- 1. Define error. Explain the types of errors along with its examples.
- 2. Write a program to animate a text field by colouring it with green and blue alternatively using Ul threads?
- 3. Explain the types of testing in detail.
- 4. Infer the steps for creating and monitoring geo fencing in android application.
- 5. Design an android app to accept the name as: "VTU" and message as: "RV COLLEGE OF ENGINEERING" to store in SQLite data base with its steps.
- 6. Devise a program to receive the latitude and longitude coordinates of a mobile device.
- 7. write a note on usage of log in logcat
- 8. Explain the most common errors which occur during debugging in android programming.
- 9. Infer the steps for creating and monitoring Geo fencing in android application.
- 10. Devise a program to receive the latitude and longitude coordinates of a mobile device with proper process of permissions and capture the details
- 11. Explain the implementation of UI threads in android application.
- 12. List and explain the types of testing used in android app development.
- 13. Design an android app to accept the name as: "VTU" and message as RV COLLEGE OF ENGINEERING to store in SQLite data base with its steps

- 14. Elaborate any three log methods of logcat with an example.
- 15. Devise a program to receive the latitude and longitude coordinates of a mobile device.
- 16. Elaborate any three debugging actions in Android Studio IDE
- 17. Create a program with a table of user credentials using SQLite database

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- 18. with a neat diagram explain the progressive enhancement in web application and offline support in PWA.
- 19. Differentiate an android based mobile app with a progressive web application.
- 20. With a neat diagram explain the service worker life cycle methods and working.
- 21. List and explain the different audits available in lighthouse.
- 22. Design and develop a program for inventory web site with the following:
 - i) Manifest file(with at least 10 attributes).
 - ii) Index page with proper imports and html tags
- 23. With a neat diagram explain the service worker architecture.
- 24. Differentiate an android based mobile app with a progressive web application.

25.	Design and develop a program with proper code in service worker lifecycle methods to cache files and fetch during the time of offline. (files to be cached are-'pirates.html', '/styles/pirates.css', '/styles/ pirates.tff, '/images/i-love-pirates.jpg', 'pirates-caribian2.png)
26.	Differentiate any ten features of manifest files of PWA and Android Studio
27.	Describe Google Lighthouse and any three auditing functions.
28.	Demonstrate the lifecycle of a Service Worker.
29.	Compare any five features of the service work in PWA to the gradle files in Android Studio
30.	Describe the manifest file instructing the browser to treat it as PWA.
31.	Write a program to demonstrate the register and install events in PWA.