

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/ECE	Year / Semester : IV/ VII	Format No.	NAC/TLP-07a.13
Subject Code : EC8701	Subject Name : Antennas and Microwave Engineering	Rev. No.	02
Unit No : 3	Unit Name : Antenna Arrays And Applications	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1	A discone antenna is a radiator whose impedance can be directly matched to what type of coaxial transmission line? a. 70 ohm line b. 30 ohm line c. 300 ohm line d. 50 ohm line	L2
2	In order to increase the gain of Yagi-Uda arrays, what element are added? a. Using many director b. Using many dipole c. Using many reflector d. All of these	L2
3	It is a measure of how much the antenna concentrates its transmitted microwave power in a given direction a. Beamwidth b. Polarization c. Bandwidth d. Gain	L4
4	Is not included in the group. a. Slot b. Horn c. Helix d. Marconi	L5
5	An antenna is formed of four array antenna, each of which has a gain of _____ if the total gain of these antenna arrays is 30 dB. a. 12 dB b. 13 dB c. 14 dB d. 15 dB	L1
6	_____ of the antenna is the ratio of the radiation resistance to the total resistance of the system. a. Gain b. Directivity c. Efficiency d. None of these	L1
7	The major lobes of the directive pattern are those in which the radiation is _____. a. Minimum b. Maximum	L2

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	c. Same d. None of these		
8	_____ is elective means to generate circular polarization. a. Folded antenna b. Marconi antenna c. Helix antenna d. Any antenna		L1
9	Ranges of frequencies the antenna will radiate effectively. a. Beamwidth b. Bandwidth c. Gain d. Directivity		L1
10	Is used to increase the current at the base of the antenna, and also to make the current distribution more uniform. a. Amplifier b. Top loading c. Booster d. None of these		L3
11	_____ is a network composed of reactances and transformers, which provide impedance matching. a. Circulator b. Antenna coupler c. Matching section d. None of these		L2
12	Consisting of grouped radiations or elements. a. Turnstile antenna b. Antenna array c. Phase array d. Half-wave dipole		L3
13	The design ratio of the log-periodic antenna must be _____. a. Equal to zero b. Greater than 1 c. Less than 1 d. Unity		L1
14	For low and medium frequency antennas which are mounted vertically from the earth's surface, the effective length is referred to as _____. a. Actual length b. Effective height c. Actual height d. None of these		L1

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15	<p>The main difference between half-wave and folded dipole is the _____.</p> <p>a. Length b. Radiation resistance c. Transmission line d. None of these</p>	L2
16	<p>A wire several wavelengths in length that is suspended at some height above the earth.</p> <p>a. Wire antennas b. Long wire antennas c. Short wire antennas d. Rhombic antennas</p>	L3
17	<p>Consist of two half-wave dipoles placed at right angles to each other and fed 90o out of phase with each other.</p> <p>a. Long wire antennas b. Turnstile antennas c. Vertical antennas d. Rhombic antennas</p>	L1
18	<p>Directivity higher than that obtained with uniform phase.</p> <p>a. Super gain b. High gain c. Medium gain d. Low gain</p>	L5
19	<p>A parabolic dish antenna has a diameter of 3m and operates at 46 Hz. Calculate the aperture.</p> <p>a. 3.5 square meters b. 4.59 square meters c. 2.7 square meters d. 1.2 square meters</p>	L1
20	<p>if the radiation resistance is 36 ohms, what must be the antenna length?</p> <p>a. Half-wavelength long b. One wavelength long c. Quarter-wavelength long d. Any of these</p>	L1
21	<p>If the antenna is receiving of 10^{-12} v/m of electric field, magnetic field of 3.2×10^{-3} A/m at a 5 sq. m absorbing area, what is the power received?</p> <p>a. 0.2561 pW b. 0.72 pW c. 0.016 pW d. 0.0012 pW</p>	L2
22	<p>The case where the electric field lies in a plane parallel to the earth surface.</p> <p>a. Vertical polarization b. Horizontal polarization</p>	L1

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	c. Circular polarization d. None of these	
23	It is known as a single directive antenna. a. Corner director b. Corner dipole c. Corner reflector d. Yagi antenna	L1
24	The presence of dielectric other than air _____ the velocity of light. a. Increase b. Decrease c. Same d. Secret	L3
25	The fact that the second wire of the folded dipole is folded makes the current on the two conductors of the antenna flow in the _____ direction. a. Same b. Opposite c. No d. None of these	L2
26	A closed circuit antenna is also called _____. a. Helix antenna b. Discone antenna c. Loop antenna d. None of these	L2
27	The omega match is slightly modified from the _____. a. T match b. Gamma match c. Delta match d. None of these	L5
28	A dish antenna has a diameter of 2m and operates at 46 Hz, find the antenna gain at 65% efficiency. a. 3422.6 b. 3.26 dB c. 12.3 dB d. 4266.67	L2
29	What is the approximate effective length of an antenna at 10 MHz a. 2.65 m b. 9.55 m c. 4.62 m	L1

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	d. 8.6 m	
30	<p>Calculate effective absorbing area operating at 106 Hz for a standard half-wave dipole.</p> <p>a. 0.265 mm² b. 0.1175 mm² c. 1.26 mm² d. 2.3 mm²</p>	L1
31	<p>A transmitting antenna has a gain of 10 and a power input of 60 watts. What is the effective radiated power?</p> <p>a. 6 kW b. 60 kW c. 0.6 kW d. 600 kW</p>	L3
32	<p>Marconi antenna is used in many types of mobile communications unit because it allows transmission and receptions in _____.</p> <p>a. One direction b. Two direction c. More direction d. All direction</p>	L1
33	<p>Used only to a small degree in the VHF band because of its large size requirements</p> <p>a. Vee antenna b. Long antenna c. Rhombic antenna d. Marconi antenna</p>	L1
34	<p>Antenna array having one active dipole element and two or more parasitic element is known as _____.</p> <p>a. Marconi b. Horizontal antenna c. Ground antenna d. Yagi-Uda antenna</p>	L1
35	<p>This antenna is a monopole in that it uses a half-wavelength radiator, but is fed at a voltage node rather than current node.</p> <p>a. Voltage antenna b. Zepp antenna c. Quartz antenna d. Xylene antenna</p>	L2