NESA NATIONAL EXAMINATION AND SCHOOL INSPECTION AUTHORITY

SPE –Mobile Application Development

T205

Monday, 31/07/2023

02:00 – 05:00 PM

Names:...................................

Index number :...................................

TVET NATIONAL EXAMINATIONS, LEVEL 5, 2022-2023

QUESTIONS and ANSWERS BOOKLET

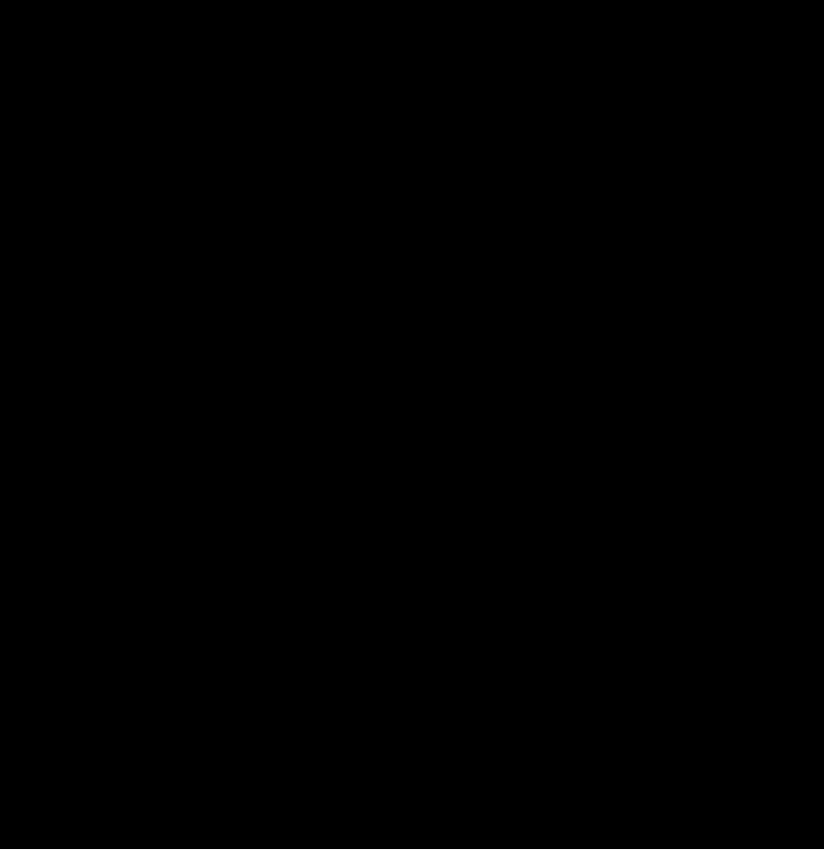**OPTION/ TRADE :** SOFTWARE PROGRAMMING AND EMBEDDED SYSTEMS

SUBJECT/EXAM: MOBILE APPLICATION DEVELOPMENT

DURATION: 3 Hours

Read carefully the instructions on page 1 & 2.

FOR EXAMINER'S USE ONLY

QUESTIONS	1	2	3	4	5	6	7	8	9	10	Total
Marks											
QUESTIONS	11	12	13	14	15	16	17	18	19	20	Total
Marks											
QUESTIONS	21	22	23	24	25	26	27	28	29	30	Total
Marks											

TVET NATIONAL EXAMINATIONS, LEVEL 5, 2022-2023

INSTRUCTIONS TO CANDIDATES (ANSWER BOOKLET)

1. A candidate should fill in the actual names and the Index number on the cover of this questions and answer booklet on the provided place.

2. It is illegal for a candidate to write any of names, Index number or school name inside the answer booklet.

3. No candidate should remove or tear any pages or part of it in the answer booklet.

4. A candidate should answer in the language in which the examination is set.

5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.

6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.

7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.

8. Write your answers on the 16 lined pages (From page 7 to page 22).

9. Use the last non-lined pages as draft.

10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

N.B: 1) After results publication, there is no remarking and no candidate is given his/her answer booklet for review. This answer booklet is a property of NESA.
2) Claims are only received online within 30 days after results publication. A link will be provided   after results publication.

T 205_ Mobile Application Development

TVET NATIONAL EXAMINATIONS, LEVEL 5, 2022-2023

OPTION/TRADE: SOFTWARE PROGRAMMING AND EMBEDDED SYSTEMS

SUBJECT/EXAM: MOBILE APPLICATION DEVELOPMENT

DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES (QUESTION PAPER)

This Exam paper is composed of Three Sections (A, B, and C). Follow the instructions given below, and answer the indicated questions for a total of 100 marks

Section **A**: Fourteen (**14**) questions, all **Compulsory**   **55 marks**

Section **B**: Among the five (**5**) questions, attempt any three (3)   **30 marks**

Section **C**: Among the two (**2**) questions, attempt any one (1)   **15 marks**

Allowed materials:

- Blue or Black pen
- Mathematical set.

Note:

Every candidate is required to carefully comply with the provided assessment instructions.

T 205_ Mobile Application Development

SECTION A: Attempt all questions   **(55 marks)**

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01. What is React Native?   **(3marks)**

02. When would you use a class Component over a Functional **(3marks)** Component?

03. What is the difference between CreateElement and **(4marks)** CloneElement?

04. How is user input handled in React Native? **(4marks)**

05. What is a bridge and why is it used in React Native? **(4marks)**

06. List four (4) tools used to debug React Native Applications. **(4marks)**

07. Explain and give examples of Touchable components in React **(3marks)** Native.

08. Is it possible to combine native codes of Android and iOS in **(4marks)** React Native? Justify your answer.

09. Select only false statement(s) about High Order Components **(3marks)** (HOC).
    a) is the functional programming methodology for reusing component logic.
    b) It is used in profiling of application in android platforms
    c) HOC takes a component as an argument and returns a new component
    d) It is a pattern evolved from React's compositional nature to decompose the logic into simpler and smaller reusable functions.

10. Select the command(s) that is not used to create a new React **(3marks)** Native project?
    a) npx create-react-app new-app
    b) npx react-native init new-app
    c) npm create-react-native-app new-app
    d) expo run new-app

11. Clarify how React Native achieves development of real Native **(5marks)** Mobile Apps.

12. Identify the real cause behind performance issues in React **(5marks)** Native.

13. Explain how storage is handled in React Native. **(5marks)**

14. Explain Memory leak Issue in React Native. **(5marks)**

Section B: Attempt any three (3) questions **(30 marks)**

15. Explain any five (5) advantages of React Native. **(10marks)**

16. Discuss how React Native handle different screen size. **(10marks)**

17. Discuss how Multiple Platforms is handled in react native. **(10marks)**

18. Write a write React native component fulfilling the following **(10marks)** instructions:

    a) The component name should be GreetingScreen.

    b) It should display the greeting message in <Text> element containing the name of the person, example of the output that should look like this: "Good morning Mr. James Doe".

    c) The name of the person i.e Mr. James Doe should be passed as a prop variable "myVistor".

    d) Style the greeting message, give it background color: green, font color: yellow and font size: 30.

    e) Make sure the component is exported so that it can be accessible by other components.

19. Compare and Contrast "props" and "state". **(10marks)**

Section C: Attempt only one (1) question   **(15 marks)**

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20. Elaborate with an example what Refs are In React native.   **(15marks)**

21. Given a list of students = [{ name: 'student #1'},{ name: 'student #2'}]:

    a) Write a react native component named "StudentListScreen" to display the above list of students on the screen using FlatList element. Make use of prop keyExtractor of the FlatList to ensure each item has a unique key.   (**12marks**)

    b) Discuss the purpose of keys In React Native FlatList.   **(3marks)**

END OF ASSESSMENT

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