

Mid Semester Assignment, Course: - Mobile Computing

Deadline: - Mentioned on SIC

Marks: - 30

Program: - BS (CS), BS-SE

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Class and Section: Bs(SE)(A)

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

Answer:

Wired networks are vary faster then mobile data networks because of improvements of gigabyte routers and new technologies ,the reason behind it is a seprate cable is used to connect each device to the network with each cable transmitting data at the same speed. wired network tend ti be void of any dead spots that are accasionlly present in a wireless connection .

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

Answer:

Miniaturization, low weight, and low volume are as **important** in medical electronics as in space electronics and other applications. The small size and weight are benefits of hybrid microcircuits; they have been used for a long time in pacemakers and defibrillators. while: **Portability** in [high-level computer programming](#) is the usability of the same [software](#) in different environments.miniaturazation can not be usable without portablility ,in every project of a software system thay need to use some kind of hardware in case of to take some work from the software and make it useable.

Question3:

Answer:

Differentiate between convergence and divergence. (3)
When you evaluate the area under an improper integral from 1 to infinity and you get a finite value, then you say the integral is convergent. Similarly if the sum of infinite series is finite then the series is convergent.

Convergence generally means coming together, while divergence generally means moving apart. In the world of finance and trading, convergence and divergence are terms used to describe the directional relationship of two trends, prices, or indicators.

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?

Answer:

We will use TCP protocol because it will send the packet of data and wait for confirmation from destination once it receives confirmation it will send next packet of data. TCP is secure more than UDP, TCP is reliable and CONNECTION FULL. UDP stands for User datagram protocol and it does not wait for three-way handshake defining mode of communication. DORA is used in UDP discovery, offer, request, acknowledgement; it is faster than TCP.

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.

Answer(a) :

We will use Wi-Fi network because it is faster than 4G because of modern routers and modems; it is good enough to stream or video call, with Wi-Fi network we cannot lose packets of data while streaming or video callings.

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

Answer(b):

We will use 2G (2G is GSM technology introduced in 1993 and its bandwidth is 25MHz. Its access system is TDMA, CDMA

) network that is enough good for voice and SMS service. It provides a slow internet but on a cheap price and is good for sending SMS and calls. The other reason is that 2G coverage is supportive all over areas.

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

Answer(c):

4G is best for streaming and voice, SMS service; it is good enough just like Wi-Fi services but in mostly areas the 4G is not in coverage just because of that problem we can use 3G as well that is also good enough for video call etc. 4G is LTE technology introduced in 2009 and its access system is CDMA; its bandwidth is 1000MHz.

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

Answer(d):

2G OR 3G is best for globe scale network with voice ,sms and internet services,
2Gis gsm Tecnology inroduce in 1993 and its bandwith is 25MHZ.its acces system is TDMS,CDMS
3G is CDMA teqnology inroduce in 2001 and its acces system is CDMA its bandwith is 25MHZ.

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

Answer(E):

we well use a wifi connection for sharing internet between 200 end devices because the data network can cast so much money and the wifi connection is gonna work in 200 end devices because wired network is good then 4G,or 3G data networks.

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

Answer(F):

3g is batter choice in a city wide network because it is soppertive everywhare in city and and as affordable its also enough for SMS calls etc .

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