Mid Semester Assignment, Course: - Mobile Computing

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

Program: - BS (CS), BS-SE   **Dated: 15 April 2020**

NAME: IBRAHIM JAN

ID#6838

Question1: Explain why wired networks have higher bandwidth in comparison to mobile networks?

Ans :   Wired network are generally faster than wireless networks. Data speed have continually   improved with inception of gigabit routers and technology. A wired network uses cables(such us coaxial cable) to connect with devices while wireless network allow devices to stay connected.

Question2: Explain the relation between miniaturization and portability?

Ans: The relation between miniaturization and probability is that with time things are getting more reliable than before, So if anything get portable than before it also need miniaturization,

Question3: Differentiate between convergence and divergence?

Ans: Convergence desire to enable as many functions.it is computing from a single devices.The smart phone is the main example of convergence as it acts as radio, phone, calculator etc. The divergence desire to enable single best device to perform as prime like DSLR camera etc.

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?

Ans : TCP is connection oriented once the connection is establish and done.
1.   Data can be sent and receive bidirectional without the lost of data.
2.   While the UDP conectionless internet protocol in this we have risk lost of data

3. .so audio message text chat live video we will use TCP because we don't want to lose any of our data.
4. TCP have flow control between sender and receiver. Control of traffic control into network while UDP don't have.

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.

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

Ans :   we will USE 5G network because its faster in transmission ,lower latency and therefore greater capacity of execution, stronger reliability,   better mobility. it will have high resolution bidirectional large bandwidth shaping. So for SMS service and internet with ultra high definition streaming and video conferencing 5G will be used.

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

Ans: we will be using 2G network because it will provide small data service like SMS and MMS. 2G capabilities are achieved by allowing multiple users on single channel via multiplexing.

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

Ans: we will USE 4G network.Because 4G LTE stand for   (long term evolution) having data transfer rate of 100mbps downlink and 50mbps uplink. Uses OFDM. Uses single carrier FDMA for uplink. We can use this network for SMS and Internet services and also for normal definition and streaming conferencing. It is also called true mobile broadband..it Quickly downloads files over wireless network.

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

Ans: we will USE Satellite network because Satellite are the height of of modern communications technology. Mainly the communication satellites are used in networks by re-transmitting signals from a ground base to a large area of earth.it is cost efficient.for global scale network with voice and SMS and internet service we will use satellite network

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

Ans: we will USE WIFI network because the wireless nature of such   networks allow users o access network resources from any location within their primary networking environment.

Ans :we will USE 3G network because web browsing, video downloading ,email and picture sharing etc were introduced in this generation.It facilitate greater voice and data capacity also it supports wider range of applications and increase the transmission of data in lower cost.