23124

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) List all tools and softwares required for developing an android application.

b) Define emulator.

c) List any four attributes of layout.

d) Define Geocoding and Reverse Geocoding.

e) State intent. List types of intent.

f) Write difference between toggle button and radio button.

g) Define :

  i)   Fragment

  ii) Broadcast receiver

Marks

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

   a) Explain relative layout with all its attributes.

   b) Explore all steps to install Android studio and SDK.

   c) Explain the need of Android Operating System. Also describe any four features of android.

   d) Develop a program to add "Hello World" marker at (10,10) co-ordinates. Write only . java file.

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

   a) Describe service life cycle with its diagram.

   b) Elaborate Android Security Model.

   c) Write an xml file to create login page using Table Layout.

   d) Develop an application to display analog Time Picker. Also display the selected time. (Write only . java file)

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

   a) Differentiate between JVM and DVM. (Any four points)

   b) Explain components of android directory structure.

   c) Develop an android application using radio button.

   d) Develop an application to send and receive SMS. (Write only . java and permission tag in manifest file)

   e) Draw and explain activity life cycle.

Marks

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

    a) Develop a program to perform addition, subtraction, division, multiplication of two numbers and display the result. (Use appropriate UI controls)

    b) Develop an application to display a Google Map. (Write JAVA and Manifest file)

    c) Develop an application to convert "thanks" text to speech as given in the following GUI.

<div style="text-align:center">

TextToSpeechDemo

Android Text to Speech (TTS)
Demo

```
thanks|
```

CLICK TO CONVERT TEXT TO SPEECH

</div>

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

    a) Develop an application to update a record of an employee whose emp.id is 'E101' in SQlite database. Change employee name from "PQR" to "XYZ". Also display the updated record. (Write .java and .xml files)

    b) i) Describe all steps in application deployment on google playstore.

       ii) Write steps for customized permissions.

    c) Develop a program to TURN ON and OFF bluetooth. Write .java file and permission tags.

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