

R19**Code No: 864AB****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA IV Semester Examinations, July/August - 2021****MOBILE APPLICATION DEVELOPMENT****Time: 3 Hours****Max.Marks:75**

Answer any five questions
All questions carry equal marks

1. What are the challenges of android application developments and how to mitigate them? [15]
2. Explain in detail about all the android application components. [15]
3. Create an android activity that displays a dialog box which contains a progress bar that shows a file downloading percentage. Time duration of file download is 30 seconds. [15]
4. Develop a simple calculator application using table layout. [15]
5. Explain the step-by-step procedure with a simple program for creating and displaying notifications in android. [15]
6. Explain with the help of a program how you can send and receive SMS from your application without using built-in SMS of android. [15]
7. How do you create, save, retrieve and clear data using shared preferences? Explain. [15]
8. Build a GUI for Student table with 5 records, write queries to add delete and view the records from the SQLite databases. [15]

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