



قائمة الاسئلة

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1)

Co-channel interference caused by

- a) increasing number of users
- b) white noise
- c) thermal noise
- d) else

- 1) a
- 2) b
- 3) c
- 4) d

2)

A major limitation in capacity is

- a) an increasing number of users
- b) co-channel interference
- c) multipath fading
- d) delay spread

- 1) a
- 2) b
- 3) c
- 4) d

3) It increases system capacity by dynamically tuning out interference while focusing on the intended user

- a) loop antennas
- b) dipole antennas
- c) array antennas
- d) smart antennas

- 1) a
- 2) b
- 3) c
- 4) d

4)





it is a short-range, low-power radio link (10–100 m) that allows two or more devices to form a communication channel and exchange data

- a) Bluetooth
- b) EDGE
- c) GSM
- d) CDMA

- 1) a
- 2) b
- 3) c
- 4) d

5) When the base station has sufficient transmit power to cover areas of radius 1–20 km, the cell is called

- a) microcell
- b) macrocell
- c) nanocell
- d) picocell

- 1) a
- 2) b
- 3) c
- 4) d

6) A minimum distance between two cells using identical channels is called

- a) frequency reuse distance
- b) co-channel reuse distance
- c) channel reuse distance
- d) else

- 1) a
- 2) b
- 3) c
- 4) d

7) The design process of selecting and allocating the same bands of frequencies to different cells of cellular base stations within a system is known as

- a) bandwidth reuse
- b) frequency reuse
- c) cluster
- d) else

- 1) a
- 2) b
- 3) c
- 4) d

8)





A group of cells with different sets is called

- a) a bandwidth reuse
- b) a frequency reuse
- c) a cluster
- d) else

- 1) - a
- 2) - b
- 3) + c
- 4) - d

9) Subdivide a cell into smaller cells is called

- a) handoff
- b) sectoring
- c) cell splitting
- d) else

- 1) - a
- 2) - b
- 3) + c
- 4) - d

10) The process of transferring communication from one base station to another base station when the mobile unit travels from one cell to another

- a) handoff
- b) sectoring
- c) cell splitting
- d) else

- 1) + a
- 2) - b
- 3) - c
- 4) - d

11)





Subdivide the traditional cellular area into sectors that are covered using directional antennas at the same base station is called

- a) handoff
- b) sectoring
- c) cell splitting
- d) else

- 1) - a
- 2) + b
- 3) - c
- 4) - d

12) If a system uses distinct time slots to transmit the signal for different users, it is

- a) a FDMA system
- b) a TDMA system
- c) a CDMA system
- d) a SDMA system

- 1) - a
- 2) + b
- 3) - c
- 4) - d

13) What do we mean when we say antenna with very directive characteristics

- a) very large beam
- b) very high gain
- c) very low power
- d) else

- 1) - a
- 2) + b
- 3) - c
- 4) - d

14) An effective way to design antennas with very directive characteristics without necessarily increasing the electrical size of the antenna, this antenna is

- a) dipole
- b) loop
- c) horn
- d) array

- 1) - a
- 2) - b
- 3) - c
- 4) + d

15)





In practice, nulls of radiation pattern correspond to a gain reduction from the maximum of the pattern form of

- a) 10 dB or more
- b) 20 dB or more
- c) 30 dB or more
- d) 40 dB or more

- 1) - a
- 2) - b
- 3) + c
- 4) - d

16) When the receiver is typically provided with multiple replicas of the transmitted signal, this method is called

- a) diversity
- b) fading
- c) shadowing
- d) path loss

- 1) + a
- 2) - b
- 3) - c
- 4) - d

17) The digital signal processor computes the direction-of-arrival, based on

- a) the frequency
- b) the gain
- c) the phase
- d) the time delay

- 1) - a
- 2) - b
- 3) - c
- 4) + d

18) The adaptive antenna systems approach communication between a user and a base station in a different way by adding the dimension of

- a) space
- b) time
- c) sound
- d) else

- 1) + a
- 2) - b
- 3) - c
- 4) - d

19)





The systems which utilize techniques by which signals are distinguished at the BS based on their origin in space are called

- a) FDMA systems
- b) TDMA systems
- c) CDMA systems
- d) SDMA systems

- 1) - a
- 2) - b
- 3) - c
- 4) + d

20) The type of array which used for outdoor environments, at least in large cells is

- a) a one-dimensional linear array with uniform element spacing
- b) a circular array with uniform angular spacing between adjacent elements
- c) a two-dimensional rectangular array with horizontal element spacing and vertical element spacing
- d) a cubic structure with element separations

- 1) + a
- 2) - b
- 3) - c
- 4) - d

21) The element which the calculates the complex weights in receiver part of smart antennas is

- a) radio unit
- b) beam forming network
- c) signal processing unit
- d) else

- 1) - a
- 2) - b
- 3) + c
- 4) - d

22) The width of the ten-element antenna at an operating frequency of 1.5 GHz will be

- a) 0.07m
- b) 0.08m
- c) 0.1m
- d) else

- 1) - a
- 2) - b
- 3) - c
- 4) + d

23)





The conventional method of direction of arrival estimation is

- a) Capon's minimum Variance Method
- b) MULTiple SIGNAL Classification Method
- c) estimation of signal parameters via rotational invariant techniques
- d) else

- 1) a
- 2) b
- 3) c
- 4) d

24) It is referred to as the delay-and-sum method and its idea is to scan across the angular region of interest, and whichever direction produces the largest output power is the estimate of the desired signal's direction

- a) Capon's minimum Variance Method
- b) the Conventional Beamforming Method
- c) MULTiple SIGNAL Classification Method
- d) else

- 1) a
- 2) b
- 3) c
- 4) d

25) When space-time processing is applied at only one end of the link, it is usually referred to as

- a) a smart antenna technique
- b) MIMO technique
- c) SISO technique
- d) SIMO technique

- 1) a
- 2) b
- 3) c
- 4) d

