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**

Student Name#:Anayat khan Student ID#:12935

Class and Section:8th and A

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

Ans1: wired network dedicated communication line its low and loss signal compare to mobile network.
High power machines

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

Ans2: Miniaturization
Relation between miniaturization and portability as required miniaturization to maximum to portability.
Example: An early days of computing people cannot fit large computer in room and we have computer our pocket

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

Ans3: Convergence is united different devices and functionality in to one hybrid device and did not converge would take advantage of the price to make a profit.
The would continue until price converge
Divergence:
Divergence is a special functionality device the related asset, or index move other direction and other place and current price may be weakening.
The some case may lead to price changing the place and direction.
Example:
Camera, Radio, Music player, Game into hybrid devices

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)

Ans4: TCP:

For text chat recorded audio massage we well use to TCP and live video calling conferencing.

It is the main protocol in TCP/IP networks and TCP provide errors and delivery of data packets in the order they were sent

We will use the UDP because the TCP is slow

<u>UDP</u>:

UDP is faster than TCP and we will use for the video are large size file

The not use for TCP use high bandwidth and UDP required low bandwidth

UDP is dose not establish a connection before sending data.

<u>Question5:</u> 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 ultrahigh definition streaming and video conferencing.

An: 4G and 5G

4G and 5G for city wild network 2G or 3G because they can't provide ultra HD streaming.

Wifi not available any where

4G and 5G use for HD video calling and speed is faster

4G frequency band 2 to 8 GHz

Bandwidth 5to 2O MHz

5G frequency 24 to 9O GHz

5G is faster download and upload speed

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

Ans: 2G

Their no data transfer or any internet service so 2G and satellite is also for communication purpose on a higher level

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

Ans: 3G and 4G

Both can provide good definition streaming video conferencing

Speed to 1OO.3OOmbps provide hd streaming so 3g is ideal one is the scenario

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

Ans: Satellite can transfer and receive data from small satellite dish on earth communicate.

Satellite 23OOO miles above the earth

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

Ans: campus size network can easily achieved by wifi

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

Ans: 3G

Is the 3rd generation of wireless mobile telecommunication technology its upgrade for 2.5G and 2.5gprs