



Department of Electronics and Communication Engineering

EC8094-Satellite Communication

Unit II – MCQ Bank

1. Cellular concept replaces many low power transmitters to a single high power transmitter.

a) True

b) False

Answer: b

2. Why neighbouring stations are assigned different group of channels in cellular system?

a) To minimize interference

b) To minimize area

c) To maximize throughput

d) To maximize capacity of each cell

Answer: a

3. What is a cell in cellular system?

a) A group of cells

b) A group of subscribers

c) A small geographical area

d) A large group of mobile systems

Answer: c

4. What is frequency reuse?

a) Process of selecting and allocating channels

b) Process of selection of mobile users

c) Process of selecting frequency of mobile equipment

d) Process of selection of number of cells

Answer: a

5. Which of the following is a universally adopted shape of cell?

- a) Square
- b) Circle
- c) Triangle
- d) Hexagon**

Answer: d

6. Actual radio coverage of a cell is called _____

- a) Fingerprint
- b) Footprint**
- c) Imprint
- d) Matrix

Answer: b

7. Why the shape of cell is not circle?

- a) Omni directionality
- b) Small area
- c) Overlapping regions or gaps are left**
- d) Complex design

Answer: c

8. What is the main reason to adopt hexagon shape in comparison to square and triangle?

- a) Largest area**
- b) Simple design
- c) Small area
- d) Single directional

Answer: a

9. Which type of antenna is used for center excited cells?

- a) Dipole antenna
- b) Grid antenna
- c) Sectored antenna
- d) Omnidirectional antenna**

Answer: d

10. Which type of antenna is used for edge excited cells?

- a) Omnidirectional antenna
- b) Grid antenna
- c) Sectored directional antenna**
- d) Dipole antenna

Answer: c

11. Which of the following is not a source of interference?

- a) Base station in a different cluster**
- b) Another mobile in same cell
- c) A call in progress in neighbouring cell
- d) Any BS operating on same frequency

Answer: a

12. Interference on voice channels causes _____

- a) Blocked calls
- b) Cross talk**
- c) Queuing
- d) Missed calls

Answer: b

13. Interference in control channel leads to _____

- a) Cross talk
- b) Queuing
- c) Blocked calls**
- d) Voice traffic

Answer: c

14. Interference is more severe in rural areas.

- a) True**
- b) False

Answer: a

15. What are co-channel cells?

- a) Cells having different base stations
- b) Cells using different frequency
- c) Cells using adjacent frequency
- d) Cells using same frequency**

Answer: d

16. Co-channel interference is a function of _____

- a) Radius of cell**
- b) Transmitted power
- c) Received power
- d) Frequency of mobile user

Answer: a

17. Co-channel reuse ratio is define by _____

- a) $Q=D*R$
- b) $Q=D/R$**
- c) $Q=D^R$
- d) $Q=1/R$

Answer: b

18. Co-channel ratio in terms of cluster size is defined as _____

- a) $(3N)^{\frac{1}{2}}$**
- b) N
- c) 3N
- d) \sqrt{N}

Answer: a

19. What is the cluster size for CDMA?

- a) N=10
- b) N=100
- c) N=1**
- d) N=50

Answer: c

20. What is breathing cell effect?

- a) Fixed coverage region
- b) Dynamic and time varying coverage region**
- c) Large coverage region
- d) Very small coverage region

Answer: b

21. Adjacent channel interference occurs due to _____

- a) Power transmitted by Base station
- b) MSCs
- c) Same frequency of mobile users
- d) Imperfect receiver filters**

Answer: d

22. Which of the following problem occur due to adjacent channel interference?

- a) Blocked calls
- b) Cross talk
- c) Near-far effect**
- d) Missed calls

Answer: c

23. In near-far effect, a nearby transmitter captures the _____

- a) Receiver of the subscriber**
- b) Transmitter of the subscriber
- c) Nearby MSC
- d) Neighbouring base station

Answer: a

24. Adjacent channel interference can be minimized through _____

- a) Changing frequency of base stations
- b) Careful filtering and channel assignments**
- c) Increasing number of base stations
- d) Increasing number of control channels

Answer: b

25. In dynamic channel assignment, any channel which is being used in one cell can be reassigned simultaneously to another cell in the system at a reasonable distance.

a) **True**

b) False

Answer: a

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