

Course Code : 2101CS402**Date** : 17-10-2023**Course Name** : Mobile Application Development using Flutter**Duration** : 150 Minutes**Total Marks** : 70**Instructions:**

1. Attempt all the questions.
2. Figures to the right indicates maximum marks.
3. Make suitable assumptions wherever necessary.

Q.1 (A) Explain nullable and non-nullable types in dart. **4****(B)** Explain the use of () underscore for data hiding in dart. **3****OR**

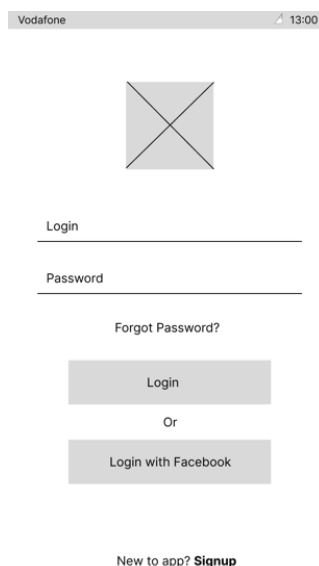
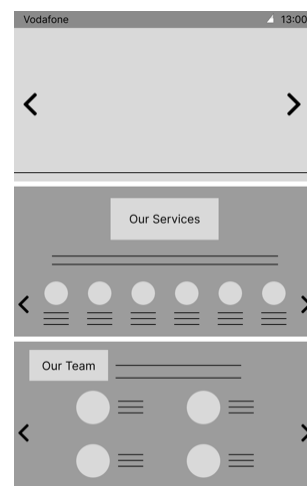
Explain in brief anonymous function in dart.

(C) Explain the flutter architecture. **7****OR**

Explain pubspec.yaml file.

Q.2 (A) Explain Scaffold widget with its attributes and example. **4****(B)** Explain Row widget with important attributes and examples. **3****OR**

Explain container class with attributes in flutter with an example.

(C) Write a flutter code to display content as shown in **figure (a)**. **7****Figure (a)****Figure (b)****OR**Write a flutter code to display content as shown in **figure (b)**.

- Q.3** **(A)** Explain the terms async and await. **4**
 (B) Write the significance of onUpgrade() method of SQLite database class. **3**

OR

Define and write the usage of the terms ListBuilder and FutureBuilder.

- (C)** Write a code for login page with database connectivity. **7**

OR

What is shared preference? Write a sample code to store dark mode / light mode theme data using preference.

- Q.4** **(A)** Discuss how you can perform parsing using JSON in flutter application. **4**
 (B) Explain 'dio' package in flutter. **3**

OR

Explain findElement() method in JSON parsing methods with single, first, and last properties.

- (C)** Explain Restfull-API with example. **7**

OR

Explain the usage of hasError and hasData in detail with the help of a code.

- Q.5** **(A)** What are the monetary advantages you may get after publishing your application? **4**
 (B) Write steps to generate a keystore from Android Studio. **3**

OR

Write all the necessary steps to take a picture using the camera along with required changes in pubspec.yaml file.

- (C)** Write all necessary code to print all the files stored in DCIM folder of SD card. **7**

OR

Compile steps to publish Android Application on Google Play.
