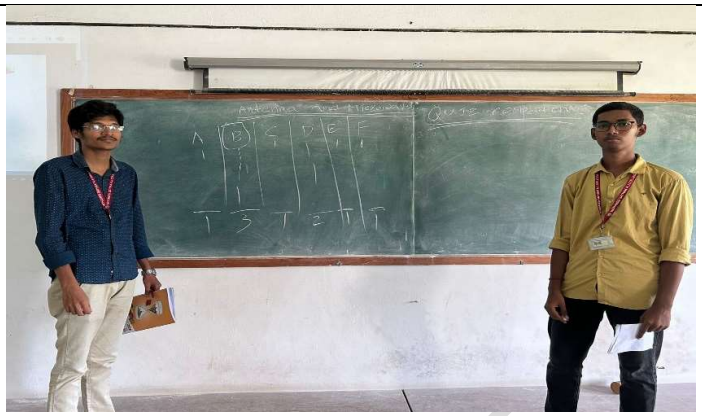
Department of Electronics and Communication Engineering

Innovative Teaching Methods

Activity Title	Quiz – Group Activity
Faculty Name/Department	Mrs.Piriyadharshini
Mapped Course Name & Code	Antenna and Microwave Engineering & EC8701
Date	24.7.2022
Benefitted Students (Year / Sem / Dept)	IV/ECE
Topic	Smart Antennas
Description	The students are divided in groups and each group the question is asked and those who raise the answer first to the question is awarded marks if the allotted group doesn't give the answer the question is passed to the next group. The group which answers the question gives extra bonus marks
Course Outcomes (CO)	Illustrate various antenna designs such as Wire antenna, Aperture, Micro strip & Frequency Independent antenna
Performance Indicator (PI)	1.4.1
Mail ID (for review)	ece.priyadharshini@msajce-edu.in
Activity Photos	

Topics/ Questions:

1. Which of the following statements is false regarding smart antenna for 802.11 applications?
a) Coverage area is increased
b) Signal paths are reduced
c) Probability of collisions is increased
d) Interference is reduced

2. Which of the following is not the advantage of smart antenna?
a) Range is increased
b) Secured transmission
c) Design of trans-receiver is simple
d) Probability of collisions is reduced

3. Which of the following is used to distinguish the selected signal and the multipath signal in smart antenna architecture?
a) DSP procedure
b) Switched beam array
c) Range gates
d) Delay Cancellers

4. Which of the following is mostly used to generate multiple fixed beams by augmentation in specific orders?
a) Switched Beam array
b) Range gates
c) Conical Scanning
d) FMCW radar

5. In which of the following type of smart antenna, the performance of the multi-channel fading is limited?
a) Diversity system
b) Omni-directional system
c) Sectored system d) Directional system

6. Which of the following is not the benefit of smart antenna?
a) It increases the SIR
b) It decreases the SIR
c) It increases the SNR
d) Probability of collisions is reduced

7. In Smart antennas, signal to interference ratio is low.
a) True
b) False

8. Which of the following suffers the co-channel interference most?
a) Smart antennas
b) Sectored antennas
c) Omni-directional
d) Both Smart antenna and Omni-direction

9. Smart antennas can be used for location-specific service.
a) True
b) False

10. Which of the following is benefit of smart antenna?
a) It is easy to tap the connection by the intruder apart from the user
b) Co-Channel interference is less compared to the Omni-directional
c) Design of Trans-receiver is complex
d) It cannot be used for location-specific services

11. Which of the following is the drawback of smart antenna?
a) Design of trans-receiver
b) Spacing between base stations
c) Probability of collisions being reduced
d) Focused to an intended direction

12. Which of the following statement regarding smart antenna is false?
a) Design of transceiver is complex
b) Smart antennas is more directive
c) Smart antenna is more expensive
d) Numeric processors and control systems are not needed in smart antennas

13. The propagation of wave from transmitter to receiver without touching the ground is called as ___
a) Single hop distance
b) Virtual height
c) Actual height
d) Multi-hop

14. The propagation of wave from transmitter to receiver by touching ground in between them and goes through different layers is called _____

a) Multi-hop single layer
b) Single hop multi layer
c) Multi hop multi layer
d) Single hop single layer

15. The take-off angle for the curved earth surface is given by ____

a) $\beta = 90 - \theta_i - 57.3d/2R$
b) $\beta = 180 - \theta_i$
c) $\beta = 180 - \theta_i - 57.3d/2R$
d) $\beta = 90 - \theta_i$

Marks:

Group Name	Reg No.	Total (15)
A	311820106001	15
	311820106002	12
	311820106007	13
	311820106009	15
	311820106305	15
B	311820106003	12
	311820106004	15
	311820106005	15
	311820106005	13
	311820106006	11
C	311820106010	12
	311820106011	15
	311820106013	15
	311820106014	15
	311820106016	11
D	311820106017	15
	311820106020	15
	311820106021	14
	311820106022	14
	311820106025	15
E	311820106301	11
	311820106302	13
	311820106303	15
	311820106306	15

Outcome:

Better understanding the concepts of Smart Antennas