Subject-Satellite Communication
Subject Code-ECCDLO-8043

1. _____ is a satellite that rotates around the earth in a low-altitude elliptical or circular pattern.
A. Geosynchronous satellite
B. Nonsynchronous satellite
C. Prograde satellite
D. Retrograde satellite

2. **A communication satellite is a repeater between …… and ……..**
a. a transmitting station and a receiving station
b. a transmitting station and many receiving station
c. many transmitting station and many receiving station
d. none

3. **Which of the following comes under methods of multiple access techniques?**

a. FDMA & TDMA
b. SCPC & CDMA
c. CDMA & GSM
d. none of these

4. The smallest beam of a satellite antenna radiation pattern
A. Zone beam
B. Hemispheric beam
C. Spot beam
D. Global beam

5. What is the frequency range of C-band?
A. 8.5 to 12.5 GHz
B. 3.4 to 6.425 GHz
C. 12.95 to 14.95 GHz
D. 27.5 to 31 GHz

6. A satellite signal transmitted from a satellite transponder to earth's station.

A. Uplink

B. Downlink

C. Terrestrial

D. Earthbound

7. _____ detects the satellite signal relayed from the feed and converts it to an electric current, amplifies and lower its frequency.

A. Horn antenna

B. LNA

C. Satellite receiver

D. Satellite dish

8. . ……. is a measure of the fraction of frame time which is used for the transmission of traffic.

a. Preamble
b. Guard time
c. Frame efficiency
d. Decoding quenching

9. Which law states that for equal time intervals, the satellite will sweep out equal areas in its orbital plane, focused at the barycenter.

a. Newton's 1st law
b. kepler's first law
c. kepler's second law
d. kepler's third law
10. The quality of a space-link is measured in terms of the ……. ratio.

a. C/N
b. S/N
c. G/T
d. EIRP
11. Most satellites operate in the frequency range of
a) 300 MHz to 3 GHz
b) 30 MHz to 300 MHZ
c) Above 300 GHz
d) 3 GHz to 30 GHz

12. Geostationary satellites follow
a) circular path
b) elliptical path
c) inclined path
d) cycloidal path

13. The distance of a geostationary satellite from the surface of the earth is nearly
a) 360 Km
b) 3600 Km
c) 36,000 Km
d) 3,60,000 Km

14. In a satellite system:
a) upward link frequency is half of downward link frequency
b) upward link frequency is greater than that of downward link frequency
c) upward link frequency is lesser than that of downward link frequency
d) upward link frequency is equal to downward link frequency

15. The satellite orbit almost invariably used with remote sensing satellite is:
a) geostationary orbit
b) geosynchronous orbit
c) sun synchronous orbit
d) Molniya orbit

16. The frequency band used by most satellite is
a) UHF
b) VHF
c) SHF
d) EHF

17. **The location of AsiaSat I.**
a. 105.5˚ East
b. 151.5˚ East
c. 115.5˚ East
d. 170.5˚ East

18.To make antenna more directional, either its size must be increased or
a. the number of its feed horns must be increased
b.the frequency of its transmission must be increased
c. its effective isotropic radiated power (EIRP) must be increased
d. its footprint must be increased

19. **……. collects very weak signals from a broadcast satellite**
a. Helical antenna
b. Satellite dish
c. LNA
d. TWT

20. **…….is a loss of power of a satellite downlink signal due to earth's atmosphere.**
a. Atmospheric loss
b. Path loss
c. Radiation loss
d. RFI

21. **Radio broadcasting is a familiar example of …….**
a. space multiplexing
b. time multiplexing
c. frequency multiplexing
d. none of the above

22. **The bandwidth of C- band satellite frequency band in U.C is ……**
a. 500 GHz
b. 1000 GHz
c. 1000 MHz
d. 500 MHz

23. Repeaters inside communication satellites are known as ……
a. Trancievers
b. Transponders
c. Transducers
d. TWT

24. **INTELSAT stands for …….**

a. Intel Satellite

b. International Telephone Satellite

c. International Telecommunications Satellite

d. International Satellite

25. **Which law states that for equal time intervals, the satellite will sweep out equal areas in its orbital plane, focused at the barycenter.**

a. Newton's 1st law

b. kepler's first law

c. kepler's second law

d. kepler's third law

26. **The flux density required at the receiving antenna to produce saturation of TWTA is known as …….**

a. Electric flux density

b. Magnetic flux density

c. Saturation flux density

d. Photon flux density

27. **…….. is necessary to prevent the bursts from overlapping.**

a. Preamble

b. Guard time

c. Frame efficiency

d. Decoding quenching

28. **For satellite communication, standard Earth stations have antenna diameters in the range of …….. metre.**

a. 27.5 to 30

b. 10 to 15

c. 30 to 50

d. 5 to 10

29. **The most effective anti jamming technique is ……..**

a. frequency hopping

b. spread-spectrum modulation

c. key leverage

d. once-only key

30. **The Sun blots out the transmission of a geosynchronous satellite twice a year when satellite passes directly in front of it. This outage lasts for about**

a. 10 minutes on 5 consecutive days

b. 5 minutes on 10 consecutive days

c. 30 minutes for 5 consecutive days

d. one hour for 5 consecutive days

31.In communication satellites, the up-link normally operates at a higher frequency than the down-link because it

a. gives a narrow beam shining into space

b. results in lesser signal attenuation

c. gives better beam-shaping
d. is easier to polarize a high frequency beam
32. **The degradation of satellite solar cells with time is mainly due to**
a. their bombardment by electrons
b. collection of meteoric dust
c. increase in resistivity of silicon
d. gradual leakage of charge carriers from the semiconductor material
33. **The lowest frequency used in satellite communications is …….. GHz.**
a. 0.8
b. 3
c. 18
d. 30
34. **Low-orbit satellites are not used for communications because they**
a. produce sonic booms
b. do not provide 24 hour/ day contact to the users on Earth
c. heat up and melt
d. Satellite
35. What is the use of the band pass filter in the receiver section?
a) Protects the receiver
b) Increases antenna gain
c) Reduces noise
d) To reduce it to an intermediate frequency
36. In Rf tuning, what is the first local oscillator?
a) Quartz oscillator
b) Frequency synthesizer
c) Magnetic oscillator
d) Electric oscillators
37. What is the reason for carrying multiple transponders in a satellite?
a) More number of operating channel
b) Better reception
c) More gain
d) Redundancy
38. Which technique uses two different antennas to reduce traffic on the same frequency?
a) Spatial isolation
b) Frequency reuse
c) Multiplexing
d) Modulation
39. Earth station uses what type of antenna

A. Despun antenna

B. Helical antenna

C. Toroidal antenna

D. Cassegrain antenna

40. The point where the orbit crosses the equatorial plane going from north to south; and the point where the orbit crosses the equatorial plane going from south to north refer to

a. Ascending node

b. Descending node

c. Ascending node and descending node, respectively

d. Descending node and ascending node, respectively

41 A circular orbit around the equator with a 24-h period is called a(n)

a. Elliptical orbit

b. Geostationary orbit

c. Polar orbit

d. Transfer obit

42. What type of satellite TV service uses compressed data transmission to beam signals directly to every home?
a) Direct broadcast satellite
b) Mobile satellite service
c) Broadcasting satellite service
d) Fixed satellite service
43. What is the number of satellites present in the Iridium system?
a) 72
b) 51
c) 66
d) 32
44. When a satellite orbits in the opposite direction as the earth's rotation with an angular velocity less than that of the earth.

a. Bus transmission

b. Payload

c. Prograde

d. Retrograde

45. What provides the sufficient drive to the final power amplifier?
a) Intermediate-power amplifier
b) Operational amplifier
c) Power driver circuit
d) Up converter

46. The direction of orbit in the same direction of earth rotation is called _____
a) Retrograde
b) Prograde
c) Perigee
d) Apogee
47. What is the maximum theoretical data rate if a transponder is used for binary transmission and has a bandwidth of 36MHz?(2M)
a) 32Mpbs
b) 72Mpbs
c) 36Mpbs
d) 12Mpbs
48. If the earth station downlink signal received is at f_s = 4.08 GHz, what first stage local-oscillator frequency f_{LO} is needed to achieve IF of 770 MHz?(2M)
a) 3310 MHz
b) 4080 MHz
c) 1203 MHz
d) 3250 MHz