



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Technology in Computer Science & Engineering

Course Name – Satellite Communication

Course Code - OEC-802B

(Semester VIII)

Time allotted : 1 Hrs.25 Min.

Full Marks : 70

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 70=70

Choose the correct alternative from the following :

- (1) Satellite communication has _____ a number of components.

a) 1	b) 2
c) 3	d) 4
- (2) Which of the following statement is true according to the space segment of satellite communication?

a) It has a stationary or mobile transmission, reception	b) It has stationary or a mobile ancillary equipment
c) It is a satellite	d) Both a and b
- (3) A typical satellite link involves in _____ of a signal from an earth station to a satellite.

a) Uplinks	b) Downlinks
c) Both a and b	d) None of the these
- (4) After the up-linking process, a satellite _____ and _____ the signal.

a) Receives, amplifies	b) Amplifies, receives
c) Receives, adds noise	d) Adds noise and transmits
- (5) DTH in DTH satellite equipment stands for _____.

a) Direct to home	b) Direction to home
c) Detection of home	d) All the these
- (6) Which of the following is the vehicle used to launch IRNSS-1H?

a) PSLV C39/IRNSS1H Mission	b) PSLV-C38/ Cartosat-2 series satellite
c) Ariane-5 VA 238	d) GSLV Mk III-D1/GSAT-19 Mission
- (7) Which of the following is the vehicle used to launch -GSAT-17?

a) PSLV C39/IRNSS1H Mission	b) PSLV-C38/ Cartosat-2 series satellite
c) Ariane-5 VA 238	d) GSLV Mk III-D1/GSAT-19 Mission
- (8) Which of the following is the vehicle used to launch the GSAT-19 satellite?

a) PSLV C39/IRNSS1H Mission	b) PSLV-C38/ Cartosat-2 series satellite
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- c) Ariane-5 VA 238
 d) GSLV Mk III-D1/GSAT-19 Mission
- (9) NASA stands for _____.
 a) National Auto Space Administration
 b) National Aeronautics and Space Administration
 c) Net Aeronautics and Space Administration
 d) National Aeronautics and satellite Administration
- (10) Which of the following are the examples of digital satellites?
 a) FalconSAT-2
 b) FalconSAT-1
 c) AISAT-1
 d) All the Tthese
- (11) Which of the following are the examples of natural satellites?
 a) Sun
 b) Moon
 c) Planets
 d) Any of the these
- (12) Satellites are classified into _____ types.
 a) 9
 b) 10
 c) 8
 d) 12
- (13) GEOs stands for _____.
 a) Geostationary Satellite
 b) Geo standing Satellite
 c) Global stationary Satellite
 d) None of these
- (14) Which of the following statement is true regarding frequency division multiplexing?
 a) It assigns a single user with a single channel
 b) It minimizes crosstalk by using guard bands
 c) No user can share other users frequency band at a time
 d) Aii of these
- (15) Which of the following statement is true regarding the FDD satellite technique?
 a) It uses only upward channel
 b) It uses only downward channel
 c) It uses both upward channel and downward channel
 d) None of the above
- (16) Which of the following are the examples of FDMA?
 a) AMPS
 b) NMT
 c) Radiocom
 d) All of these
- (17) Which of the following are the advantages of FDMA?
 a) It is easy to implement
 b) It is a continuous transmission scheme
 c) Less complex scheme
 d) All of these
- (18) A communication satellite is a _____ satellite.
 a) Artificial satellite
 b) Natural satellite
 c) Man made satellite
 d) All of these
- (19) Which of the following are the components in satellite communication?
 a) Mixer
 b) Transponder
 c) Filter
 d) All of these
- (20) Which of the following are the main components in satellite communication?
 a) Uplink
 b) Downlink
 c) Transponder
 d) All of these
- (21) INSAT stands for _____.
 a) Indian National Satellite
 b) International Satellite
 c) Either a or b
 d) None of the these
- (22) Satellite communication services are classified into how many types?
 a) One
 b) Two
 c) Three
 d) Four
- (23) Which of the following is a true statement according to two way satellite communication?

- a) It takes place between one or multiple earth stations via satellite
 b) Information is exchanged between two earth stations
 c) Both a and b
 d) None of the these
- (24) Which of the following are the advantages of satellite communication?
 a) Covers maximum bandwidth
 b) It provides elasticity property
 c) Reliability
 d) All of these
- (25) Which of the following are the applications of satellite communications?
 a) TV
 b) Radio
 c) Military
 d) All of these
- (26) Which of the following is the own satellite of India?
 a) Rohini D1
 b) Ohsumi
 c) Dong Fang Hong I
 d) GSAT
- (27) Which of the following is the own satellite of Japan?
 a) Rohini D1
 b) Ohsumi
 c) Dong Fang Hong I
 d) GSAT
- (28) How many laws of Kepler supports satellite communication?
 a) 2
 b) 3
 c) 4
 d) 6
- (29) Which of the following are the units of data rate?
 a) Bits/seconds
 b) Meters
 c) Centimeters
 d) Bits
- (30) Which of the following are the units of along track pixel dimension?
 a) Bits/seconds
 b) Meters
 c) Centimeters
 d) Bits
- (31) Which of the following is true when the data rate is reduced?
 a) Duty cycles are increased
 b) Duty cycles are increased
 c) There will be compression in data
 d) All of these
- (32) GEO stands for _____.
 a) Geostationary orbit
 b) Google stationary orbit
 c) Geo stand orbit
 d) None of the these
- (33) LEO stands for _____.
 a) Low earth orbit
 b) Level earth orbit
 c) Low equal orbit
 d) None of the these
- (34) What is the velocity of geosynchronous orbit?
 a) 11300 km/hr
 b) 35000km/hr
 c) 5690 km/hr
 d) 31456 km/hr
- (35) GEO is _____ km away from the earth.
 a) 36000 km
 b) 6000–20,000km
 c) 500–1500 km
 d) 1000 km
- (36) LEO is _____ km away from the earth.
 a) 36000 km
 b) 6000 – 20,000km
 c) 500 – 1500 km
 d) 1000 km
- (37) Does MEO requires fewer satellites?
 a) Yes
 b) No
 c) Maybe
 d) Depends on the position of orbit

- (38) Which of the following orbit is much close to earth?
- a) LEO
b) GEO
c) MEO
d) None of the these
- (39) ISL stands for _____.
- a) Inter satellite link
b) Intermediate satellite link
c) Inter stationary link
d) Intermediate stationary link
- (40) Which of the following connects 2 satellites on different objects?
- a) ISL
b) UML
c) GML
d) Both a and b
- (41) What is the altitude of geosynchronous orbit?
- a) 35786 km
b) 35000km
c) 5690 km
d) 31456 km
- (42) Which of the following is an uplink satellite?
- a) A signal transmitted from earth station to satellite
b) Signal transmitted from a satellite to earth station
c) Both a or b
d) None of the these
- (43) Simplex type transmission is observed in _____.
- a) TV
b) Radio
c) Telephone
d) All of these
- (44) The point close to earth is called _____.
- a) Apogee
b) Perigee
c) Longitude
d) Latitude
- (45) The signals that are transmitted and received are separated using _____.
- a) Diplexer
b) Duplexer
c) Simplexer
d) Both a and b
- (46) Units of SNR is _____.
- a) dB
b) Meters
c) Centimeters
d) Hertz
- (47) The transmitter-receiver combination in the satellite is known as a _____.
- a) Relay
b) Repeater
c) Transponder
d) Duplexer
- (48) Why are VHF, UHF, and microwave signals used in satellite communication?
- a) More bandwidth
b) More spectrum space
c) Are not diffracted by the ionosphere
d) Economically viable
- (49) Which of the following bands cannot be used for satellite communication?
- a) MF
b) Ku
c) X
d) C
- (50) Why are techniques like frequency reuse and spatial isolation carried out?
- a) Reduce traffic load
b) More gain
c) High speed
d) Error detection
- (51) Which technique uses two different antennas to reduce traffic on the same frequency?
- a) Spatial isolation
b) Frequency reuse
c) Multiplexing
d) Modulation
- (52) Which of the following is not a satellite subsystem?
- a) Ground station
b) Power system
c) Telemetry tracking
d) Communication subsystem

- (53) Which of the following is not true?
- a) Battery is only used as a back up
 - b) When in orbit, solar power is always available
 - c) Battery is used for initial satellite orientation and stabilization
 - d) The batteries are charged using solar power
- (54) What is the primary use of communication satellites?
- a) Telephone service
 - b) Surveillance
 - c) Research
 - d) GPS
- (55) 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
- (56) Which one of the following does not fall under the positioning system?
- a) Radio systems
 - b) Celestial systems
 - c) AHRS
 - d) Mapping navigation systems
- (57) What is the line connecting the intersection of the orbital plane with the Earth's equatorial plane called?
- a) Critical point
 - b) Intersection plane
 - c) Line of nodes
 - d) Differential line
- (58) How does troposphere affect the satellite signals?
- a) Reduces velocity
 - b) Reflects the signals
 - c) Refracts the signal
 - d) Bit inversion occurs
- (59) Which of the following makes the existence of ionosphere possible?
- a) Rotation of the Earth
 - b) Ultraviolet radiation from sun
 - c) Solar flares
 - d) Radiation from distant stars
- (60) What is the increase in velocity of the signal by the ionosphere termed as?
- a) Differential velocity
 - b) Velocity advance
 - c) Velocity advance
 - d) Signal advance
- (61) The refractivity of the troposphere is not a function of _____
- a) Frequency
 - b) Temperature
 - c) Pressure
 - d) Partial pressure of water vapour
- (62) What type of antenna is used in GLONASS satellites?
- a) Helical
 - b) Beam antenna
 - c) Parabolic antenna
 - d) Loop antenna
- (63) The first geostationary satellite launched in 1965 was called
- a) ANIK
 - b) EARLY BIRD (Intelsat-I)
 - c) WESTAR
 - d) MOLNIYA
- (64) The discussing sharing of a communication satellite by many geographically dispersed Earth station, DAMA means
- a) Demand-Assigned Multiple Access
 - b) Decibel Attenuated Microwave Access
 - c) Digital Analog Master Antenna
 - d) Dynamically-Assigned Multiple Access
- (65) A geosynchronous satellite
- a) has the same period as that of the Earth
 - b) has a circular orbit
 - c) rotates in the equatorial plane
 - d) has all of the above
- (66) 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
- (67) Satellite launch sites are invariably located on Eastern seaboard to ensure that
- a) launch takes place eastward
 - b) expenditure of propulsion fuel is reduced during plane changing
 - c) the satellite achieves circular orbit quickly
 - d) spent rocket motor and other launcher debris falls into the sea
- (68) Of the four INSAT-I satellites planned by India so far, only _____ has proved to be successful.
- a) INSAT-IA
 - b) INSAT-IB
 - c) INSAT-IC
 - d) INSAT-ID
- (69) The quality of a space-link is measured in terms of the _____ ratio.
- a) C/N
 - b) S/N
 - c) G/T
 - d) EIRP
- (70) Orbital disturbances of a geosynchronous satellite are caused by the
- a) moon
 - b) sun
 - c) earth
 - d) all of the above