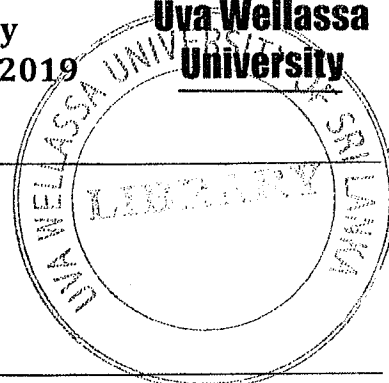


Uva Wellassa University of Sri Lanka
Faculty of Science and Technology
Department of Computer Science and Technology
300 level 2nd Semester Examination –Dec.2018/Jan. 2019
CST334-2 Mobile Computing



**Uva Wellassa
University**



Instructions to candidates

Duration: Two (02) hours

Number of Questions: Four (04)

Mark Allocation: 100

Answer all questions.

1. a. List five (05) attributes of ubiquity and briefly explain three (03) of them. (5 mark)
b. What is the role of transcoding middleware in mobile computing? Give an example for a transcoding middleware used in mobile computing. (5 mark)
c. Briefly explain three (03) design considerations of mobile applications. (5 mark)
d. Briefly describe about the information managed by the Client Context Manager (CCM) in mobile computing. (5 mark)
e. List four (04) functions of the Policy Manager in mobile computing. (5 mark)
2. a. Briefly explain the Adaptability Manager in terms of its inputs and functions. (5 mark)
b. What are the main objectives of Security Manager in mobile computing? (5 mark)
c. What is the standard for the wireless network security? (5 mark)
d. Briefly explain the Wi-Fi protocol architecture using a diagram. (5 mark)
e. List five (05) services provided by mobile stations and distributed systems in a wireless network. (5 mark)
3. a. A system is needed to develop for tracking slow moving items in a logistic transit hub. Explain the technology and the mechanism you use to develop this system. (5 mark)
b. What is the significant property of the mobile IP? (5 mark)
c. Briefly explain the two (02) IP addresses of the mobile IP. (5 mark)
d. What is the security standard implemented in IPv6? (5 mark)
e. What is a smart card and why is java used to program smart cards? (5 mark)
4. a. Explain the frequency reuse in Global System for Mobile (GSM) using a diagram. (5 mark)
b. What are the technologies used to expand the allocated frequency spectrum for a GSM network? (5 mark)
c. Draw a diagram to represent the GSM network architecture and name each of the components in the network. (5 mark)
d. Briefly explain International Mobile Station Equipment Identity (IMEI) and International Mobile Subscriber Identity (IMSI). (5 mark)
e. Name two (02) mobile applications development environments to develop applications for variations of Linux and iOS operating systems. (5 mark)