

22617

23124

3 Hours / 70 Marks

Seat No.

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- 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 FIVE 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

P.T.O.

- 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.

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.



TextToSpeechDemo

Android Text to Speech (TTS)
Demo

thanks|

CLICK TO CONVERT TEXT TO SPEECH

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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