This question paper contains **3** printed pages]

(Write your Roll No. on the top immediately on receipt of this question paper.)

Section A is compulsory.

Attempt any **3** questions from Section B.

Parts of a question must be answered together.

Section A

(Compulsory)

1. (*a*) What is the usage of Android Manifest.xml file ?   1

    (*b*) XML tags are case sensitive. (True *or* False) *True*   1

    (*c*) Which file in Android application contains permissions to use features on device, API information, minimum required Android SDK version, activities information and so on ? *Android Manifest*   1

    (*d*) What Activity method you use to retrieve a reference to an Android view by using the id attribute of a resource XML ? *findViewById( )*   1

P.T.O.

(e) What is the second layer from top called in the Android's Architecture ? 1

(f) Which method is used to call another activity when we expect to get something back from the called activity ? *StartActivityForResult()* 1

(g) Write appropriate statements for the following : 2+2

    (i) To display text notification (toast) on screen with message "Hello User !" for a long period of time. *Toast t = Toast.makeText(getAPPlicationContext() , "Hello User", Toast.LENGTH_LONG).show();*

    (ii) To insert a row for John, Roll No : 2140152 in table STUDENT (_ID INTEGER AUTOINCREMENT, NAME TEXT, ROLL_NO INTEGER) in SQLite database.

Section B

(Attempt any *three*)

2. Describe the following :

    (a) ART (Android Runtime) 2.5

    (b) Ninepatch bitmaps 2.5

3. What are intents ? What are the various types of intents in Android ? Explain with example. 5

4. (a) What are the main components/building blocks of an Android application ? 2

    (b) Define activity. Explain activity lifecycle through various callback methods that are called during life time of an activity. 3

5. What is SQLite database ? How to provide that database connection using SQLite database. 5

6. Give an overview of the classes listed below : 5

   (a) MenuInflater

   (b) Spinner

   (c) Array Adapter

   (d) Toast

   (e) Alert Dialog.