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3 Hours / 70 Marks   Seat No.

Instructions –   (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1.   **Attempt any <u>FIVE</u> of the following:**   **10**

a) State android ECO system.

b) List various tools for android application development.

c) List various layouts used in android UI design.

d) Name any four attributes of Edit Text control.

e) State the use of fragments in android App development.

f) Define SMS service in android application development.

g) List different types of sensors used in android.

Marks

2.   **Attempt any THREE of the following:**   **12**

a)   Describe android and importance of OHA.

b)   Explain Dalvik Virtual Machine and state it's importance.

c)   Describe process of getting the map API Key.

d)   Explain multimedia framework in android.

3.   **Attempt any THREE of the following:**   **12**

a)   Describe various installation steps of android studio and its environment.

b)   Explain Gridview with its attributes with suitable example.

c)   Explain text to speech conversion technique in android.

d)   Describe steps for deploying android application on Google Play Store.

4.   **Attempt any THREE of the following:**   **12**

a)   Describe directory structure and its components.

b)   Develop an android application for Date and Time Picker.

c)   Explain property animation method to animate the properties of view object with example.

d)   Describe permissions required for android application development.

e)   Develop an android application to show current location of an user's car.

5.   **Attempt any TWO of the following:**   **12**

a)   Design a employee registration form using UI component.

b)   Develop an android application for taking student feedback with database connectivity.

c)   Explain Geocoding and Reverse Geocoding with suitable example.

Marks

6. **Attempt any TWO of the following:** **12**

a) Design an android application to show the list of paired devices by Bluetooth.

b) Develop an android application for sending Short Message Service (SMS).

c) Explain how linear and frame layout is used to design an android application with suitable example.

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