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## 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

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- What are the challenges of android application developments and how to mitigate them? [15]
- Explain in detail about all the android application components. [15]
- 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]

Develop a simple calculator application using table layout.

[15]

- Explain the step-by-step procedure with a simple program for creating and displaying notifications in android. [15]
- 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]
- How do you create, save, retrieve and clear data using shared preferences? Explain.

[15

 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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