

Q1. How does FDMA handle near-far problem?

(FDMA assigns individual channels to individual users. Each user is allocated with a unique frequency subband for the duration of connection. Whether the connection is in active or idle state.) These channels are assigned on demand to users who request service. Hence it prevents near-far problem.

Q2. Why is cellular concept used for mobile telephony?

(Modern mobile phone networks use cells because radio frequencies are a limited, shared resource.) (Cell-sites) and handsets change frequency under computer control and use low power transmitters so that the usually limited number of radio frequencies can be simultaneously used by many callers with less interference.)

Q3. What do you mean by mobile assisted handoff?

(In MAHO, the mobile measures the signal levels from the various APs using a periodic beacon generated by the APs) (to keep track of the location of the mobiles.)

(The mobile collects a set of power levels from different APs, and feed PT logic to the MSC, via the serving AP, for handoff decision making)

04. In a cellular network, among handoff call

and a new call, which one is given as priority? Why?

In principle, a user moves to a longer distance

from a Handoff Cell and are given higher priority

than new calls. A new call occurs when

a user requests a new connection, while

handoff occurs when an active user moves from one cell to other. Call dropping

occurs when a call in progress is forcefully terminated due to lack of available

sources in the new cell. On the other hand, call blocking takes place when a new call

(possibly not best served). Call dropping is less desirable than call blocking. Hence,

Handoff calls are given higher priority

over new calls.

05. Find the Fraunhofer distance for an antenna with maximum dimension of 1m and operating frequency of 900 MHz.

$$DF = \frac{2D^2}{\lambda}$$

$$= \frac{2 \times (1)^2}{900 \times 10^6}$$

$$DF = 2.22 \text{ m}$$

also causes to set a signal silent off

Q6 Differentiation small from large scale fading printed off 02M off

SMALL SCALE FADING

LARGE SCALE FADING

11(a) Asked about scatter exhibited on it.

In the rapid fluctuation of the amplitude, phase of a radio signal over a short period of time or distance.

In amplitude, phase of a radio signal over a short period of time or distance.

Over a large area is called as small scale (hundreds of wavelength fading).

Over a large area is called as large scale fading).

Asked what is the effect of it.

07. Calculate the Brewster angle for a wave

striking on ground having a permittivity

and $\epsilon_r = 5.115$ and off in second.

Ans Brewster angle is 40.9° .

Brewster Angle $\equiv \sin^{-1}(0.409)$

Ans Brewster angle is 24.14° .

Waves rapidly oscillate off ground.

08. What is the major advantages of wireless communication?

Advantages of wireless communication:

* ~~minimum~~ Flexibility with mobile

* lower cost printing bus

* Ease of use.

Q9. What is frequency selective fading?

If the channel possesses a constant gain and linear phase response over a bandwidth that is, smaller than the bandwidth of transmitted signal, then the channel creates frequency selective fading on the received signal.

Q10. What are the effects of multipath propagation?

1. Multiple versions of the transmitted signal can arrive at the receiver.

2. Random phases and fluctuations lead to fading.

3. It can also lead to Inter symbol Interference (ISI).