explain android activity life cycle in detail.
2. How can you declare multiple activities in manifest? Explain.
3. What do you mean by intent? Explain.
4. How can you pass data between multiple activities using intent? Explain.
5. Develop an android application which get result back from a child activity.
6. Develop an android application to calculate simple interest. Your application should contain fields to input principal, rate, time and button for event handling. Calculate and display result in a TextView.
7. Develop an android application to calculate area and perimeter of rectangle. Your application should contain field to input length and breadth and two buttons for calculating area and perimeter. Calculate and display result in a TextView.
8. Design a signup form using any layout of your choice.
9. Your design must include important widgets like TextView, EditText, Button, RadioButton, CheckBox, Spinner etc.
10. When user clicks a Button display inputted data in a TextView.
11. Develop a simple calculator application with two input fields for inputting numbers and four Buttons for performing addition, subtraction, multiplication and division. Display the result in a TextView.
12. Develop an android application to input your name, address, gender and other personal information. Pass and display this information in another activity.

Chapter-5

14. What do you mean by fragment? Explain lifecycle of fragment in detail.
15. What do you mean by UI flexibility? Why UI needs to be flexible? Explain how fragments help to make UI flexible.
16. How can you create UI fragment? Explain with example.
17. How can you create fragment class? Explain with example.
18. Develop an android application to demonstrate fragments.
19. What do you mean by fragment manager? Explain with example.
20. Develop an android application to display multiple fragments in activity using fragment manager.
21. Develop an android application to calculate simple interest using fragment.
22. Develop an android application to calculate area and perimeter of rectangle. Your application must calculate and display area in one fragment and perimeter in another fragment.
23. Differentiate activity and fragment with example.
24. What do you mean by menu? Explain its types.
25. Develop an android application to demonstrate options menu.
26. Develop an android application to demonstrate context menu.
27. Develop an android application to demonstrate popup menu.
28. What do you mean by dialog box? Explain its types.

29. 16. How can you create a dialog fragment? Explain with example.
30. 17. Develop an android application to demonstrate alert dialog.
31. 18. How can you open custom dialog on button click? Explain with example.
32. 19. Develop an android application to calculate simple interest in a dialog.
33. 20. Develop an android application to calculate area and perimeter of a rectangle in a dialog.
34. **Chapter-6**
35. 1. What do you mean by ListView? Explain its features.
36. 2. What do you mean by GridView? Explain its features.
37. 3. What do you mean by RecyclerView? Explain its features.
38. 4. Differentiate ListView and GridView with example.
39. 5. Differentiate ListView and RecyclerView with example.
40. 6. Why RecyclerView is recommended over ListView? Explain with example.
41. 7. Develop an android application to display id, name and address of 5 students using ListView.
42. 8. Develop an android application to display image, name and address of 5 students using GridView.
43. 9. Write a code snippet for retrieving data from ListView and GridView.
44. 10. Develop an image gallery using GridView. Your gallery should display at least 5 drawable images. If any of the image is clicked it should be displayed in another activity in large size.
45. 11. Develop an android application for the same information given in question no. 7 using RecyclerView.
46. 12. Develop an android application for the same information given in question no. 8 using RecyclerView (use MVC pattern).
47. 13. Develop an android application for the same information given in question no. 10 using RecyclerView.
48. 14. Write a code snippet for retrieving data from RecyclerView.

Unit 7: Advance Android Concepts

Questions:

1. What do you mean by SQLite? Explain its features.
2. Explain advantages and disadvantages of using SQLite.
3. Differentiate SQLite and SQL with example.
4. How can you establish connection using SQLite in android? Explain with the help of suitable example.

5. Explain the process of creating Database and Tables using SQLite in android.
6. Develop an android application to demonstrate basic crud operation using SQLite.
7. Develop a to-do list application using SQLite.
8. Develop a phone directory application using SQLite.
9. Develop an android application which track your daily income and expenses. Also your app should display daily savings.
10. What do you mean by API? Explain its types.
11. Define JSON. Explain JSON as a tool for creating API with example.
12. Explain the advantages of JSON over XML.
13. How do you communicate your application with remote server? Explain with the help of an example.
14. Develop an android application that demonstrates retrieval of contents from remote server.
15. Develop an android application that demonstrates sending of contents to remote server.
16. Develop a phone directory application (Phone records must be stored in remote server).
17. Explain the procedure for generating API key for displaying google map in your application.
18. Develop an android application that displays google map.
19. Explain the procedure for generating signed APK.
20. Explain the procedure for publishing signed APK in play store.

Unit 8: Introduction To IOS Programming

Questions:

1. What do you mean by iOS programming? Explain.
2. Explain iOS platform in detail.
3. Explain the procedure for developing hello world application in iOS.
4. What do you mean by connections? How can you connect UI controls to application code? Explain with example,
5. What do you mean by swift language? Explain process of declaring and using variables in swift language.
6. Explain different types of operators used in swift language.
7. Explain branching and looping statements used in swift language in detail.
8. How can you create array and use array in swift language? Explain.
9. Explain view hierarchy in iOS programming in detail.
10. What do you mean by storyboard and view controllers? Explain with example.
11. What are different types of UI controls used in iOS programming? Explain in detail.
12. Develop an iOS application to calculate simple interest.
13. Develop an iOS application to calculate area and perimeter of rectangle.

Chapter 7

1. **Create CRUD API for product(id,name,price,categoryId,status) , Category(Id,Name)**
2. **Create CRUD API for student(id,name,email,classid), class(id,name)**