

Mobile Computing and Communications - 19CS6704

Important Questions. part - A.

Define MANET

A mobile ad hoc network (MANET) is a continuously self-configuring, infrastructure-less network of mobile devices connected without wires.

Difference between cellular and Ad-Hoc Networks

CELLULAR	Ad-Hoc NETWORKS
Infrastructure Networks	Infrastructureless Networks
Fixed, pre-located cell sites and base stations	No base station, and rapid deployment
Static backbone network topology	Highly dynamic network topologies
Relatively caring environment and stable connectivity	Hostile environment and irregular connectivity
Detailed planning before base station can be installed	Ad-Hoc network automatically forms and adapts to changes
High setup costs	Cost-effective
Large setup time	Less setup time

Comparison of Link state and Distance vector

Distance vector protocols send their entire routing table to directly connected neighbors.

Link state protocols send information about directly connected links to all the routers in the network.

Distance vector protocols have slow convergence and suffer from the count-to-infinity problem.

List the Types of Communications.

Unicast - Message is sent to a single destination node

Multicast- Message is sent to a selected subset of network nodes

Broadcast- Message is sent to all the nodes in the network

What are the features of TCP?

The main features of TCP are:

- 1) Transmission as data Streams
- 2) Buffering and retransmission
- 3) Session-start, data transfer, and session-finish fully acknowledged end to end.
- 4) In-order delivery
- 5) Congestion Control and avoidance

What are the two functions of transport layer in the internet ?

- 1) Checksumming over user data.
- 2) Multiplexing / Demultiplexing from /to applications.

List the Advantages of I-TCP:

- I-TCP does not require any changes in the TCP protocol as used by the hosts in the fixed network or other hosts in a wireless network that do not use this optimization.
- Without partitioning retransmission of lost packets would take place between mobile host and correspondent host across the whole network.
- Optimization of new mechanisms is quite simple to be done in I-TCP as they only cover a single hop.
- The short delay between the mobile host and foreign agent can be determined and is independent of other traffic streams. Therefore an optimized TCP can use precise time-outs to guarantee retransmission as fast as possible.

What are the configuration parameters to adapt TCP to wireless environments?

Large Windows
Limited Transmit
Large MTU
Selective Acknowledgement
Explicit Congestion
Notification Timestamp
No header compression

What are the advantages of WTP?

WTP offers several advantages to higher layers, including an improved reliability over datagram services, improved efficiency over connection-oriented services and support for transaction-oriented services such as web browsing.

What are the capabilities of WMLScript?

WMLScript offer several capabilities:

- Validity check of user input
- Access to device facilities
- Local user interaction
- Extension to the device software

Name the features of Operating System

- Multitasking
- Scheduling
- Memory Allocation
- File System Interface
- Keypad Interface
- I/O Interface
- Protection and Security
- Multimedia features

What is Symbian OS?

Symbian OS is a real time, multitasking, pre-emptive, 32-bit operating system that runs on ARM-based processor designs. The inherent design of the Symbian operating system is microkernel- based.

What are the requirements of Mobile O/S

- Support for specific communication protocols
- Support for a variety of input mechanisms
- Compliance with open standards
- Extensive library support

Give some examples of Mobile OS.

- Palm OS
- Symbian OS
- iOS
- Android OS

What is iOS?

An iOS is a closed and proprietary operating system fully owned and controlled by Apple and not designed to be used by various mobile phone vendors on their systems.

What is M-Commerce?

Mobile e-commerce (m-commerce) is a term that describes online sales transactions that use wireless electronic devices such as hand-held computers, mobile phones or laptops. These wireless devices interact with computer networks that have the ability to conduct online merchandise purchases. Any type of cash exchange is referred to as an e-commerce transaction. Mobile e-commerce is just one of the many subsets of electronic commerce. Mobile e-commerce may also be known as mobile commerce

List the pros & cons of M- commerce?

Pros:

- Providing a wider reach or Accessibility
- Reducing the transaction cost
- Ubiquity
- Personalization. .
- Reducing time.

Cons:

- Limited Speed .
- Small Screen Size
- No standard for M-commerce
- Technology constraints of devices

What is Business-to-consumer (B2C)?

Business-to-consumer (B2C) is a form of commerce in which products or services are sold by a business firm to a consumer. B2C is an important category of mobile commerce applications and is reported to be nearly half of the total M-commerce market.