**061006T4ICT**

**ICT TECHNICIAN LEVEL 6**

**IT/OS/ICT/CR/11/6/A**

**DEVELOP MOBILE APPLICATION**

**Mar. /Apr. 2023**

**TIME: 3 Hours**



**THE KENYA NATIONAL EXAMINATIONS COUNCIL**

**3 Hours**

**WRITTEN ASSESSMENT**

**INSTRUCTIONS TO THE CANDIDATE:**

*Maximum marks for each question are indicated in brackets ( ).*

*This paper consists of* ***TWO*** *sections: A and B.*

*Answer questions as per instructions in each section.*

*You are provided with a separate answer booklet.*

***The candidates should answer the questions in English***

**Section A (40 marks)**

*Answer ALL the questions in this section.*

1. Define a fragment in mobile application development. (2 Marks)
2. List **five** tools for developing mobile Apps. (5 Marks)
3. Outline t**wo** objectives for developing a mobile application. (2 Marks)
4. List **six** characteristics of a good mobile application. (6 Marks)
5. Discuss the importance of user interface in mobile applications. . (4 Marks)
6. Outline **three** differences between voice user interfaces (VUI) and Mobile App as used in the modern technology. (6 Marks)
7. Juma used plugins when developing a mobile application. Explain **two** purposes of plugins in this application. (4 Marks)
8. Explain look and feel features as applied in mobile application. (4 Marks)
9. Jael incorporated intents into a mobile application she was developing. Outline **two** benefits of using the intents. (4 Marks)
10. Mobile development IDEs combine developer tools under one GUI. List **three** typical features of such IDEs. (3 Marks)

**Section B (60 marks)**

*Answer* ***any******THREE*** *questions in this section*

1. (a) Outline **four** advantages of using SQLite database in an android application.

(4 Marks)

(b) Describe the **three** major mobile application development approaches that can be employed by a mobile application developer. (6 Marks)

(c) Kim has been hired by TMZ Mobile App Ltd as a mobile software developer. Explain the **five**stages of mobile software development lifecycle he should follow when developing the apps. (10 Marks)

1. (a) Discuss about the designing the right user interface for mobile application.

(10 Marks)

(b) Explain each of the following terms as used in mobile application development:

(i) Voice XML; (2 Marks)

(ii) Gesture based UIs. (2 Marks)

(c) Mark is developing a mobile application for a customer. Explain **three** challenges he is likely to face during development. (6 Marks)

13. (a) Explain Dynamic linking as used in mobile application development. (2 Marks)

(b) Explain **two** design considerations in mobile for mobile apps. (4 Marks)

(c) Every mobile application developer must know the architecture of the platform on which his or her developed mobile app runs. In reference to this statement:

1. Describe **four** components of an android OS layered architecture. (8 Marks)
2. Describe **three** methods that could be used during an Android activity lifecycle process. (6 Marks)
3. (a) List **four** items that are included in every Android project. (4 Marks)

(b) Explain **three** limitations of Android in mobile application development. (6 Marks)

(c) Differentiate between *activity* and *service* as used in mobile application. (4 Marks)

(d) A student monitored an activity of a mobile application. Describe **three** loops he could use when monitoring. (6 Marks)

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