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**SUBJECT    MOBILE COMPUTING**

## **Q NO 1 / Explain why wired networks have high bandwidth in comparison to mobile networks.**

**ANS,** wired networks also have an advantage over cellular networks in that they're usually subject to much more generous bandwidth caps, if they're subject to any meaning you can transmit more data without running into data limits. The main difference in the wired networks has high bandwidth in comparison to mobile network. As we know that wired is term refers to any physical medium consisting of cable. The cable can be copper wire or fiber optic.

- **Wired Networks**

- 1 high bandwidth
- 2 low bandwidth variability
- 3 can listen on wire
- 4 high power machines
- 5 high resource machines
- 6 need physical access (security)
- 7 low delay
- 8 connected operation

- **Mobile Networks**

- 1 low bandwidth
- 2 high bandwidth variability
- 3 hidden terminal problem
- 4 low power machines
- 5 low resource machines
- 6 need proximity
- 7 higher delay
- 8 disconnected operation

## **Q NO 2 / Explain the relation between miniaturization and portability.**

- **ANS..**

**Miniaturization.** Creating new and significantly smaller mobile form factors that allowed the use of personal mobile devices while on the move. Miniaturization. is the trend to manufacture ever smaller mechanical, optical and electronic products and devices. Examples include miniaturization of mobile phones, computers and vehicle engine downsizing.

- **Portability**

Reducing the size of hardware to enable the creation of computers that could be physically moved around relatively easily. Devices/nodes connected within the mobile computing system should facilitate mobility. These devices may have limited device capabilities and limited power supply, but should have a sufficient processing capability and physical portability to operate in a movable environment.

In portability we can minimize size of the chip to a specific limit so it can be carry , by hand and in miniaturization there are no specific limits to reduce the size of chip we can reduce as we can .

### **Q,NO 3 Differentiate between convergence and divergence.**

- **ANS. Convergence** Integrating emerging types of digital mobile devices, such as Personal Digital Assistants (PDAs), mobile phones, music players, cameras, games, etc., into hybrid devices. convergence is a personal digital assistants has used in a multiple digital thinks in mobile software game music players.
- **Divergence** Opposite approach to interaction design by promoting information appliances with specialized functionality rather than

generalized ones. divergence is a use for a many application in a multiple digital thinks is mobile and is a application is use for a many digital device in a many devices.

Example tv remote.

**Q NO 4** 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 taye of service and why?

**ANS** The TCP and UDP protocols are two different protocols that handle data communications between terminals in an IP network (the Internet). This page will talk about what TCP and UDP are, and what the differences are between them. Device disables touch screen when the user speaks on the phone

Are using app and for this we would use IP internet protocol and here we are not following UDP and TCP procotol because we have to deliver or receive text. audio and video in packets with the help of OSL model.

**Q NO 5** suppose you have the choice of using 2G,3G,4G,5G Wi-Fi and satellite networks . which of these technology will you use in the following scenarios and why.

**A .a city wide networks with voice , sms services good enough for ultra high definition straming and video conferencing.**

**ANS.** In this scenario we use the 4G network because 4G network provide simulation communication throughout the city. It is best for streaming because it can handle server people at a time.

**B. A city wide network with only voice and SMS service.**

**ANS.** In this condition 2G network is suitable because we are not using any online streaming and other internet services.

**C.** A city wide network with voice and sms service and internet service good enough for normal definition streaming and video conferencing.

**ANS.** In this scenario 3G network be suitable because we are using normal definition streaming and 3G is the best of normal streaming.

**D.** a global scale network with voice ,SMS and internet service.

**ANS.** In this scenario satellite network will be suitable because 2G,3G and 4G are not supported for global scale communication or global internet service . in global scale people are connected through all the world.

**E.** a campus size network for information and resource sharing between 200 end devices.

**ANS.** In this scenario wifi would be suitable because we are sharing resources and information within and a campus with a limited range.

**F.** a city wide network with voice , SMS and basic internet services .

**ANS.** In this scenario 5G would be best network for basic sharing data and internet services.