

B.Sc. Part- III Electronics

Choice Based Credit System (June 2020 Onwards)

Semester- V Paper- X

DSE-E18 : Antenna and Wave Propagation

1) Which of the following antenna is treated as reference antenna?

- a) Half wave dipole **b) Isotropic radiator** c) Yagi d) V-antenna

2) Which one of the following term does not apply to Yagi antenna?

- a) Good bandwidth b) Parasitic elements c) Folded dipole **d) High gain**

3) The Yagi antenna is used for

- a) TV reception** b) Walky-Talky c) Radio d) Communication

4) Which one of the following antenna is used for radio transmission?

- a) Half wave dipole **b) Marconi** c) Yagi d) Parabolic dish antennas

5) For Satellite communication which one of the following is preferred?

- a) Parabolic dish antenna** b) Half wave dipole c) Yagi d) Ferrite loop type

6) Which one of the following antenna is preferred in radio receiver?

- a) Ferrite road loop type** b) Yagi c) dish antenna d) none of these

7) State whether the following statements about the antenna are True or False.

- i. It converts electrical power into electromagnetic waves and vice versa.
- ii. It can be used either as a transmitting antenna or a receiving antenna.
- iii. The Same antenna can not be used for both transmission and reception.

- A) i-True, ii-True, iii-True
B) i-True, ii-False, iii-True
C) i-False, ii-True, iii-True
D) i-True, ii-True, iii-False

8) The ... antenna consists of two straight collinear conductors of equal length, separated by small gap.

- A) half-wave dipole** B) horizontal-quarter wave dipole C) vertical-quarter wave dipole D) folded dipole

9) A ... antenna is the type commonly used for automobile radios and portable radios.

- A) half-wave dipole B) horizontal-quarter wave dipole **C) vertical-quarter wave dipole** D) folded dipole

- 10) A ... has a uniform or omnidirectional radiation pattern in one dimension.
 A) half-wave dipole B) horizontal-quarter wave dipole **C) vertical-quarter wave dipole** D) folded dipole
- 11) ... antenna is used in terrestrial microwave and satellite applications.
 A) Isotropic B) Marconi **C) Parabolic reflective** D) Folded dipole
- 12) An ... antenna is a point in space that radiates power in all directions equally.
A) Isotropic B) Marconi C) Parabolic reflective D) Folded dipole
- 13) ... occurs when an incoming signal hits an object whose size is in the order of the wavelength of the signal or less.
A) Scattering B) Diffraction C) Fading D) none of these
- 14) ... occurs at the edge of an impenetrable body that is large compared to the wavelength of radio wave.
 A) Scattering **B) Diffraction** C) Fading D) Reflection
- 15) ... occurs when the signal encounters a surface that is large relative to the wavelength of the signal.
 A) Scattering B) Diffraction C) Fading **D) Reflection**
- 16) A device that converts high frequency current into electromagnetic wave.
A. Antenna B. Loudspeaker C. Microphone D. Transducer
- 17) Which is a non-resonant antenna?
A. Rhombic antenna B. Folded dipole C. End-fire array D. Yagi-Uda antenna
- 18) _____ is an antenna with a number of half-wave antenna on it.
A. Antenna array B. Tower C. Omni-directional D. Rhombic
- 19) An antenna with very high gain and very narrow beam width.
 A. Helical antenna B. Discone antenna C. Horn antenna **D. Parabolic dish antenna**
- 20) _____ is the horizontal pointing angle of an antenna
A. Azimuth B. Angle of elevation C. Right angle D. Beamwidth
- 21) _____ is an open-ended slot antenna
 A. Helical antenna B. Rhombic antenna **C. Notch antenna** D. Cassegrain antenna
- 22) Which antenna is a properly terminated?
 A. Marconi **B. Rhombic** C. Dipole D. Yagi-Uda
- 23) What is the radiation characteristic of a dipole antenna?

A. Omnidirectional **B. Bidirectional** C. Unidirectional D. Hemispherical

24) An antenna with unity gain

A. Rhombic B. Half-wave dipole **C. Isotropic** D. Whip

25) How will you increase the gain of an antenna?

A. By adding several antennas in parallel

B. By focusing the radiated energy in one desired direction

C. By making antenna rods thicker

D. By making the antenna size larger

26) Which of the following improves antenna directivity?

A. Driven element B. Reflector element C. Director element **D. Parasitic element**

27) _____ of an antenna is a measure of how the antenna concentrates its radiated power in a given direction.

A. Efficiency B. Power **C. Gain** D. Polarization

28) The basic requirements of transmitting antennas are

a) High Efficiency b) high gain c) low side lobes d) large signal to noise ratio

29) The basic requirements of receiving antennas are

a) High Efficiency b) high gain **c) low side lobes** d) large signal to noise ratio

30) As the beam area of an antenna decreases, the directivity of the antenna

a) Increases b) Decreases c) Remains unchanged d) Depends on the type of the antenna

31) If an antenna radiates over half a sphere, directivity of the antenna is

a) two b) four c) three d) one

32) Which of the following refers to the pattern of reflector in the reflector antenna?

a) primary pattern **b) secondary pattern** c) reflector pattern d) feed pattern

33) Which of the following is a dual reflector antenna?

a) Cassegrain antenna b) parabolic antenna c) offset reflector antenna d) wire antenna

34) When a reflector is placed at the foci along the feed it is called ----- antenna.

a) Dual reflector antenna b) plane antenna c) wire antenna d) convex-convex

35) Which of the following is not a reflector antenna?

a) **convex-convex** b) corner c) Gregorian d) Cassegrain

36) Which of the following is used as a secondary antenna in the reflector antenna?

a) Horn b) Feed antenna c) **Parabolic** d) Dipole