[Knowledge for Development]

KIBABII UNIVERSITY

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UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS
YEAR THREE SEMESTER TWO EXAMINATIONS

FOR THE DEGREE IN
COMPUTER SCIENCE

COURSE CODE   :   CSC 314

COURSE TITLE   :   MOBILE COMPUTING

DATE: 13 / 12 / 2022   **TIME: 9:00 A.M – 11:00 A.M.**

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSORY) [30 MARKS]

a. Define:
- i. Mobile IP   [1Mark]
- ii. Mobile computing   [1Mark]

b. State and explain any three wireless security standards applied in WLANS   [6Marks]

c. Differentiate between 3G and 4G technologies of data transmission as used in mobile computing   [2Marks]

d. State and explain four advantages and four disadvantages of satellite transmission.   [8Marks]

e. Describe any two techniques that may be used to determine the current network address of a mobile unit.   [4Marks]

f. State and explain four problems of mobile computing   [8Marks]

QUESTION TWO [20 MARKS]

a. Explain any five Support services given by software packages to support mobile and wireless computing.   [10marks]

b. Explain the following as used in android application development: [8Marks]
- i. Activities
- ii. Content providers
- iii. Intent and Intent Receiver
- iv. service

c. Write a sample text code in java that would display a save button   [2Marks]

QUESTION THREE [20 MARKS]

a. Define wireless application protocol and state its features. [10 Marks]

b. A satellite's job in the communications network is to serve as a repeater. Explain [2Marks]

c. Differentiate between GPS and GEOs satellites as used in mobile communications [6Marks]

d. Define Wireless computing [2Marks]

QUESTION FOUR [20 MARKS]

a. Differentiate between: [8Marks]

   i.   802.11g and 802.11i standards

   ii. 802.1x and WPA

b. State and explain any five roles/functions of middleware [10Marks]

c. State any four application areas of WLANS [2Marks]

QUESTION FIVE [20 MARKS]

a. Trunked mobile radio systems overcome many of the disadvantages associated with the operation of individual repeaters such as Community Repeaters. Discuss [10 Marks]

b. List and describe any two Mobile IP components [4Marks]

c. State any two types of satellites that operate at the MEO orbit. [2Marks]

d. Describe the two types of WLANS. [4Marks]