RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. (Four Year) Degree in Applied Sciences
Fourth Year - Semester I Examination – September/October 2019

COM 4201 – Mobile Computing

Time: Two (2) hours

Answer ALL the questions

1

a) Explain with appropriate examples, the importance of Mobile Applications for businesses.

(05 marks)

b) What are the issues you would consider before recommending a business to go for a Mobile Application?

(05 marks)

c) Which mobile platform(s) would you recommend for a Sri Lankan business? Justify your answer.

(05 marks)

d) Why do consultants prefer *outsourcing* over *in-house development* when it comes to Mobile Applications development?

(05 marks)

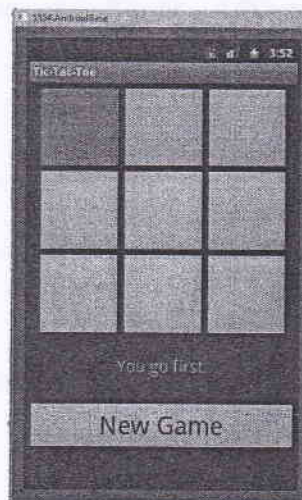e) Why companies prefer *Mobile Applications* over *Mobile Websites*?

. (05 marks)

2

a) While Microsoft and Google are rivals in many arenas, Microsoft makes a substantial profit from patents used by Android vendors. Elaborate on the statement *"Microsoft has chosen to pursue de facto licensing arrangements in lieu of litigation"*.
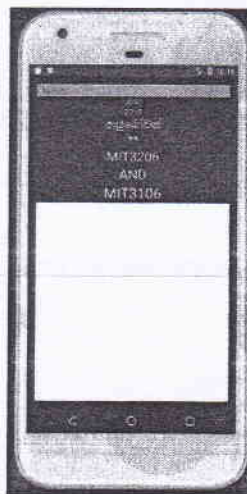
(05 marks)

b) Describe briefly the technical aspects (e.g. components, views, view, groups, configurations etc.) of the following user interfaces (UI)?

i.

(10 marks)

ii.

(10 marks)

3.

a) What is meant by Android Native Development?

(05 marks)

b) What is Android NDK and what is its role in Android development?

(05 marks)

c) What is the use of Android Support Libraries in an Android project?

(05 marks)

d)
What is the importance of the following code segment?

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

(10 marks)

4.

a) "Testing a mobile application is not only about finding dysfunctional features, but also about evaluating the usability of the application." Elaborate on the above statement.

(05 marks)

b) Suppose you have been requested to develop an android application named *ElectUse* to maintain daily electricity consumption of a household. User needs to record **year**, **month**, **date** and consumption in **kW**. Data must be stored in a SQLite database table named **LECO**. The application you develop must support CRUD functions. The user interfaces of the application have to be user friendly and instead of typing, selection must be used wherever possible.

   i. State any settings (e.g. API level, permissions etc.) the Application needs to run on an Android device and list down the Android components (e.g. Classes, Methods etc.) needed by the Application.

(10 marks)

ii. Using appropriate diagrams and code segments outline your approach to develop the above application. The approach should cover all design issues, tips, warnings, etc. for a Java programmer to confidently implement it.

(10 marks)

-End -