

**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*

**This paper consists of THREE (3) printed pages**

**Candidates should check the question paper to ascertain that all pages  
are printed as indicated and that no questions are missing**

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### 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 **two** 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

11. (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)
12. (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:
- (i) Describe **four** components of an android OS layered architecture. (8 Marks)
  - (ii) Describe **three** methods that could be used during an Android activity lifecycle process. (6 Marks)
13. (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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