Printed Pages:2 **Sub Code:KCA-044**

Paper Id: 236599 **Roll No.** | | | | | | | | | | |

MCA
(SEM IV) THEORY EXAMINATION 2022-23
MODERN APPLICATIOIN DEVELOPMENT

Time: 3 Hours ***Total Marks: 100***

Note: Attempt all Sections. If require any missing data, then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

(a) Explain Inline Functions in short.
(b) Describe the role of channel in notification after Oreo version.
(c) What is the use of Value Folder in Android Studio?
(d) Explain the Firebase Components.
(e) Describe the role of Gradle in Android Studio.
(f) Demonstrate how fragment is different from Activity.
(g) Calculate the value of X at different phases of activity life cycle, if x=10 is given in Main Activity class and on Create=X+1,onStart=x+2, on Resume=x+3, on Pause=x+4, on Stop =x+5,on Destroy = x+6, On Restart = x+8.
(h) What do you mean by Nested Class?
(i) What is the use of backward compatibility option and determine which class is used for it?
(j) Explain Signed and Un-Signed APK.

SECTION B

2. Attempt any *three* of the following: 10x3=30

(a) Discuss data binding? Explain it with proper example.
(b) Explain notification in android with a complete program in KOTLIN.
(c) Explain the role of services in android.
(d) Illustrate List view and write a function to add any 10 items in Listview.
(e) Discuss the sensor? Describe the types of sensors available in Android.

SECTION C

3. Attempt any *one* part of the following: 10x1=10

(a) Determine Lambda Expression in KOTLIN with proper example.
(b) Discuss MVVM architecture in details with a proper example.

4. Attempt any *one* part of the following: 10x1=10

(a) Explain List View, Recycler View with proper examples
(b) Discuss the Volley Library and Retrofit Library? Explain their use with proper example.

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5. Attempt any *one* part of the following: 10x1=10

(a) Demonstrate various layouts available in android and also explain where & how we can use these layouts in android application development?

(b) Demonstrate Inline Functions, Higher-Order Functions, Scope Functions with proper examples.

6. Attempt any *one* part of the following: 10x1=10

(a) Discus the different types of services? Define how these are different from activity.

(b) Illustrate how packaging and deployment is done. Explain the steps to publish an app on Google Play Store.

7. Attempt any *one* part of the following: 10x1=10

(a) Develop an application to store and retrieve Name, Age, Mob. no. and gender of a student in SQLlite.

(b) Explain the process of generating signed APK in android studio.

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