

1. All questions are **compulsory**.
2. All questions carry **equal** marks.
3. Draw **neat, labelled diagrams** wherever necessary

Q.1 Attempt the following (Any Four)

[20 Marks]

- a. Describe android Architecture.
- b. Create simple app to display "hello world".
- c. Write Kotlin code to execute activity life cycle using logcat.
- d. How to create notification with respect to the following:
To create a notification builder
To set properties like content text, icon, title
Attaching actions
Issuing a notification
- e. Explain operators in Kotlin.
- f. What is implicit intent? Explain with example.

Q.2 Attempt the following (Any Four)

[20 Marks]

- a. How we can create option menu? Explain with example.
- b. Create Application to create user interface to accept user name and password and display user name. (using text view, edit text and command button). write Kotlin code.
- c. Write short note on folders of value / drawable/ , raw/ .
- d. Explain List view with example.
- e. What is Layout? Write properties of Linear and Relative Layout.
- f. Write XML code to add, delete and show records using SQLite database along with suitable example.

Q.3 Attempt the following (Any Four)

[20 Marks]

- a. Write steps to publish application.
- b. Write a XML code to apply following effect in Animation.(Fade_in,Fade_out,zoom_in,zoom_out)
- c. Explain services of android.
- d. Create an Android application to use a camera and capture image and display them on the screen.(write kt code)
- e. Explain canvas in Android with example.
- f. Explain Broadcast Receiver.

Q.4 Attempt the following (Any Five)

[15 Marks]

- a. Write short note on
 - 1) Gradle
 - 2) spinner
- b. How we can create popup menu? Write XML code.
- c. How do you declare variables in kotlin? Explain with example
- d. Write Xml code to creating ranking table of players where we define four columns Rank, Name, Country and Points
- e. Write a short note on 1.Radio Button 2.checkbox
- f. Write Xml code for addition of two numbers using edit text and command button.