Important Instructions:

1) Open this MS-Word document and start writing answers below each respective question given on page 2.
2) Answers the question in the same sequence in which they appear.
3) Provide to the point and concrete answers.
4) First read the questions and understand what is required of you before writing the answer.
5) Attempt the paper yourself and do not copy from your friends or the Internet. Students with exactly similar answers or copy paste from the Internet will not get any marks for their assignment.
6) You can contact me for help if you have any doubt in the above instructions or the assignment questions.
7) All questions must be attempted.
8) Do not forget to write your name, university ID, class and section information.
9) Rename you answer file with your university ID# before uploading to SIC.
10) When you are finished with writing your answers and are ready to submit your answer, convert it to PDF and upload it to SIC unzipped, before the deadline mentioned on SIC.

Mid Semester Assignment, Course: - Mobile Computing

Deadline: - Mentioned on SIC   **Marks: - 30**

Program: - BS (CS), BS-SE   **Dated: 13 April 2020**

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Class and Section: 8th A

Question1: **Explain why wired networks have higher bandwidth in comparison to mobile networks.**   **(2)**

Ans: Wired Networks is dedicated communication line it has low loss in signal Compare to mobile network.

Question2: **Explain the relation between miniaturization and portability.**   **(3)**

Ans: Portability has direct relation with miniaturization. Advancement in miniaturization Makes the devices more portable.

Example: In early days of computing. the computer ware stored in big rooms and same years later the miniaturization begins. they Made pc and the laptop pc and now mobile. the miniaturization is that advance now that we have computer in our pockets and on our hand watches

Question3: **Differentiate between convergence and divergence.**   **(3)**

Ans: Convergence: Is when one device does multipole functionalities. for example, Smart-Phone. Its integrated PC, Camera, internet, telephone into one device.

Divergence: it's specialized in one specific functionality for Example Camera, tv, security cameras

Question4: **Suppose you are given the task of designing an app for mobile devices which has the capabilities of text chat, recorded audio message, and live video conferencing. Explain which protocol out of UDP and TCP would you use for each type of service and why?**   **(4)**

Ans: For Text chat and Recorded audio message we will use TCP because its small data even 2G can handle it and no one want to resend messages again and again it makes confusions so for text and audio message we will use TCP. and for Live video conferencing well use UDP because it faster and low bandwidth networks can't handle large data so the UDP will make it possible for dose low bandwidth networks to make the conferencing going and if any losses happen the user can reconfirm it form the other user

Question5: Suppose you have the choice of using 2G, 3G, 4G, 5G, Wi-Fi and Satellite networks. Which of these technologies will you use in the following scenarios and why?   (18)

a) A city-wide network with voice, SMS services and Internet services good enough for ultra-high definition streaming and video conferencing.

Ans: WE have tow choice 4G, 5G. but we will use 5G because it has higher bandwidth. For ultra-high definition we required high bandwidth.

b) A city-wide network with only voice and SMS services.

Ans: 2G is cheaper and it can cover long distance per antenna and handles voice and SMS services easily

c) A city-wide network with voice, SMS services and Internet services good enough for normal definition streaming and video conferencing.

Ans: Here we have two choices 3G, 4G and we will use 4G for streaming you required stable and high bandwidth and 4G can provide it easily

d) A global scale network with voice, SMS and Internet services.

Ans: Satellite can cover more distances per satellite. Advancement in rocket technology now its cheaper to send satellite onto spaces and coming time satellite network we disrupt all the other warless company's

e) A campus size network for information and resource sharing between 200 and devices.

Ans: Wi-Fi it's easy to Maintain cheaper and cost effective

f) A city-wide network with voice, SMS and basic Internet services.

Ans: Here we have two 3G, 2G we will use 3G. 2G can provide basic internet services but it's to slow for it can't load some websites easily and it can lead to frustration so the batter choses would be 3G