TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MATHEMATICS & PHYSICS

UNIVERSITY EXAMINATION FOR:

BACHELOR OF MATHEMATICS & COMPUTER SCIENCE

EIT 4452: MOBILE APPLICATION DEVELOPMENT

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

DATE: Sep 2018

Instructions to Candidates
You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of **FIVE** questions. Attemptquestion ONE (Compulsory) and any other TWO questions
Do not write on the question paper.

Question ONE

A. What is phoneGap Plaform?   [3 marks]

B. How does PhoneGap Platform Works?   [3 marks]

C. Based on the type of channels being utilized, mobile radio transmission systems may be classified as the following three categories. Discuss the following mobile radio transmission systems

  i.   Simplex Systems   [4 marks]

  ii.   Half Duplex Systems   [4 marks]

  iii. Full Duplex Systems   [4 marks]

D. Whitelisting is a process of enable or allowing a server service to be given without necessary having a server in a mobile platform. Using suitable example discuss the following types of Whitelisting technologies

      i.   Navigation Whitelist   [4 marks]

      ii.   Intent Whitelist   [4 marks]

      iii.   Network Request Whitelist   [4 marks]

Question TWO

A. The mobile development entails various tools and technologies. Using pertinent examples explain, the following terminologies:

      i.   Mobile App Development   [2 marks]

      ii.   Emulator   [2 marks]

B. An emulator is a tool that can be used to test code offline, which has come very handy for mobile developers. Briefly, describe the functions of each of following emulators' type.

      i.   Android SDK Emulator   [4 marks]

      ii.   MobiOne   [4 marks]

      iii.   TestiPhone   [4 marks]

      iv.   BlackBerry Simulator   [4 marks]

Question THREE

You have been development a hybrid mobile for your final year project. Write an XML code using the config.xml file that will add the following plugins in phonegap build app for your project.

      i.   Socialsharing   [4 marks]

      ii.   Inappbrowser   [4 marks]

      iii.   Network information   [4 marks]

      iv.   Universal clipboard   [4 marks]

      v.   Barcodescanner   [4 marks]

Question FOUR

A. Differentiate between a framework and platform as used in mobile app development environment. [2 marks]

B. There are several ways to build applications for mobile devices, each with strengths and weaknesses. Discuss the three (3) advantages and three (3) disadvantages for each of the following basic types of mobile app platform

    i.   Native apps   [6 marks]

    ii.   Mobile web apps   [6 marks]

    iii.   Hybrid apps   [6 marks]

Question FIVE

Preferences allow us to configure our app, there are various configurations. Preferences can be set either for all the platforms you wish to build for or they can be set separately for individual platforms. Basically, references are divided into types: multi platform and platform specific. Write an XML code which will implement the following platforms

    i.   Multi platform   [10 marks]

    ii.   Platform specific   [10 marks]