

Gandhi Institute of Engineering and Technology University, Odisha, Gunupur (GIET University)



B. Tech (Sixth Semester - Regular) Examinations, April 2026 23BCSOE36011 – Android Application Development Using Kotlin (CSE, CSE-AIML, CSE-DS)

Time: 3 hrs

Maximum: 60 Marks

Answer ALL questions
(The figures in the right hand margin indicate marks)

PART – A**(2 x 5 = 10 Marks)**Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. Write uses of data class and interface.	CO1	K1
b. Define Android Virtual Devices (AVD)	CO2	K2
c. Write the Kotlin code snippet required to display a basic Toast message with the text "Saved Successfully."	CO4	K2
d. Describe the role of a Fragment in creating a flexible UI and how it differs from an Activity.	CO3	K2
e. Explain the benefits of using Firebase Realtime Database over a local SQLite database for collaborative applications.	CO5	K2

PART – B**(10 x 5 = 50 Marks)**Answer **ALL** the questions

	Marks	CO #	Blooms Level
2. a. Explain with suitable example the different types of constructors in Kotlin Programming.	5	CO1	K2
b. Write a code snippet in Kotlin to accept a number through command line argument and reverse the number if Prime else display the nearest prime number. Input: 13 Output: Given number is Prime, Reversed number: 31 Input: 10 Output: Given number is Not Prime, Nearest prime number: 11	5	CO1	K3
(OR)			
c. Explain about sealed classes in Kotlin in detail.	5	CO1	K1
d. Write a code in Kotlin to print all Armstrong numbers between 100 to 500.	5	CO1	K3
3.a. Explain in detail with suitable example and neat diagram about the activity lifecycle and callbacks.	5	CO2	K2
b. Write the xml and Kotlin code to display three buttons and set action to change the background color w.r.t. to button text	5	CO2	K3
(OR)			
c. Write the xml and Kotlin code to display addition and subtraction of EditText values.	5	CO2	K3
d. With neat diagram explain the framework architecture of Android.	5	CO2	K3
4.a. Describe different types of Application architecture.	5	CO3	K2
b. Create an android application having 3 fragments named Loginfragment, Registerfragment and Homefragment. Loginfragment have 2 buttons named Login and Register. On successful login, Homefragment will open and on clicking the Register button, Registerfragment will open.	5	CO3	K3

(OR)

- | | | | |
|---|---|-----|----|
| c. Define RecyclerView in android? What is the difference between ListView and RecyclerView? | 5 | CO3 | K2 |
| d. Write an android program to create a registration activity to enter name, email id, mobile number with proper validation. | 5 | CO3 | K3 |
| 5.a. Describe different types of menu in android ? Write down the steps to create option menu Android. | 5 | CO5 | K2 |
| b. Create a settings screen with a Spinner to select a country. Use an ArrayAdapter to populate it from a Kotlin string array and implement an onItemSelectedListener to display the selection in a TextView. | 5 | CO4 | K3 |

(OR)

- | | | | |
|---|---|-----|----|
| c. Explain with suitable example use of shared preference in android programming. | 5 | CO4 | K2 |
| d. Explain the different types of Menus and use cases for any two types of Menu | 5 | CO5 | K2 |
| 6.a. Write down an android program to store employee data like empno, name, department, designation in SQLite database. | 5 | CO6 | K3 |
| b. Compare the pros and cons of using Shared Preferences versus SQLite for saving a single language selection from a Spinner. Analyze which method is more efficient for simple settings and how it allows the app to "remember" the choice upon restart. | 5 | CO5 | K2 |

(OR)

- | | | | |
|---|---|-----|----|
| c. Describe the importance of testing Android applications before they are released. Explain how managing application resources in a hierarchy helps an app work on different screen sizes and devices. | 5 | CO6 | K2 |
| d. Explain various classes and functions required for SQLite connection. | 5 | CO6 | K2 |

--- End of Paper ---