# UNIVERSITY OF MUMBAI
## T.Y.B.Sc. INFORMATION TECHNOLOGY PRACTICAL EXAMINATION
## SEMESTER VI
## ANDROID PROGRAMMING PRACTICAL

**Seat No:**                                          **Max. Marks: 50**

| 1. | Create the standard calculator application in android | 30 |
|---|---|---|
| | My Application<br><br>DEL   C   %   +<br><br>1   2   3   /<br><br>4   5   6   –<br><br>7   8   9   X<br><br>.   0   = | |
| 2. | Create a simple "Hello World" application in Android Studio. Explain the purpose of the MainActivity and the activity_main.xml file. | 10 |
| 3. | Viva | 5 |
| 4. | Journal | 5 |

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**Seat No: _____**                              **Max. Marks: 50**

| 1. | Create a login screen with EditText fields for username and password, and a Button to submit. Include validation for empty fields. | 20 |
|---|---|---|
| 2. | Create an android application to display Alert Dialog on pressing the Back button. | 20 |
| 3. | Viva | 5 |
| 4. | Journal | 5 |

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**Seat No:**                                                   **Max. Marks: 50**

| 1. | Create an android application to pass the data from one activity to another activity in the same application using intent. | 10 |
|----|---|---|
| 2. | Create a user interface with a TextView, Button, and ImageView. When the button is clicked, the image should be changed dynamically. | 30 |
| 3. | Viva | 5 |
| 4. | Journal | 5 |

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**Seat No:** _____                                   **Max. Marks: 50**

| 1. | Create the background service android application to play the ringtone/music. | 20 |
|----|---|---|
| 2. | Create an android application which automatically notify the user when Aeroplane mode is turned on or off using broadcast receiver. | 20 |
| 3. | Viva | 5 |
| 4. | Journal | 5 |

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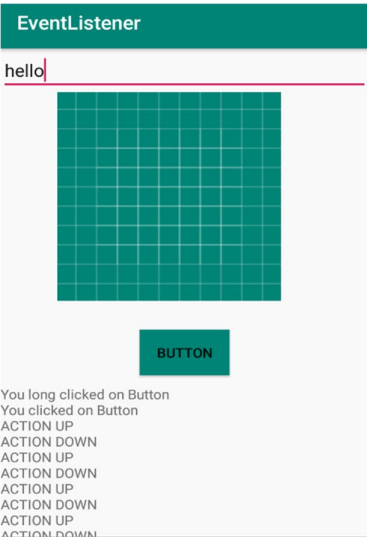
**Seat No:** _____                                   **Max. Marks: 50**

| 1. | Explain the Android Activity life cycle in detail. Implement a simple app that logs the lifecycle methods (onCreate(), onStart(), onResume(), onPause(), onStop(), onDestroy()). | 40 |
|----|---|---|
| 2. | Viva | 5 |
| 3. | Journal | 5 |

**Seat No:**                                    **Max. Marks: 50**

| 1. | Create an android application to pass the data from one activity to another activity in the same application using intent. | 10 |
|---|---|---|
| 2. | Create an android application to demonstrate the following event listeners on the following widgets<br>Button: on click listener, long click listener<br>Image: Touch listener with these motion events =>Action up, action down and action pointer down<br>Edit Text :  key listener on Enter key<br>The Appropriate message should be displayed in text view.<br><br>EventLentener<br><br>hello<br><br>BUTTON<br><br>You long clicked on Button<br>You clicked on Button<br>ACTION UP<br>ACTION DOWN<br>ACTION UP<br>ACTION DOWN<br>ACTION UP<br>ACTION DOWN<br>ACTION UP<br>ACTION DOWN | 30 |
| 3. | Viva | 5 |
| 4. | Journal | 5 |

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**Seat No: _____**                        **Max. Marks: 50**

| 1. | Create an android application to pass the data from one activity to another activity in the same application using intent. | 20 |
|---|---|---|
| 2. | Implement a custom color scheme for your registration form. Set the background color of the entire layout to a light color, and use a contrasting color for the Submit button. | 20 |
| 3. | Viva | 5 |
| 4. | Journal | 5 |

**Seat No:**                                                                 **Max. Marks: 50**

| 1. | Insert the new contents in the following resources and demonstrate their uses in the android application<br>Android Resources: (Color, Theme, String, Drawable, Dimension, Image) | **20** |
|---|---|---|
| 2. | Create an android application which automatically notify the user when Aeroplane mode is turned on or off using broadcast receiver. | **20** |
| 3. | Viva | **5** |
| 4. | Journal | **5** |

**Seat No: _____**                                                    **Max. Marks: 50**

| 1. | Define the following string resources in the strings.xml file for the registration form:<br>• "Full Name", "Email", "Password", "Confirm Password", and "Submit".<br>• Use these string resources in the corresponding TextView and Button in your layout XML. | **40** |
|---|---|---|
| 2. | Viva | **5** |
| 3. | Journal | **5** |

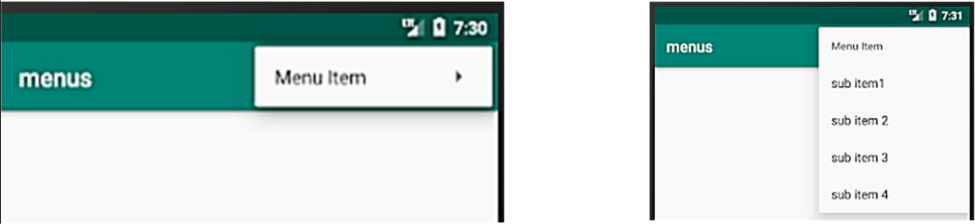**Seat No: _____**                                                    **Max. Marks: 50**

| 1. | Create a registration form where the form fields (Name, Email, Password, Confirm Password) are stacked vertically. Include a **Submit** button at the bottom of the form. | **25** |
|---|---|---|
| 2. | Create an android application, with one button and image view also set the background image in the application, the image should be changed on each click of the button (Use two images). | **15** |
| 3. | Viva | **5** |
| 4. | Journal | **5** |

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**Seat No:**                                    **Max. Marks: 50**

| 1. | Create an android application to demonstrate the use of sub menu  the toast should be appeared by selecting the sub menu item  | **25** |
|---|---|---|
| 2. | Design a form with a **RadioGroup** for selecting the **gender** (Male/Female/Other). Include a **Submit** button that shows the selected gender in a **TextView**. | **15** |
| 3. | Viva | **5** |
| 4. | Journal | **5** |

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**Seat No: _____**                                    **Max. Marks: 50**

| 1. | Create a **RelativeLayout** for a profile screen with:<br>• A **Profile Image** centered at the top of the screen.<br>• A **TextView** displaying the name below the profile image, aligned to the center.<br>• A **Button** below the name, aligned to the center. | **20** |
|---|---|---|
| 2. | Write a program that logs the different lifecycle methods of an **Activity** (e.g., onCreate(), onStart(), onResume(), onPause(), onStop(), onDestroy()) to the logout. | **20** |
| 3. | Viva | **5** |
| 4. | Journal | **5** |

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**Seat No: _____**                                    **Max. Marks: 50**

| 1. | Design a **ListView** that displays a list of items. Each item should be a simple **TextView** with a string from an array of names. The list should be populated dynamically in your Activity. | **40** |
|---|---|---|
| 2. | Viva | **5** |
| 3. | Journal | **5** |

**Seat No:**                                                      **Max. Marks: 50**

| 1. | Create an **Activity** that hosts a **Fragment**. When a button in the **Activity** is clicked, pass a string value to the **Fragment** and display it in a **TextView**. | 20 |
|----|----|----|
| 2. | Create an android application using linear layout and insert 10 animals in the list view and display the appropriate Toast. | 20 |
| 3. | Viva | 5 |
| 4. | Journal | 5 |

**Seat No:** _____                          **Max. Marks: 50**

| 1. | Create an app that displays an **ImageView**. When the user clicks the **ImageView**, show a **Toast** with the message "Image clicked!". | 20 |
|----|----|----|
| 2. | Create the background service android application to play the ringtone/music. | 20 |
| 3. | Viva | 5 |
| 4. | Journal | 5 |

**Seat No:** _____                          **Max. Marks: 50**

| 1. | Design a simple login form using **ConstraintLayout** that has:<br>• **Username** and **Password** fields aligned vertically.<br>• **Login** button centered horizontally below the fields.<br>• **Forgot Password?** link aligned to the right of the password field.<br>• **Task:** Position all the elements using constraints in the **ConstraintLayout**. | 40 |
|----|----|----|
| 2. | Viva | 5 |
| 3. | Journal | 5 |

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**Seat No:**                                                  **Max. Marks: 50**

| | | |
|---|---|---|
| 1. | Create an android application to demonstrate the use of sub menu  the toast should be appeared by selecting the sub menu item  | **25** |
| 2. | Design a screen with two buttons: **Start** and **Stop**. When the **Start** button is clicked, start a **Timer** (display the time in seconds). When the **Stop** button is clicked, stop the timer. | **15** |
| 3. | Viva | **5** |
| 4. | Journal | **5** |

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**Seat No: _____**                                    **Max. Marks: 50**

| | | |
|---|---|---|
| 1. | Create a simple **Registration Form** with the following fields:<br>• **Name** (Text Input)<br>• **Email** (Text Input)<br>• **Phone Number** (Text Input)<br>• **Password** (Password Input)<br>• **Confirm Password** (Password Input)<br>• **Submit Button** | **40** |
| 2. | Viva | **5** |
| 3. | Journal | **5** |

Seat No: _____          Max. Marks: 50

| 1. | Create a **Registration Form** with the following fields:<br>• **First Name** (Text Input)<br>• **Last Name** (Text Input)<br>• **Email Address** (Text Input)<br>• **Country** (Spinner Dropdown)<br>• **Password** (Password Input)<br>• **Confirm Password** (Password Input)<br>• **Submit Button** | 40 |
|----|----|----|
| 2. | Viva | 5 |
| 3. | Journal | 5 |

Seat No: _____          Max. Marks: 50

| 1. | Create a **Registration Form** with the following fields:<br>• **Username** (Text Input)<br>• **Email Address** (Text Input)<br>• **Gender** (Radio Buttons with options "Male" and "Female")<br>• **Password** (Password Input)<br>• **Submit Button** | 40 |
|----|----|----|
| 2. | Viva | 5 |
| 3. | Journal | 5 |

Seat No: _____          Max. Marks: 50

| 1. | Create a **Registration Form** with the following fields:<br><br>• **Username** (Text Input)<br>• **Email Address** (Text Input)<br>• **Phone Number** (Text Input)<br>• **Password** (Password Input)<br>• **Submit Button** (Floating Action Button)<br>• | 40 |
|----|----|----|
| 2. | Viva | 5 |
| 3. | Journal | 5 |

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**ANDROID PROGRAMMING PRACTICAL**

**Seat No: _____**                    **Max. Marks: 50**

| 1. | Design a **Registration Form** that includes:<br>• **Name** (Text Input)<br>• **Date of Birth** (Date Picker)<br>• **Email Address** (Text Input)<br>• **Phone Number** (Text Input)<br>• **Password** (Password Input)<br>• **Submit Button** | **40** |
|----|----|----|
| 2. | Viva | **5** |
| 3. | Journal | **5** |

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**Seat No: _____**                    **Max. Marks: 50**

| 1. | Create a **Registration Form** with the following fields:<br>• **Username** (Text Input)<br>• **Email Address** (Text Input)<br>• **Agree to Terms and Conditions** (Checkbox)<br>• **Password** (Password Input)<br>• **Confirm Password** (Password Input)<br>• **Submit Button** | **40** |
|----|----|----|
| 2. | Viva | **5** |
| 3. | Journal | **5** |

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**Seat No: _____**                    **Max. Marks: 50**

| 1. | Create a **Registration Form** with the following fields:<br>• **Username** (Text Input)<br>• **Email Address** (Text Input)<br>• **Password** (Password Input)<br>• **Confirm Password** (Password Input)<br>• **Profile Picture** (Image Upload Button)<br>• **Submit Button** | **40** |
|----|----|----|
| 2. | Viva | **5** |
| 3. | Journal | **5** |

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**Seat No: _____**                                    **Max. Marks: 50**

| 1. | Write a program that creates a **Service** to download a file in the background. While the file is downloading, show a **Notification** indicating the progress. Once the download is complete, the notification should be updated to show "Download Complete." | **40** |
|----|----|----|
| 2. | Viva | **5** |
| 3. | Journal | **5** |

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**Seat No: _____**                                    **Max. Marks: 50**

| 1. | Create a **BroadcastReceiver** that listens for the **Android Intent ACTION_BATTERY_CHANGED** broadcast and shows a **Toast** displaying the current battery percentage. | **40** |
|----|----|----|
| 2. | Viva | **5** |
| 3. | Journal | **5** |

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**Seat No: _____**                                    **Max. Marks: 50**

| 1. | Create an app that listens for **ACTION_AIRPLANE_MODE_CHANGED** using a **BroadcastReceiver**. Display a **Toast** message whenever the airplane mode is turned on or off. | **40** |
|----|----|----|
| 2. | Viva | **5** |
| 3. | Journal | **5** |

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# ANDROID PROGRAMMING PRACTICAL

**Seat No: _____**                                    **Max. Marks: 50**

| | | |
|---|---|---|
| 1. | Write a program that uses a **Service** to perform a task in the background, and once the task is completed, it sends a broadcast. A **BroadcastReceiver** will listen for the completion broadcast and display a **Notification** when the task is done. | **40** |
| 2. | Viva | **5** |
| 3. | Journal | **5** |