



SRI BHARATHI

ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)
Kaikkurichi, Pudukkottai -622 303

www.sbec.edu.in

NAAC DOCUMENTS



Quality Indicator Frame Work

Criterion – 1

CURRICULAR ASPECTS

Submitted by

IQAC

Internal Quality Assurance Cell

Sri Bharathi Engineering College for Women



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
KAIKKURUCHI, PUDUKOTTAI – 622 303

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2018-2019 / EVEN SEMESTER

1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

VAC Title:	ANTENNA DESIGN USING HIGH FREQUENCY SIMULATION SOFTWARE				
Resource Person:	Er.A.GANESAN, Software Engineer, Maria Academy, Chennai.				
Date of conduct from :	10.12.2018	To:	14.12.2018	Duration:	30 Hours
Organized Department :	ELECTRONICS AND COMMUNICATION ENGINEERING				
Participant Year:	2,3,4	Semester:	EVEN	No. of Students Registered :	50
Venue:	Seminar Hall, ,Ground Floor, SBECW				

TABLE OF CONTENTS

SNO	DOCUMENT	PAGE-NO
1	VAC Circular	3-3
2	VAC Syllabus and Schedule	4-4
3	LIST Of Students Participants	5-7
4	Attendance Of Students	8-10
5	VAC Report	10-10
6	Course Completion Certificates -VAC	11-13
7	VAC Test Paper	14-15
8	VAC Answer Key	16-16
9	VAC Test Answer Sheet	17-21
10	VAC Mark Statement	22-24



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai 25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2018-2019/EVEN SEMESTER

DEPARTMENT CIRCULAR

Date: 03.12.2018

Value Added Course offered by the Department of ECE will be conducted for all Second, Third and Final year students on “**Antenna Design using High Frequency Simulation Software**” in association with Maria Academy from 10.12.2018 to 14.12.2018. Certificates will be issued to the eligible participants at the end of the course.

S.No	Name of the Course	Resource Person
1	Antenna Design using High Frequency Simulation Software	Er.A.GANESAN, Software Engineer, Maria Academy, No 58, 17, S Usman Road, Near Bus stand, Kannammampet, T. Nagar, Chennai 600 059. Tamil Nadu . Mail.Id: mariatrainingacademy@gmail.com

Cc:

- Principal Office
- IQAC Coordinator
- Class In charges- II ,III &IV Year
- II ,III & IV Year ECE Students
- Notice Board

Rygh
HOD/ECE
HOD / ECE

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303.

[Signature]
Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2018-2019/EVEN SEMESTER

Value Added Course on “Antenna Design Using High Frequency Simulation Software”

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	Introduction to the course and high-frequency simulation software. Review of antenna fundamentals and electromagnetic theory.	2	10.12.2018
2	Overview of various types of antennas and their applications. Introduction to the chosen simulation software and its interface.	1	10.12.2018
3	Modeling simple wire antennas (dipole, monopole) using the simulation software. Radiation pattern analysis and gain calculations.	3	10.12.2018
4	Design and simulation of patch antennas. Understanding bandwidth, polarization, and impedance matching. Simulation of array antennas (linear and planar arrays).	3	11.12.2018
5	Beamforming techniques and phased arrays.	3	11.12.2018
6	Introduction to microstrip antennas and their design using the software.	3	12.12.2018
7	Design and simulation of helical antennas. Circularly polarized antennas and axial ratio.	3	12.12.2018
8	Optimization algorithms for antenna design.	3	13.12.2018
9	Design and simulation of Yagi-Uda antennas and log-periodic antennas.	3	13.12.2018
10	Antenna arrays with non-uniform excitation.	3	14.12.2018
11	Introduction to antenna measurement techniques and validation of simulation results. Understanding measurement errors and calibration.	3	14.12.2018
Total Hours		30	

VAC Coordinator


Dr. S. THILAGAVATHI M.E., Ph.D.
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.


HoD/ECE
HOD / ECE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF ELECTRONICS AN COMMUNICATIONENGINEERING
ACADEMIC YEAR EVEN SEMESTER (2018-2019)

STUDENT PARTICIPATION LIST FOR VALUE ADDED PROGRAM

Antenna Design Using High Frequency Simulation Software

S.NO	REG.NO	NAME	YEAR & BRANCH
1	912617106001	ABIRAMI.S	II & ECE
2	912617106002	ABISHEKA.S	II & ECE
3	912617106003	ATSHAYA.R	II & ECE
4	912617106004	BAVADHARANI.A	II & ECE
5	912617106005	BHUVANESHWARI.B	II & ECE
6	912617106006	DHIVYA.L	II & ECE
7	912617106007	GOWSALYA.D	II & ECE
8	912617106009	INDHUMATHI.S	II & ECE
9	912617106010	KANIMOZHIL.D	II & ECE
10	912617106011	KAVYA.C	II & ECE
11	912617106012	KEERTHANA.G	II & ECE
12	912617106013	MAHESHWARI.G	II & ECE
13	912617106014	MANOHARI.M	II & ECE
14	912617106015	MARAGATHALAKSHMI.S	II & ECE
15	912617106017	SAFRIN NISHA.S	II & ECE
16	912617106018	SUBASHINI.M	II & ECE
17	912617106019	SUBASHINI.T	II & ECE
18	912617106020	VINTHIYA.R	II & ECE
19	912616106001	ABINAYA.R	III & ECE
20	912616106002	AGALYA.A	III & ECE
21	912616106003	ATCHAYA.G	III & ECE
22	912616106004	DEEPA.N	III & ECE
23	912616106005	DHARANIYA.A	III & ECE
24	912616106006	JEEVITHA.U	III & ECE
25	912616106007	MAHESWARI.V	III & ECE

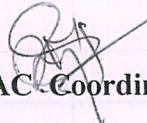
DR. S. TRILAGAVATHI M.E., Ph.D.,


PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN

Kaikkurichi - 622 303, Pudukkottai Dt

S.NO	REG.NO	NAME	YEAR & BRANCH
26	912616106008	PAZHANIYAMMAL.R	III & ECE
27	912616106009	PRIYANKA.E	III & ECE
28	912616106010	ROJA.A	III & ECE
29	912616106011	SHANMUGAPRIYA.R	III & ECE
30	912616106012	SHIYAMALA.E	III & ECE
31	912616106013	SIVA BHARATHI.P	III & ECE
32	912616106014	SIVARUBINI.S	III & ECE
33	912616106015	THENMOZHI.A	III & ECE
34	912616106016	VINCY.A	III & ECE
35	912616106302	SANKAVI M	III & ECE
36	912615106001	AARTHI .M	IV & ECE
37	912615106002	ABIRAMI .C	IV & ECE
38	912615106004	AKILA .S	IV & ECE
39	912615106005	ARTHI .M	IV & ECE
40	912615106006	BAVADHARANI .M	IV & ECE
41	912615106007	DIVYABHARATHI .S	IV & ECE
42	912615106008	JAGADESWARI .K	IV & ECE
43	912615106009	MEENAKSHI .R	IV & ECE
44	912615106010	MEENAL .T	IV & ECE
45	912615106012	SARGUNAVALLI .C	IV & ECE
46	912615106013	THENMOZHI .K	IV & ECE
47	912615106014	VENNILA .K	IV & ECE
48	912615106301	MANIMEGALAI .S	IV & ECE
49	912615106701	SARADHA .S	IV & ECE
50	912615106702	KAVIYA .S	IV & ECE


VAC Coordinator


HoD/ECE

HOD / ECE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303.


Dr. S.THILAGAVATHI M.E., Ph.D.
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

KAIKKURICHI, PUDUKKOTTAI-622 303

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR EVEN SEMESTER (2018-2019)

ATTENDANCE SHEET FOR VALUE ADDED COURSE- ANTENNA DESIGN USING HIGH FREQUENCY SIMULATION SOFTWARE

S.NO	REG. NO	NAME	YEAR/ BRANCH	10.12.2018		11.12.2018		12.12.2018		13.12.2018		14.12.2018		NO. OF SESSIONS ATTENDED	SIGN OF STUDENT
				F.N	A.N	F.N	A.N	F.N	A.N	F.N	A.N	F.N	A.N		
1	912617106001	ABIRAM.I.S	II /ECE	/	/	/	/	/	/	/	/	/	/	10	S. Abirami
2	912617106002	ABISHEKA.S	II /ECE	/	/	/	/	/	/	/	/	/	/	10	S. Abheka
3	912617106003	ATSHAYA.R	II /ECE	/	/	a	a	/	/	/	/	/	/	8	R. Atshaya
4	912617106004	BAVADHARANI.A	II /ECE	/	/	/	/	/	/	/	/	/	/	10	A. Bavadhani
5	912617106005	BHUVANESHWARI.B	II /ECE	a	a	/	/	/	/	/	/	/	/	8	B. Bhuvaneshwari
6	912617106006	DHIVYA.L	II /ECE	/	/	/	/	/	/	a	/	/	/	9	L. Divya
7	912617106007	GOWSALYA.D	II /ECE	/	/	/	/	/	/	/	/	/	/	10	D. Gowshalya
8	912617106009	INDHUMATHI.S	II /ECE	a	/	/	/	/	/	/	/	/	/	9	S. Indhumathi
9	912617106010	KANIMOZHI.D	II /ECE	a	/	/	/	/	/	/	/	/	/	9	D. Kanimozhi
10	912617106011	KAVYA.C	II /ECE	/	/	/	/	/	/	/	/	/	/	10	C. Kavya
11	912617106012	KEERTHANA.G	II /ECE	/	/	/	/	/	/	/	/	/	/	10	G. Keerthana

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi, 622 303

12	912617106013	MAHESHWARI.G	II /ECE	/	/	/	/	/	/	/	/	/	/	/	10	G. Maheswari
13	912617106014	MANOHARI.M	II /ECE	/	/	/	/	/	/	/	/	/	/	/	10	M. Manis
14	912617106015	MARAGATHA LAKSHMIS	II /ECE	/	/	/	/	a	/	/	/	/	/	/	9	S. Maragathalakshmi
15	912617106017	SAFRIN NISHA.S	II /ECE	/	/	/	/	/	/	/	/	/	/	/	10	S. Safrin Nisha
16	912617106018	SUBASHINI.M	II /ECE	/	/	/	/	/	/	/	/	/	/	/	10	M. Subashini
17	912617106019	SUBASHINI.T	II /ECE	/	/	/	/	/	/	/	/	/	/	/	10	T. Subini
18	912617106020	VINTHIYA.R	II /ECE	/	/	/	/	/	/	/	/	/	/	/	10	R. Vinthiya
19	912616106001	ABINAYA.R	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	R. Abinaya
20	912616106002	AGALYA.A	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	A. Agalya
21	912616106003	ATCHAYA.G	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	G. Atchaya
22	912616106004	DEEPA.N	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	N. Deepa
23	912616106005	DHARANIYA.A	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	D. Dhanya
24	912616106006	JEEVITHA.U	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	U. Jeevitha
25	912616106007	MAHESWARI.V	III/ECE	/	/	/	/	a	a	/	/	/	/	/	8	V. Maheswari
26	912616106008	PAZHANIYAMMAL.R	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	P. Pammal
27	912616106009	PRIYANKA.E	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	P. Priyanka E
28	912616106010	ROJA.A	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	R. Roja
29	912616106011	SHANMUGAPRIYA.R	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	S. Shanmugapriya
30	912616106012	SHIYAMALA.E	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	S. Shyamala E
31	912616106013	SIVA BHARATHI.P	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	P. Sivarathi

32	912616106014	SIVARUBINI.S	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Sivz
33	912616106015	THENMOZHI.A	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Thz
34	912616106016	VINCY.A	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Vincy A
35	912616106302	SANKAVI M	III/ECE	/	/	/	/	/	/	/	/	/	/	/	10	M. Sankavi
36	912615106001	AARTHI .M	IV/ECE	a	/	/	/	/	/	/	/	/	/	/	9	M. Arathi
37	912615106002	ABIRAMI .C	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Abirami.c
38	912615106004	AKILA .S	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Akila.S
39	912615106005	ARTHI .M	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Arathi.M
40	912615106006	BAVADHARANI .M	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Bavadarani
41	912615106007	DIVYABHARATHI .S	IV/ECE	/	/	/	/	/	/	a	/	/	/	/	9	S. Divyabharathi
42	912615106008	JAGADESWARI .K	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Jagadeeswari
43	912615106009	MEENAKSHI .R	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Meenakshi
44	912615106010	MEENAL .T	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	T. Meenal
45	912615106012	SARGUNAVALLI .C	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	C. Sargunavalli
46	912615106013	THENMOZHI .K	IV/ECE	/	/	/	/	a	a	/	/	/	/	/	8	K. Thenmozhi
47	912615106014	VENNILA .K	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Vennila
48	912615106301	MANIMEGALAI .S	IV/ECE	a	/	/	/	/	/	/	/	/	/	/	9	Manimegalai
49	912615106701	SARADHA .S	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	Saradha
50	912615106702	KAVIYA .S	IV/ECE	/	/	/	/	/	/	/	/	/	/	/	10	S. Kaviya

622-303, Pudukkottai Dt.

V.C. Coordinator

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

HOD/ECE
HOD / ECE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303.

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Report on Value Added Course

Title:	Antenna Design using High Frequency Simulation Software				
Resource Person:	Mr.A.GANESAN Software Engineer, Maria Academy , T. Nagar, Chennai 600059.				
Date of conduct from :	10.12.2018	To:	14.12.2018	Duration:	30 Hours
Organized Department :	Electronics and Communication Engineering				
Participant Year:	2/ 3 /4	Semester:	EVEN	No. of Students Registered :	50
Venue:	Seminar Hall, ,Ground Floor, SBECW				

Outcome of Value Added Course (VAC) :At the end of Course,Students can able to

- Design and or develop a prototype in the area of passive/Active circuits/Antennas.
- Design and analyze various antennas.
- Develops an idea to compare the performance of different types of antennas.
- Develops an insight to optimize different performance parameters of antenna to have more advance performance.
- Creates an interest to design a new form of antenna which can be implemented in specific wireless applications.
- Design and analysis of Microwave Antennas Using HFSS.

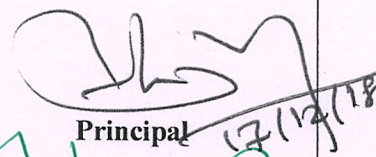
No. of students successfully completed the VAC course is **50 Students** based on the following Assessment process.

Assessment Process

- Students securing **more than 60% on total score** and secured more than **75%** in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = (0.5 *Attendance in VAC out of 100 percentage + 0.5 *Test mark in VAC out of 100 marks)


VAC Coordinator


HOD/ECE


Principal

HOD / ECE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303


Dr. S.THILAGAVATHI M.E.,Ph.D
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

MARIA ACADEMY



CERTIFICATE OF PARTICIPATION

This certificate recognizes that Ms. BAVADHARANI.A, II YEAR ECE, from Sri Bharathi Engineering College for Women, has successfully completed 5 days Value Added Course on Antenna Design Using High Frequency Simulation Software Conducted from 10.12.2018 to 14.12.2018 during the academic year 2018-2019.

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

Ganesan
RESOURCE PERSON

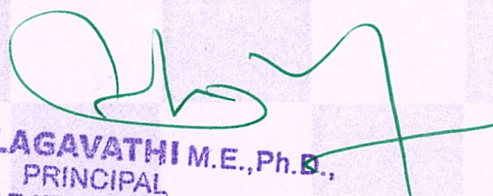
T. NAGAR, CHENNAI 600059. TAMIL NADU .
MAIL. ID: MARIATRainingAcademy@gmail.com

MARIA ACADEMY



CERTIFICATE OF PARTICIPATION

This is to Certify that Mr/Ms. DEEPAN, III YEAR ECE, from Sri Bharathi Engineering College for Women, has successfully completed 5 days Value Added Course on Antenna Design High Frequency Simulation Software Conducted from 10.12.2018 to 14.12.2018 during the academic year 2018-2019.


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

Ganesan
RESOURCE PERSON

T. NAGAR, CHENNAI 600059. TAMIL NADU .
MAIL. ID: MARIATRainingAcademy@gmail.com

MARIA ACADEMY



CERTIFICATE OF PARTICIPATION

This certificate recognizes that Ms. MEENAL .T, IV YEAR ECE, from Sri Bharathi Engineering College for Women, has successfully completed 5 days Value Added Course on Antenna Design Using High Frequency Simulation Software Conducted from 10.12.2018 to 14.12.2018 during the academic year 2018-2019.

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

Ganesan
RESOURCE PERSON

T. NAGAR, CHENNAI 600059. TAMIL NADU .
MAIL. ID: MARIA TRAINING ACADEMY@GMAIL.COM



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Name of the Student :

Year/Sem:

AU Register Number:

Value Added Course on “Antenna Design using HFSS”

MCQ QUESTIONS (20X1 = 20 Marks)

1. EIRP in an isotropic antenna stands for _____.
a) Effective isotropic radiated power c) Entropic isotropic radiated power
b) Equivalent isotropic radiation power d) Equivalent isolated radiated power
2. What is the gain factor (in dB) of an isotropic radiator in all directions?
a) 1 c) Infinity
b) 0 d) 0db
3. What is the gain factor of an isotropic radiator in all directions?
a) 1 c) Infinity
b) 0 d) 0db
4. What is the shape of isotropic radiation when observed in 3D?
a) Doughnut shaped c) Figure of Eight
b) Spherical d) Circle
5. Isotropic radiation is also known as _____.
a) Omni-directional radiation c) Tri- directional radiation
b) Bi-directional radiation d) None of the above
6. The characteristics of an antenna's radiation pattern can be represented in _____ number of ways.
a) 2 b) 3 c) 4 d) 4
7. Transmitting antenna has which of the following parameter as a basic requirement.
a) Side lobes are low c) High SNR value
b) Efficiency is high d) High SNR value
8. Which of the following is an equation for ERP of an isotropic antenna?
a) $ERP(dBW) = EIRP(dBW) - 2.15dBi$ c) $ERP(dBW) = EIRP(dBW) + 2.15dBi$
b) $ERP(dBW) = EIRP(dBW) - 3.15dBi$ d) $ERP(dBW) = EIRP(dBW) * 2.15dBi$
9. Radiation patterns can be represented in terms of _____ types.
a) Field patterns c) Both a and b
b) Power patterns d) Direction pattern

Dr. S. THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN

Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2018-2019/EVEN SEMESTER

Value Added Course on “Antenna Design Using High Frequency Simulation Software”

MCQ ANSWER KEY

1	A	6	B	11	B	16	A
2	D	7	B	12	A	17	B
3	A	8	A	13	A	18	A
4	A	9	C	14	B	19	C
5	A	10	A	15	A	20	C

Dr. S. THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN

Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Name of the Student : *R. Atshaya*

Year/Sem: *II/IV*

AU Register Number: *912617106003*

Value Added Course on “Antenna Design using HFSS”

MCQ QUESTIONS (20X1 = 20 Marks)

17
20

1. EIRP in an isotropic antenna stands for _____.

- a) Effective isotropic radiated power c) Entropic isotropic radiated power
 b) Equivalent isotropic radiation power d) Equivalent isolated radiated power

2. What is the gain factor (in dB) of an isotropic radiator in all directions?

- a) 1 c) Infinity
 b) 0 d) 0db

3. What is the gain factor of an isotropic radiator in all directions?

- a) 1 c) Infinity
 b) 0 d) 0db

4. What is the shape of isotropic radiation when observed in 3D?

- a) Doughnut shaped c) Figure of Eight
 b) Spherical d) Circle

5. Isotropic radiation is also known as _____.

- a) Omni-directional radiation c) Tri-directional radiation
 b) Bi-directional radiation d) None of the above

6. The characteristics of an antenna's radiation pattern can be represented in _____ number of ways.

- a) 2 b) 3 c) 4 d) 4

7. Transmitting antenna has which of the following parameter as a basic requirement.

- a) Side lobes are low c) High SNR value
 b) Efficiency is high d) High SNR value

8. Which of the following is an equation for ERP of an isotropic antenna?

- a) $ERP(dBW) = EIRP(dBW) - 2.15dB$ c) $ERP(dBW) = EIRP(dBW) + 2.15dB$
b) $ERP(dBW) = EIRP(dBW) - 3.15dB$ d) $ERP(dBW) = EIRP(dBW) * 2.15dB$

9. Radiation patterns can be represented in terms of _____ types.

- a) Field patterns c) Both a and b
 b) Power patterns d) Direction pattern

Dr. S. THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN

Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

10. A 2-D radiation pattern graph contains how many coordinates?

- a) 2 b) 3 c) 5 d) 1

11. Antenna can be polarized in _____ ways.

- a) 3 b) 2 c) 5 d) 1

12. An example of circular polarization is _____.

- a) GPS c) TV signals
b) Radio wave d) Mobile communication signals

13. Which of the following is the frequency of horizontal polarization?

- a) 1 GHz c) 15 GHz
b) 10 GHz d) 20 GHz

14. Magnetic field in EM wave is plotted on _____ axis.

- a) X-axis c) Z-axis
 b) Y-axis d) Either a or b

15. Units of Poynting vector is _____.

- a) W/m² b) W/m c) m/W d) wm

16. If the wavelength is bigger than the length of dipole then it is termed as a type of _____ dipole.

- a) Infinitesimal dipole c) Short dipole
b) Long dipole d) Any of the above

17. What is the range of frequency in a V-shaped antenna that operates?

- a) 33 KHz to 300 GHz c) 30 MHz to 300 GHz
 b) 3 to 30 MHz d) 31 KHz to 300 GHz

18. What is the beam width for a half wave dipole antenna?

- a) 90° c) 50°
b) 180° d) 250°

19. What is the impedance of the folded dipole antenna?

- a) 50Ω c) 300Ω
b) 100Ω d) 20Ω

20. Which of the following antennas produce a vertical radiation pattern?

- a) Dipole antenna c) Marconi antenna
b) Yagi antenna d) Hertz antenna


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Name of the Student : A. ROJA

Year/Sem: III / VI

AU Register Number: 912616106010

Value Added Course on “Antenna Design using HFSS”

MCQ QUESTIONS (20X1 = 20 Marks)

19
20

1. EIRP in an isotropic antenna stands for _____.

- a) Effective isotropic radiated power
 b) Equivalent isotropic radiation power
 c) Entropic isotropic radiated power
 d) Equivalent isolated radiated power

2. What is the gain factor (in dB) of an isotropic radiator in all directions?

- a) 1
 b) 0
 c) Infinity
 d) 0db

3. What is the gain factor of an isotropic radiator in all directions?

- a) 1
 b) 0
 c) Infinity
 d) 0db

4. What is the shape of isotropic radiation when observed in 3D?

- a) Doughnut shaped
 b) Spherical
 c) Figure of Eight
 d) Circle

5. Isotropic radiation is also known as _____.

- a) Omni-directional radiation
 b) Bi-directional radiation
 c) Tri-directional radiation
 d) None of the above

6. The characteristics of an antenna's radiation pattern can be represented in _____ number of ways.

- a) 2
 b) 3
 c) 4
 d) 4

7. Transmitting antenna has which of the following parameter as a basic requirement.

- a) Side lobes are low
 b) Efficiency is high
 c) High SNR value
 d) High SNR value

8. Which of the following is an equation for ERP of an isotropic antenna?

- a) $ERP(dBW) = EIRP(dBW) - 2.15dBi$
 b) $ERP(dBW) = EIRP(dBW) - 3.15dBi$
 c) $ERP(dBW) = EIRP(dBW) + 2.15dBi$
 d) $ERP(dBW) = EIRP(dBW) * 2.15dBi$

9. Radiation patterns can be represented in terms of _____ types.

- a) Field patterns
 c) Both a and b
 b) Power patterns
 d) Direction pattern

Dr. S. THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN

Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

10. A 2-D radiation pattern graph contains how many coordinates?

- a) 2 b) 3 c) 5 d) 1

11. Antenna can be polarized in _____ ways.

- a) 3 b) 2 c) 5 d) 1

12. An example of circular polarization is _____.

- a) GPS c) TV signals
b) Radio wave d) Mobile communication signals

13. Which of the following is the frequency of horizontal polarization?

- a) 1 GHz c) 15 GHz
b) 10 GHz d) 20 GHz

14. Magnetic field in EM wave is plotted on _____ axis.

- a) X-axis c) Z-axis
b) Y-axis d) Either a or b

15. Units of Poynting vector is _____.

- a) W/m² b) W/m c) m/W d) wm

16. If the wavelength is bigger than the length of dipole then it is termed as a type of _____ dipole.

- a) Infinitesimal dipole c) Short dipole
b) Long dipole d) Any of the above

17. What is the range of frequency in a V-shaped antenna that operates?

- a) 33 KHz to 300 GHz c) 30 MHz to 300 GHz
b) 3 to 30 MHz d) 31 KHz to 300 GHz

18. What is the beam width for a half wave dipole antenna?

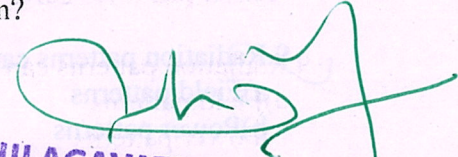
- a) 90° c) 50°
b) 180° d) 250°

19. What is the impedance of the folded dipole antenna?

- a) 50Ω c) 300Ω
b) 100Ω d) 20Ω

20. Which of the following antennas produce a vertical radiation pattern?

- a) Dipole antenna c) Marconi antenna
b) Yagi antenna d) Hertz antenna


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Name of the Student : S. SARADHA

Year/Sem: IV | VIII

AU Register Number: 912615706701

Value Added Course on “Antenna Design using HFSS”

MCQ QUESTIONS (20X1 = 20 Marks)

18
20

1. EIRP in an isotropic antenna stands for _____.

- a) Effective isotropic radiated power
 b) Equivalent isotropic radiation power
 c) Entropic isotropic radiated power
 d) Equivalent isolated radiated power

2. What is the gain factor (in dB) of an isotropic radiator in all directions?

- a) 1
 b) 0
 c) Infinity
 d) 0db

3. What is the gain factor of an isotropic radiator in all directions?

- a) 1
 b) 0
 c) Infinity
 d) 0db

4. What is the shape of isotropic radiation when observed in 3D?

- a) Doughnut shaped
 b) Spherical
 c) Figure of Eight
 d) Circle

5. Isotropic radiation is also known as _____.

- a) Omni-directional radiation
 b) Bi-directional radiation
 c) Tri-directional radiation
 d) None of the above

6. The characteristics of an antenna's radiation pattern can be represented in _____ number of ways.

- a) 2
 b) 3
 c) 4
 d) 4

7. Transmitting antenna has which of the following parameter as a basic requirement.

- a) Side lobes are low
 b) Efficiency is high
 c) High SNR value
 d) High SNR value

8. Which of the following is an equation for ERP of an isotropic antenna?

- a) $ERP(dBW) = EIRP(dBW) - 2.15dBi$
 b) $ERP(dBW) = EIRP(dBW) - 3.15dBi$
 c) $ERP(dBW) = EIRP(dBW) + 2.15dBi$
 d) $ERP(dBW) = EIRP(dBW) * 2.15dBi$

9. Radiation patterns can be represented in terms of _____ types.

- a) Field patterns
 b) Power patterns
 c) Both a and b
 d) Direction pattern


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

10. A 2-D radiation pattern graph contains how many coordinates?

- a) 2 b) 3 c) 5 d) 1

11. Antenna can be polarized in _____ ways.

- a) 3 b) 2 c) 5 d) 1

12. An example of circular polarization is _____.

- a) GPS c) TV signals
b) Radio wave d) Mobile communication signals

13. Which of the following is the frequency of horizontal polarization?

- a) 1 GHz c) 15 GHz
b) 10 GHz d) 20 GHz

14. Magnetic field in EM wave is plotted on _____ axis.

- a) X-axis c) Z-axis
 b) Y-axis d) Either a or b

15. Units of Poynting vector is _____.

- a) W/m² b) W/m c) m/W d) wm

16. If the wavelength is bigger than the length of dipole then it is termed as a type of _____ dipole.

- a) Infinitesimal dipole c) Short dipole
b) Long dipole d) Any of the above

17. What is the range of frequency in a V-shaped antenna that operates?

- a) 33 KHz to 300 GHz c) 30 MHz to 300 GHz
 b) 3 to 30 MHz d) 31 KHz to 300 GHz

18. What is the beam width for a half wave dipole antenna?

- a) 90° c) 50°
b) 180° d) 250°

19. What is the impedance of the folded dipole antenna?

- a) 50Ω c) 300Ω
b) 100Ω d) 20Ω

20. Which of the following antennas produce a vertical radiation pattern?

- a) Dipole antenna c) Marconi antenna
b) Yagi antenna d) Hertz antenna


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR EVEN SEMESTER (2018-2019)

MARK SHEET FOR VALUE ADDED COURSE-ANTENNA DESIGN USING HIGH FREQUENCY

SIMULATION SOFTWARE

S.NO	REGISTER NUMBER	NAME	YEAR & BRANCH	Attendance (A)		VAC –MCQ TEST (B)		OVERALL MARK(100) (50% of A + 50% of B)
				No.of Sessions Attended	Marks (100)	No.of Correct Answer	Marks (100)	
1	912617106001	ABIRAM.I.S	II /ECE	10	100	16	80	90
2	912617106002	ABISHEKA.S	II /ECE	10	100	18	90	95
3	912617106003	ATSHAYA.R	II /ECE	8	80	17	85	83
4	912617106004	BAVADHARANI.A	II /ECE	10	100	14	60	80
5	912617106005	BHUVANESHWARI.B	II /ECE	8	80	13	65	73
6	912617106006	DHIVYA.L	II /ECE	9	90	15	75	83
7	912617106007	GOWSALYA.D	II /ECE	10	100	16	80	90
8	912617106009	INDHUMATHI.S	II /ECE	9	90	15	75	83
9	912617106010	KANIMOZHI.D	II /ECE	9	90	15	75	83
10	912617106011	KAVYA.C	II /ECE	10	100	19	95	98
11	912617106012	KEERTHANA.G	II /ECE	10	100	17	85	93
12	912617106013	MAHESHWARI.G	II /ECE	10	100	14	70	85

S. THILAKAVATHI M.E., Ph.D.,

PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN

Kaikkurichi - 622 303, Pudukkottai



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

13	912617106014	MANOHARI.M	II /ECE	10	100	14	70	85
14	912617106015	MARAGATHALAKSHMI.S	II /ECE	9	90	13	65	78
15	912617106017	SAFRIN NISHA.S	II /ECE	10	100	16	80	90
16	912617106018	SUBASHINI.M	II /ECE	10	100	13	65	83
17	912617106019	SUBASHINI.T	II /ECE	10	100	14	70	85
18	912617106020	VINTHIYA.R	II /ECE	10	100	19	95	98
19	912616106001	ABINAYA.R	III /ECE	10	100	18	90	95
20	912616106002	AGALYA.A	III /ECE	10	100	16	80	90
21	912616106003	ATCHAYA.G	III /ECE	10	100	14	60	80
22	912616106004	DEEPA.N	III /ECE	10	100	18	90	95
23	912616106005	DHARANIYA.A	III /ECE	10	100	14	70	85
24	912616106006	JEEVITHA.U	III /ECE	10	100	14	70	85
25	912616106007	MAHESWARI.V	III /ECE	8	80	15	75	78
26	912616106008	PAZHANIYAMMAL.R	III /ECE	10	100	18	90	95
27	912616106009	PRIYANKA.E	III /ECE	10	100	16	80	90
28	912616106010	ROJA.A	III /ECE	10	100	19	95	98
29	912616106011	SHANMUGAPRIYA.R	III /ECE	10	100	12	60	80
30	912616106012	SHIYAMALA.E	III /ECE	10	100	14	70	82
31	912616106013	SIVA BHARATHI.P	III /ECE	10	100	13	65	83
32	912616106014	SIVARUBINI.S	III /ECE	10	100	19	95	98
33	912616106015	THENMOZHI.A	III /ECE	10	100	13	65	83
34	912616106016	VINCY.A	III /ECE	10	100	14	70	85


Dr. S. THILAGAVATHI M.E., Ph.
PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkotta' Di.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

35	912616106302	SANKAVI M	III /ECE	10	100	14	70	85
36	912615106001	AARTHI .M	IV/ECE	9	90	17	75	83
37	912615106002	ABIRAMI .C	IV/ECE	10	100	18	90	95
38	912615106004	AKILA .S	IV/ECE	10	100	16	80	90
39	912615106005	ARTHI .M	IV/ECE	10	100	15	75	88
40	912615106006	BAVADHARANI .M	IV/ECE	10	100	14	70	85
41	912615106007	DIVYABHARATHI .S	IV/ECE	9	90	16	80	85
42	912615106008	JAGADESWARI .K	IV/ECE	10	100	15	75	88
43	912615106009	MEENAKSHI .R	IV/ECE	10	100	17	85	93
44	912615106010	MEENAL .T	IV/ECE	10	100	15	75	88
45	912615106012	SARGUNAVALLI .C	IV/ECE	10	100	13	65	83
46	912615106013	THENMOZHI .K	IV/ECE	8	80	14	70	75
47	912615106014	VENNILA .K	IV/ECE	10	100	18	90	95
48	912615106301	MANIMEGALAI .S	IV/ECE	9	90	15	75	83
49	912615106701	SARADHA .S	IV/ECE	10	100	18	90	95
50	912615106702	KAVIYA. S	IV/ECE	10	100	14	70	85

VAC Coordinator


Dr. **S.THILAGAVATHI M.E., Ph.D.**,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.


HoD/ ECE
HOD / ECE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303.