

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 : 1	Unit Name : Introduction To Microwave Systems and Antennas	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1	The basic requirements of transmitting antennas are: a) High efficiency b) Low side lobes c) Large signal to noise ratio d) Lone of the mentioned	L2
2	_____ is a device that converts electrons to photons or vice-versa. a) Antenna b) Electron gun c) Photon amplifier d) Microwave tube	L2
3	The basic equation of radiation that is applied to any antenna irrespective of the type of the antenna is: a) $iL = Qv$ b) $iQ = Lv$ c) $i/L = Q/v$ d) None of the mentioned	L4
4	Which activity is concerned with identifying the task at the final embedded systems? a) high-level transformation b) compilation c) scheduling d) task-level concurrency management	L5
5	When the separation between two lines that carry the TEM wave approaches _____ the wave tends to be radiated. a) True b) False	L1
6	The number of patterns radiation pattern required to specify the characteristic are : a) Three b) Four c) Two d) Five	L1
7	The beam width of the antenna pattern measured at half power points is called: a) Half power beam width b) Full null beam width c) Beam width	L2

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	d) None of the mentioned	
8	An antenna has a field pattern of $E(\theta) = \cos^2 \theta$, varies between 0 and 90°. Half power beam width of the antenna is: a) 33° b) 66° c) 120° d) None of the mentioned	L1
9	How are the instructions executed in DSP Processors? a. In Parallel manner b. In Sequential manner c. Both a and b d. None of the above	L1
10	An antenna has a field pattern $E(\theta) = \cos \theta \cdot \cos 2\theta$. The first null beam width of the antenna is: a) 45° b) 90° c) 180° d) 120°	L3
11	The solid area through which all the power radiated by the antenna is: a) Beam area b) Effective area c) Aperture area d) Beam efficiency	L2
12	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	L3
13	If an antenna radiates over half a sphere, directivity of the antenna is: a) Two b) Four c) Three d) One	L1
14	The half power beam width of an antenna in both θ and ϕ are 40° each. Then the gain of the antenna is: a) 23 b) 25 c) 14 d) 27	L1

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15	<p>The number N of radio transmitters or point sources of radiation distributed uniformly over the sky which an antenna can resolve is given by:</p> <p>a) 4 / A b) 2 / A c) / A d) None of the mentioned</p>	L2	
16	<p>Ideally, the number of point sources an antenna can resolve is numerically equal to:</p> <p>a) Gain of the antenna b) Directivity c) Beam efficiency d) Beam area</p>	L3	
17	<p>Effective aperture is a parameter of the antenna that gives the physical aperture of the antenna.</p> <p>a) True b) False</p>	L1	
18	<p>Effective aperture in terms of beam area and operating wavelength is given by the relation:</p> <p>a) λ^2 / A b) A / λ^2 c) $\lambda^2 \times A$ d) No such relationship exists</p>	L5	
19	<p>___ of an antenna is defined as the ratio of the induced voltage to the incident electric field.</p> <p>a) Effective height b) Gain c) Directivity d) Loss</p>	L1	
20	<p>The directivity of an antenna in terms of the aperture efficiency and operating wavelength is given by:</p> <p>a) $4 A_e / \lambda^2$ b) $2 A_e / \lambda^2$ c) A_e / λ^2 d) None of the mentioned</p>	L1	
21	<p>A radio link has 15 W transmitter connected to an antenna of 2.5 m^2 effective aperture at 5 GHz. The receiving antenna has an effective aperture of 0.5 m^2 and is located at a 15 Km</p>	L2	

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	line of sight distance from transmitting antenna. Assuming lossless, matched antennas, the power delivered to the receiver is: a) 20 μ W b) 15 μ m c) 23 μm d) 25 μ m	
22	The members of the antenna family which are made of wires of certain value in terms of operating wavelength are called: a) Loop antennas b) Wire antennas c) Dipole antenna d) Slot antennas	L1
23	The antenna in which location of the feed determines the direction of the lobe are: a) Wire antenna b) Loop antenna c) Helical antenna d) Horn antenna	L1
24	Based on the size of the loops, loop antennas are classified as small and large loops. This is the only classification of loop antenna. a) True b) False	L3
25	Antenna that does not belong to the horn antenna family among the following are: a) Pyramidal horn b) Conical horn c) bi-conical horn d) None of the mentioned	L2
26	Patch antennas are the antennas of small size and are made of: a) Strip line b) Microstrip lines c) Coaxial cables d) Rectangular waveguide	L2
27	Reflector antennas are widely used to modify radiation patterns of radiating elements. a) True b) False	L5
28	The pattern of the reflector in a reflector antenna is called: a) Primary pattern b) Secondary pattern c) Reflector pattern	L2

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	d) None of the mentioned	
29	<p>_____Antennas have gain less than reflector antennas but have more lenient tolerance on surfaces.</p> <p>a) Helical antennas</p> <p>b) Lens antennas</p> <p>c) Array antennas</p> <p>d) Slot antennas</p>	L1
30	<p>Lens antennas are classified into two types. One being fast antenna, the other one is:</p> <p>a) Slow antenna</p> <p>b) Delay antenna</p> <p>c) Dynamic antenna</p> <p>d) None of the mentioned</p>	L1

