

Unique paper Code : 42343601  
 Name of the Course : B.Sc. (Prog.) Physical Science/ Mathematical Science (SEC)  
 Name of the Paper : Android Programming  
 Semester : VI  
 Year of Admission : 2015, 2016, 2017 & 2018  
 Maximum Marks : 75  
 Duration : Three hours

**Instructions for candidates:**

Attempt any four questions. All questions carry equal marks.

Q1.	<p>Create an Android App with two edit boxes (to take two numbers from user) and four buttons. The details of four buttons are:</p> <table border="1" data-bbox="399 779 1385 1384"> <thead> <tr> <th>Label</th><th>On Click Functionality</th></tr> </thead> <tbody> <tr> <td>1. Show Double</td><td>Double of the first number is shown in second edit box.</td></tr> <tr> <td>2. Show Half</td><td>Half of the second number is shown in first edit box.</td></tr> <tr> <td>3. Reset</td><td>Clears the contents of both the edit boxes</td></tr> <tr> <td>4. Close</td><td>A dialog box appears, asking user "Are you sure to close the app?" The app is closed only if user chooses yes on dialog box.</td></tr> </tbody> </table> <p>Write the XML and the Java code.</p>	Label	On Click Functionality	1. Show Double	Double of the first number is shown in second edit box.	2. Show Half	Half of the second number is shown in first edit box.	3. Reset	Clears the contents of both the edit boxes	4. Close	A dialog box appears, asking user "Are you sure to close the app?" The app is closed only if user chooses yes on dialog box.
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Q2.	<p>How is Dynamic method dispatch useful for resolving call to Overridden methods in Java, explain with suitable example?          What are intents? What are they used for?          A main activity has an edit box and a button, when user clicks the button the contents of the edit box are sent to the second activity where the reverse of this text is shown. Both the activities have 'Close' button. Write the XML and the Java code for the same.</p>										
Q3.	<p>What is Android Runtime?          How is multiple inheritance implemented in Java? How is it used in Android programming?          Write XML and Java code for a menu-driven application for changing the background color of the application. The menu should have 5 items corresponding to different color names.</p>										

Q4.	<p>Is it necessary to include multiple radio buttons in a radio group? Justify your answer.</p> <p>Differentiate between <b>AndroidManifest.xml</b> and <b>activity_main.xml</b> files.</p> <p>Write the steps to deploy an application on USB-connected android device and steps to create Android Virtual Device.</p> <p>Draw Android activity life cycle and give callback methods associated with all activities involved for the following user actions:</p> <ul style="list-style-type: none"> <li>(i) When you move from Activity <b>A</b> to previous Activity <b>B</b>.</li> <li>(ii) When you move from Activity <b>B</b> to some other Activity <b>X</b> in another application.</li> <li>(iii) When you move from Activity <b>B</b> to Main Activity.</li> </ul>								
Q5.	<p>Name the class which represents the SQLiteDatabase results in a table format. Discuss any 2 methods of this class.</p> <p>Write an application to create a Database <i>ABC_School</i> with Table Student ( <i>StudentId</i> INTEGER AUTOINCREMENT, <i>StudentName</i> TEXT, <i>DepartmentId</i> INTEGER) using SQLite Database. Insert the following 3 records into the table.</p> <table border="1"> <thead> <tr> <th><i>StudentName</i></th><th><i>DepartmentId</i></th></tr> </thead> <tbody> <tr> <td>ABC</td><td>4</td></tr> <tr> <td>DEF</td><td>2</td></tr> <tr> <td>XYZ</td><td>6</td></tr> </tbody> </table> <p>Delete the row where <i>DepartmentId</i> =2.</p>	<i>StudentName</i>	<i>DepartmentId</i>	ABC	4	DEF	2	XYZ	6
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Q6.	<p>Write and explain the code to display text notification (toast) on screen with the message “OBE Examination Submitted Successfully!” for a long period of time.</p> <p>What is the difference between <b>Broadcast Receivers</b> and <b>Content Providers</b>?</p> <p>What are Linear, Table, Frame and Relative layouts in android? Also differentiate between List View and Grid View layouts.</p>								