Roll No……..….. **Total No. of Printed Pages: 1**

Total No. of Questions: [09]

BCA-MCA DUAL DEGREE (Semester – 4th)
ANDROID APPLICATION DEVELOPMENT
Subject Code: BMCAS1-401
Paper ID: [19340116]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a What is Intent?
b What is an XML Layout?
c What are drawables in Android?
d Define Android Virtual Devices (AVD).
e Define services in the Android operating system.
f Enlist the steps to publish the Android application.
g What is a Content Provider? How does it work?
h What is the primary purpose of the Async Task Loader in Android?
i What are Loaders in Android, and how do they help in managing background data loading?
j Explain the difference between a debug APK and a release APK.

Section – B **(5 marks each)**

Q2. Explain the activity life cycle.
Q3. Discuss how one can use Alarm Manager to schedule background tasks in Android.
Q4. Describe types of permissions used while developing android applications.
Q5. Build a GUI for Student table with 5 records, write queries to add, delete and view the records from the SQLite databases.
Q6. Discuss the process of generating and publishing a signed APK for release on the Google Play Store.

Section – C **(10 marks each)**

Q7. Discuss the different types of layouts available in Android. Provide an example of how to arrange views in a Constraint Layout to create a simple user interface.
Q8. Compare Toast**,** Snack bar**,** and Alert Dialog in terms of their use cases, appearance, and user interaction. Provide examples where each would be appropriate in a mobile app.
Q9. a) Discuss the process of parsing JSON in Android.
b) Provide an example of using one Google API of your choice with the Explorer.