J.B. INSTITUTE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

http://www.jbiet.edu.in

		ACADEMIC YEAR	2013-14

FACULTY DETAILS:

Name of the Faculty:: **FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**

COURSE DETAILS

Name Of The Programme:: B.Tech   **Batch:: R 12**
Designation::
Year   II   **Semester   I**
Department:: CSE
Title of The Subject   BASIC ELECTRICAL   **Subject Code   6753025**
ENGINEERING
No of Students   120

	COURSE PLAN	2013-14
		Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**

Designation: **ASSOCIATE PROFESSOR**

Department:: **EEE**

1. TARGET

   a) Percentage Pass   85%

   b) Percentage I class   %

2. COURSE PLAN

(Please write how you intend to cover the contents: i.e., coverage of Units by lectures, guest lectures, design exercises, solving numerical problems, demonstration of models, model preparation, or by assignments, etc.)

3. METHOD OF EVALUATION

   ✓   ☐ Continuous Assessment Examinations (CAE 1, CAE 2)

   ✓   ☐ Assignments / Seminars

   ☐ Mini Projects

   ☐ Quiz

   ☐ Term End Examination

   ☐ Others

4. List out any new topic(s) or any innovation you would like to introduce in teaching the subject in this Semester.

   Regular slip test shall be conducted after each unit.evaluation & discussion of the answer script shall be done without bias.

FATIMA AZRA

Signature of HOD   Signature of Faculty

Date: Date:10.12.2013

FACULTY DETAILS:

Name of the Faculty:: Ms FATIMA AZRA

Designation: ASSOCIATE PROFESSOR

Department:: EEE

Guidelines for Preparing the Course:

Course Description:
BASIC ELECTRICAL ENGINEERING

Course Objectives:
1. To give basic introduction of Electrical Engineering to CSE & CSIT students
2. To create interest in basic Electrical subject.
3. To pursue the students to attend the classes & understand the subject .
4. Create awareness in students that the basic electrical is required in dealing with computers.
5. Creating awareness that this subject is equally important as far as their credits & percentage is concerned.
6. Create interest in students by giving live examples.
7. Solving maximum problems related to the topics covered.
8. Giving material to them which helps them understand the subject easily.
9. Imparting proper subject knowledge to the students.
10. Encouraging them to explore more on subject.

Learning Outcomes:
Students started taking interest in the subject.
Explored the subject through books, internet, etc.
Knowledge on contemporary issues was developed.
"A good **objective** of leadership is to help those who are doing poorly to do well and to help those who are doing well to do even better.
A set definite **objective** must be established if we are to accomplish anything in a big way.

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On completion of this Subject / Course the student shall be able to: KNOW THE BASICS OF ELECTRICAL ENGINEERING & APPEAR FOR BEE EXAM

S.No.	Objectives	Outcomes
1.	Basic introduction of Electrical Engineering to CSE & CSIT students GIVEN	ACHIEVED
2.	Created interest in basic Electrical subject.	ACHIEVED
3.	Pursue the students to attend the classes & understand the subject .	ACHIEVED
4.	Created awareness in students that the basic electrical is required in dealing with computers.	ACHIEVED
5.	Creating awareness that this subject is equally important as far as their credits & percentage is concerned.	ACHIEVED
6.	Create interest in students by giving live examples	ACHIEVED
7.	Solving maximum problems related to the topics covered	ACHIEVED
8.	Giving material to them which helps them understand the subject easily	ACHIEVED
9.	Imparting proper subject knowledge to the students.	ACHIEVED
10.	Encouraging them to explore more on subject.	ACHIEVED

FATIMA AZRA
Signature of Faculty
Date:10.12.2013

Note: For each of the OBJECTIVE indicate the appropriate OUTCOMES to be achieved.
Kindly refer Page 16, to know the illustrative verbs that can be used to state the objectives.

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Department:: **EEE**

The expected outcomes of the Course / Subject are: Is to understand Basics of Electrical Engineering

S.No.	General Categories of Outcomes	Specific Outcomes of the Course
A.	An ability to apply knowledge of mathematics, science, and engineering	IMPROVED ABILITY SEEN IN STUDENTS
B.	An ability to design and conduct experiments, as well as to analyze and interpret data	NA
C.	An ability to design a system, component, or process to meet desired needs within realistic Constraints such as economic, environmental, social, political, ethical, health and safety, Manufacturability and sustainability	NA
D.	An ability to function on multi-disciplinary teams	Functioning on multi-disciplinary teams observed in students
E.	An ability to identify, formulate, and solve engineering problems	Ability to identify, formulate, and solve engineering problems observed in students
F.	An understanding of professional and ethical responsibility	Understanding of professional and ethical responsibility seen in students
G.	An ability to communicate effectively	An ability to communicate effectively developed.
H.	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context seen.
I.	A recognition of the need for, and an ability to engage in life-long learning	A recognition of the need for, and an ability to engage in life-long learning
J.	A knowledge of contemporary issues	A knowledge of contemporary issues seen in students .
K.	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice observed in students, .

Objectives – Outcome Relationship Matrix (Indicate the relationships by ⊠ mark)

Objectives \ Outcomes	A	B	C	D	E	F	G	H	I	J	K
1.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

COURSE SCHEDULE

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: 63 PERIODS

S. No.	Description	Duration (Date)		Total No.
		From	To	of Periods
1.	**Introduction to Electrical Engineering**	15.07.2013	23.07.2013	**07**
2.	**Network Analysis**	24.07.2013	31.07.2013	**08**
3.	**Alternating Quantities**	01.08.2013	08.08.2013	**08**
4.	**Transformers**	12.08.2013	22.08.2013	**08**
5.	**D.C Generators**	23.08.2013	04.09.2013	**08**
6.	**D.C Machines**	1.09.2013	11.09.2013	**08**
7	**A.C Machines**	12.09.2013	22.09.2013	**08**
8	**Basic Instruments**	25.09.2013	**01.10.2013**	**08**

Total No. of Instructional periods available for the course: Hours / Periods : 50 min/period

| | | | | SCHEDULE OF INSTRUCTIONS | 2013-14 |
| | | | | UNIT - I | Regulation: R12 |

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
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Department:: **EEE**
The Schedule for the whole Course / Subject is:: **7 PERIODS**

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome NO.	References (Text Book, Journal…) Page No___ to ___
1.	15.07.2013	1.	Ohm's law.	**ACHEIVED ALL**	**NETWORK THEORY SUDHAKAR & SHYAM MOHAN & D.P.KOTHARI & I.J. NAGRATH - PHI**
2.	15.07.2013	1.	Simple problems	**-DO-**	**-DO-**
3.	17.07.2013	1.	Basic circuit components	**-DO-**	**-DO-**
4.	18.07.2013	1.	Simple problems	**-DO-**	**-DO-**
5.	19.07.2013	1	Kirchhoff's voltage law	**-DO-**	**-DO-**
6.	20.07.2013	1	Simple problems	**-DO-**	**-DO-**
7.	22.07.2013	1	Kirchhoff's current law	**-DO-**	**-DO-**
8.	23.07.2013	1	Simple problems	**-DO-**	**-DO-**

FATIMA AZRA
Signature of Faculty
Date 10.12.2013

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED **BOLDLY**.
3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS	2013-14
	UNIT - II	Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: **8 PERIODS**

SI. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No___ to ___
1.	24.07.2013	1	Basic definitions & Types of elements	1 TO 10	**NETWORK THEORY SUDHAKAR & SHYAM MOHAN & D.P.KOTHARI & I.J. NAGRATH - PHI**
2.	24.07.2013	1	Types of sources & resistive networks	**-DO-**	**-DO-**
3.	25.07.2013	1	Inductive networks & capacitive networks	**-DO-**	**-DO-**
4.	26.07.2013	1	Series & parallel circuits	**-DO-**	**-DO-**
5.	27.07.2013	1	Star delta and delta star transformation.	**-DO-**	**-DO-**
6.	29.07.2013	1	Network theorems- Superposition Theorem	**-DO-**	**-DO-**
7.	30.07.2013	1	Thevenins's, Maximum power transfer	**-DO-**	**-DO-**
8.	31.07.2013	1	Simple problems solved.	**-DO-**	**-DO-**

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Date 10.12.2013

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	SCHEDULE OF INSTRUCTIONS	2013-14
	UNIT - III	Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: **8 PERIODS**

SI. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No___ to ___
1	01.08.2013	1	Principle of ac voltages, waveforms and basic definitions	**1 TO 10**	**NETWORK THEORY SUDHAKAR & SHYAM MOHAN & D.P.KOTHARI & I.J. NAGRATH - PHI**
2	02.08.2013	1	Root mean square and average values of alternating currents and voltage	**-DO**	**-DO-**
3	**03.08.2013**	1	Form factor and Peak factor	**-DO-**	**-DO-**
4	**04.08.2013**	**1**	Phasor Representation of alternating quantities	**-DO-**	**-DO-**
5	**05.08.2013**	1	The J operator and phasor algebra	**-DO-**	**-DO-**
6	**06.08.2013**	1	Analysis of ac circuits with single basic network element	**-DO-**	**-DO-**
7	**07.08.2013**	1	Single phase series circuits	**-DO-**	**-DO-**
8	**08.08.2013**	1	Simple problems solved.	**-DO-**	**-DO-**

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	SCHEDULE OF INSTRUCTIONS	2013-14
	UNIT - IV	Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: 8 PERIODS

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No___ to ___
1.	**12.08.2013**	1	Principles of operation of a Transformer.	**1 TO 10**	**MACHINES BY B L. THERAJA VOLUME II & MACHINES BY BHIMARA**
2.	**13.08.2013**	1	Constructional of an Ideal Transformer	**-DO-**	**-DO-**
3.	**14.08.2013**	1	Constructional of a practical Transformer	**-DO- -**	
4.	**16.08.2013**	1	Transformer Test & Transformer losses	**-DO-**	**-DO-**
5.	**17.08.2013**	1	, Efficiency and Regulation Calculations	**-DO-**	**-DO-**
6.	**20.08.2013**	1	**Phasor Diagram & Equivalent Circuit diagram.**	**-DO-**	**-DO-**
7	**21.08.2013**	1	**Tests on Transformers**	**-DO-**	**-DO-**
8.	**22.08.2013**	1	Related problems Solved.	**-DO-**	**-DO-**

FATIMA AZRA
Signature of Faculty
Date 10.12.2013

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			SCHEDULE OF INSTRUCTIONS	2013-14
			UNIT - V	Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: **8 PERIODS**

SI. No.	DATE	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal…) Page No___ to ___
1.	23.08.2013	**1**	Principle of operation of DC Generator	**1 TO 10**	**MACHINES BY B L. THERAJA VOLUME II & MACHINES BY BHIMARA**
2.	24.08.2013	1	Types of Dc Generator	**-DO-**	**-DO-**
3.	30.08.2013	1	EMF Equation of a DC Generator	**-DO-**	**-DO-**
4.	31.08.2013	1	**Characteristics of DC Generator**	**-DO-**	**-DO-**
5.	01.09.2013	1	**External Characteristics & Internal characteristics of a Dc Generator**	**-DO**	**-DO-**
6.	02.09.2013	**1**	**Power Stages of a DC Generator**	**-DO-**	**-DO-**
7	03.09.2013	1	Related Problems solved	**-DO-**	**-DO-**
8.	04.09.2013	1	Related Problems solved	**-DO-**	**-DO-**

FATIMA AZRA
Signature of Faculty
Date 10.12.2013

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				SCHEDULE OF INSTRUCTIONS	2013-14

SCHEDULE OF INSTRUCTIONS

UNIT - VI

2013-14
Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: **8 PERIODS**

SI. No.	DATE	No. of Periods	Topics / Sub - Topics	OBJECTIVES & OUTCOME NO:	References (Text Book, Journal…) Page No___ to ___
1.	01.09.2013	1	Principle of operation of dc motors.	1 TO 10	**MACHINES BY B L. THERAJA VOLUME II & MACHINES BY BHIMARA**
2.	02.09.2013	1	Types of DC Motor	**-DO-**	**-DO-**
3.	03.09.2013	1	Losses & Torque Equation	**-DO-**	**-DO-**
4.	04.09.2013	1	Losses & Efficiency calculation	**-DO-**	**-DO-**
5.	05.09.2013	1	**Characteristics of a DC Motor**	**-DO-**	**-DO-**
6	06.09.2013	1	**Power Stages of a DC MOTOR**	**-DO-**	**-DO-**
7.	10.09.2013	1	Related problems solved.	**-DO-**	**-DO-**
8.	11.09.2013	1	Related problems solved.	**-DO-**	**-DO-**

FATIMA AZRA
Signature of Faculty
Date 10.12.2013

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MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

	SCHEDULE OF INSTRUCTIONS	2013-14
	UNIT - VII	Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: **8 PERIODS**

Sl. No.	Date	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No___ to ___
1.	12.09.2013	1	Introduction of a Three phase induction motor.		**MACHINES BY B L. THERAJA VOLUME II & MACHINES BY BHIMARA**
2.	13.09.2013	**1**	Principle of operation of an Induction motor	**1 TO 10**	**-DO-**
3.	14.09.2013	1	Slip & rotor frequency calculation	**-DO-**	**-DO-**
4.	15.09.2013	1	Rotor frequency calculation.	**-DO-**	**-DO-**
5.	17.09.2013	1	Torque calculation.	**-DO-**	**-DO-**
6.	19.09.2013	1	**Power Stages of an Induction motor**	**-DO-**	**-DO-**
7.	20.09.2013	1	**Characteristics of an Induction Motor**	**-DO-**	**-DO-**
8.	22.09.2013	1	Related problems solved	**-DO-**	**-DO-**

FATIMA AZRA
Signature of Faculty
Date 10.12.2013

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MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

<table>
<tr><td colspan="2">**SCHEDULE OF INSTRUCTIONS**

UNIT - VIII</td><td>2013-14</td></tr>
<tr><td></td><td></td><td>Regulation: R12</td></tr>
</table>

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: **8 PERIODS**

Sl. No.	DATE	No. of Periods	Topics / Sub - Topics	Objectives & Outcome Nos.	References (Text Book, Journal...) Page No___ to ___
1.	25.09.2013.	1	Introduction & classification of Basic Instruments	**1 TO 10**	**MEASUREMENTS & INSTRUMENTS BY A K SHAWNEY**
2.	26.09.2013	1	Operating principles	**-DO-**	**-DO-**
3.	27.09.2013	1	Essential features of measuring instruments,	**-DO-**	**-DO-**
4.	28.09.2013	1	Moving coil permanent magnet (PMMC) instrument	**-DO-**	**-DO-**
5.	30.09.2013	2	Moving Iron of Ammeters And Voltmeters	**-DO-**	**-DO-**
6.	01.10.2013	2	APPLICATIONS OF THESE INSTRUMENTS	**-DO-**	**-DO-**

FATIMA AZRA
Signature of Faculty
Date 10.12.2013

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	COURSE COMPLETION STATUS	2013-14
		Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**

Subject:: **BASIC ELECTRICAL ENGINEERING** Subject **Code 6753025**

Department:: **EEE**

Actual Date of Completion & Remarks, if any

Units	Remarks	Nos. of Objectives Achieved
Unit 1	**INTRODUCTION TO ELECTRICAL ENGINEERING**	**10 ACHIEVED**
Unit 2	**NETWORK ANALYSIS**	**10 ACHIEVED**
Unit 3	**ALTERNATING QUANTITY**	**10 ACHIEVED**
Unit 4	**TRANSFORMERS**	**10 ACHIEVED**
Unit 5	**DC GENERATORS**	**10 ACHIEVED**
Unit 6	**DC MOTORS**	**10 ACHIEVED**
Unit 7	**AC MACHINES**	**10 ACHIEVED**
Unit 8	**BASIC INSTRUMENTS**	**10 ACHIEVED**

Signature of Dean of School
Date:

FATIMA AZRA
Signature of Faculty
Date:10.12.2013

NOTE: AFTER THE COMPLETION OF EACH UNIT MENTION THE NUMBER OF OBJECTIVES ACHIEVED.

	2013-14
TUTORIAL SHEETS - I	Regulation: R12

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**
The Schedule for the whole Course / Subject is:: **8 PERIODS**

Date:

This Tutorial corresponds to Unit Nos.**1 &2**   Time:

Q1.What is Ohm's Law. Give a brief description with a circuit diagram & explain the same with an example.

Q2.Define KVL & KCL .Give an example for each with a neat diagram.

Q3.Define Resistor, capacitor & an Inductor. Give the power dissipated in each when connected to an AC source.

Q4.Define lumped parameters & distributed parameters.

Q5.Solve the problem no. 1.17 on page 37 from Network Theory by Sudhakar & Shyam Mohan

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the objectives to which these questions / Problems are related.

Signature of Dean of School

Date:

FATIMA AZRA
 Signature of Faculty
Date:

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
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Department:: **EEE**
The Schedule for the whole Course / Subject is:: **8 PERIODS**

Date:

This Tutorial corresponds to Unit Nos**. 3 & 4**   Time:

Q1.Derive the relationship between source & line quantities of voltage & current for a balanced star connected loads.

Q2.Find Thevinin's equivalent circuit at terminal AB for the network shown.

. The problem no. 6 on page 767 from Network Theory by Sudhakar & Shyam Mohan

Q3.A symmetrical 400V three phase supply has a star connected load with z r = 20 ,Z y = j 5   & Z b = j 5   Determine the line current .The phase sequence is RYB

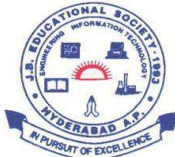Q4.Define Maximum Power Transfer Theorem. Justify your answer with an example.

Q5.What is Superposition Theorem & reciprocity theorem. Give an example in each case.

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the objectives to which these questions / Problems are related.

FATIMA AZRA
Signature of Dean of School   **Signature of Faculty**
Date: **Date:**

FACULTY DETAILS:

Name of the Faculty:: **Ms FATIMA AZRA**
Designation: **ASSOCIATE PROFESSOR**
Department:: **EEE**

Date:

This Tutorial corresponds to Unit Nos**. 5 & 6**   Time:

Q1.Define form factor, peak factor & root mean square for an alternating voltage.

Q2.What is reactive & active power. Show the relationship between apparent power ,active & reactive power.

Q3.Solve problem No.6.8 page 222 of Network Theory by Sudhakar & shyam Mohan.

Q4.Define the principle of a transformer .Show in detail the basic phasor diagram of an ideal transformer

Q5.What is the construction of an Induction Motor, Show a detailed Power flow daigram for the same.

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the objectives to which these questions / Problems are related.

                                                                          FATIMA AZRA
Signature of Dean of School   **Signature of Faculty**
Date: **Date: 109.12.2013**

These verbs can also be used while framing questions for Continuous Assessment Examinations as well as for End – Semester (final) Examinations.

ILLUSTRATIVE VERBS FOR STATING **GENERAL OBJECTIVES**

Know Comprehend	Understand Apply	Analyze Design	Generate Evaluate

ILLUSTRATIVE VERBS FOR STATING **SPECIFIC OBJECTIVES:**

A. Cognitive Domain

1	2	3	4	5	6
Knowledge	**Comprehension Understanding**	**Application** of knowledge & comprehension	**Analysis** of whole w.r.t. its constituents	**Synthesis** combination of ideas/constituents	**Evaluation** judgement
Define	Convert	Change	Breakdown	Categorize	Appraise
Identify	Defend	Compute	Differentiate	Combine	Compare
Label	Describe (a	Demonstrate	Discriminate	Compile	Conclude
List	procedure)	Deduce	Distinguish	Compose	Contrast
Match	Distinguish	Manipulate	Separate	Create	Criticize
Reproduce	Estimate	Modify	Subdivide	Devise	Justify
Select	Explain why/how	Predict		Design	Interpret
State	Extend	Prepare		Generate	Support
	Generalize	Relate		Organize	
	Give examples	Show		Plan	
	Illustrate	Solve		Rearrange	
	Infer			Reconstruct	
	Summarize			Reorganize	
				Revise	

B. Affective Domain		**C. Psychomotor Domain (skill development)**				
Adhere	Resolve	Bend	Dissect	Insert	Perform	Straighten
Assist	Select	Calibrate	Draw	Keep	Prepare	Strengthen
Attend	Serve	Compress	Extend	Elongate	Remove	Time
Change	Share	Conduct	Feed	Limit	Replace	Transfer
Develop		Connect	File	Manipulate	Report	Type
Help		Convert	Grow	Move preciselyReset		Weigh
Influence		Decrease	Handle	Operate	Run	
Initiate		Demonstrate	Increase	Paint	Set	

	LESSON PLAN **Unit-1**	2013-14
		Regulation: R12

Name of the Faculty : **Ms FATIMA AZRA**
                   ASSOCIATE PROFESSOR
                   EEE

Subject Code   6753025

INSTRUCTIONAL OBJECTIVES: **To make the student understand the importance of Basic Electrical Engineering & its applications in computer field**.

Session No	Topics to be covered	Time	Ref	Teaching Method
1	Ohm's law taught to students giving examples.	1 period	Text Book on NT & Class notes.	Explained on Class room board
2	Basic circuit components like resistor ,capacitor & inductor Explained.	1 period	-do-	-do-
3	Kirchhoff's voltage laws & Kirchhoff's current law explained in detail.	1 period	-do-	-do-
4	Related problems solved .	4 periods	-do-	-do-

On completion of this lesson the student shall be able to (Outcomes)
1. Had understood the importance of Basic Electrical Engineering.
 2. Had understood the application of solution to mesh & nodal equations.

3. Had a clear view of how & why Electrical Engineering is integral part of Computer Engineering

4. Solve problems related to Ohm's law.

Assignment / Questions   **Deduce the relation ship of voltage ,current & power for each of the Basic Elements.**

FATIMA AZRA
Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

<table>
<tr><td rowspan="2"></td><td rowspan="2" align="center">**LESSON PLAN**
Unit-II</td><td align="center">2013-14</td></tr>
<tr><td align="center">Regulation: R12</td></tr>
</table>

NAME OF THE FACULTY : FATIMA AZRA
DESIGNATION   : ASSOCIATE PROFESSOR
SUBJECT : NETWORK THEORY   **SUBJECT CODE :6753025**
 UNIT   : 2

INSTRUCTIONAL OBJECTIVES :To impart basic knowledge in BASIC ELEMENTS.

Session No	Topics to be covered	Time	Ref	Teaching Method
1	**Basic definitions of all types of elements given to students**	**1 Period**	**Class Notes & Text Book on NT**	Classroom Board
2	**Types of sources: Active & Passive taught to students.**	**-Do-**	**-Do-**	-Do-
3	**Resistive networks, inductive networks & capacitive Networks explained in detail.**	**-Do-**	**-Do-**	-Do-
4	**Series & parallel circuits & star delta and delta star transformation taught**	**-Do-**	**-Do-**	-Do-
5	**Network theorems- Superposition & The venin's taught .**	**-Do-**	**-Do-**	-Do-
6	**Maximum power transfer theorems and simple problems.**	**-Do-**	**-Do-**	-Do-
7	**Related problems solved**	**-Do-**	**-Do-**	-Do-
8.	**Related problems solved**	**-Do-**	**-Do-**	-Do-

On completion of this lesson the student shall be able to

1. Had understood the importance of Basic Elements in Electrical Engineering.
 2. Had understood the solution by mesh & nodal equations.

3.Theorems & their applications had helped students solve complicated problems in a simple way.

4. Solve problems related to all theorems mentioned above.

Assignment / Questions : Define The venin's , Norton's theorem   & give one example in each case

Define Maximum Power Transfer Theorem & Superposition Theorem & give one example in each case.

FATIMA AZRA
Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

	LESSON PLAN Unit-III	2013-14
		Regulation: R12

NAME OF THE FACULTY : FATIMA AZRA
DESIGNATION   : ASSOCIATE PROFESSOR
SUBJECT   : NETWORK THEORY
UNIT   : 3

SUBJECT CODE :6753025

INSTRUCTIONAL OBJECTIVES :To impart basic knowledge ELECTRICAL BASICS.

Session No	Topics to be covered	Time	Ref	Teaching Method
1.	Principle of ac voltages, waveforms and basic definitions taught to students.	1 Period	Class Notes & Text Book on NT	Classroom Board
2.	Root mean square and average values of alternating currents and voltage.	-Do-	-Do-	-Do-
3.	Form factor and peak factor, phase representation of alternating quantities taught to students	-Do-	-Do-	-Do-
4.	The J operator and phase algebra taught to students.	-Do-	-Do-	-Do-
5.	Analysis of ac circuits with single basic network element taught.	-Do-	-Do-	-Do-
6.	Single phase series & parallel circuits taught to students.	-Do-	-Do-	-Do-
7.	Related problems solved.	-Do-	-Do-	-Do-
8.	Related problems solved.	-Do-	-Do-	-Do-

On completion of this lesson the student shall be able to(Outcomes)

1. Had understood the importance of Basic Elements in Electrical Engineering.

2. Had understood the Principle of AC Voltage its wave form .

3. Basic factors are taught & their applications had helped students solve complicated problems in a simple way.

4. Solve problems related to Series & parallel circuits.

	ASSIGNMENT Unit-III	2013-14
		Regulation: R12

**Assignment / Questions 1.Define form factor ,root mean square, average value & peak factor for a standard
voltage & current.
2.Define J operator,& its application to Current field.**

3.
3. Expalin a simple series & parallel circuit with alive example.

FATIMA AZRA
Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

NAME OF THE FACULTY : FATIMA AZRA
DESIGNATION   : ASSOCIATE PROFESSOR
SUBJECT   : NETWORK   THEORY   **SUBJECT CODE :6753025**
 UNIT   : 4

INSTRUCTIONAL OBJECTIVES :To impart basic knowledge in TRANSFORMERS

Session No	Topics to be covered	Time	Ref	Teaching Method
1.	Transformers: Principles of operation taught in detail.	1 Period	Class Notes & Text Book on Machines	Classroom Board
2.	Constructional Details of an Ideal Transformer given in detail.	-Do-	-Do-	-Do-
3.	Constructional Details of a Practical Transformer given in detail.	-Do-	-Do-	-Do-
4.	Losses & Transformer Test studied in detail.	-Do-	-Do-	-Do-
5.	Efficiency and Regulation Calculations taught.	-Do-	-Do-	-Do-
6.	Phase diagram of an ideal transformer taught.	-Do-	-Do-	-Do-
7.	Related problems solved.	-Do-	-Do-	-Do-
8.	Related problems solved.	-Do-	-Do-	-Do-

On completion of this lesson the student shall be able to (Outcomes)

1. Had understood the importance of Transformers in Electrical Engineering.

2. Had understood the Principle of working of an ideal transformer & practical Transformer.

3. Basic Transformer connections are taught & its losses had helped students solve complicated problems in a simple way.

4. Solve problems related to Transformers..

	ASSIGNMENT Unit-IV	2013-14
		Regulation: R12

Assignment / Questions 1. Give the working principle of a Transformer & explain its losses in detail.

2.What is the difference between an ideal transformer & a practical transformer.

3. What are the different tests that can be performed on a transformer.

4. How are the test helpful in calculating the efficiency of a

Transformer.

FATIMA AZRA
Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

NAME OF THE FACULTY : FATIMA AZRA
DESIGNATION   : ASSOCIATE PROFESSOR
SUBJECT : NETWORK THEORY   **SUBJECT CODE :6753025**
 UNIT   : 5

INSTRUCTIONAL OBJECTIVES :To impart basic knowledge in DC GENERATORS.

Session No	Topics to be covered	Time	Ref	Teaching Method
1.	Principle of operation of DC Generator	1 Period	Class Notes & Text Book on Machines	Classroom Board
2.	Types of Dc Generator	-Do-	-Do-	-Do-
3.	EMF Equation of a DC Generator	-Do-	-Do-	-Do-
4.	**Characteristics of DC Generator**	-Do-	-Do-	-Do-
5.	**External Characteristics & Internal characteristics of a Dc Generator**	-Do-	-Do-	-Do-
6.	**Power Stages of a DC Generator**	-Do-	-Do-	-Do-
7.	Related Problems solved	-Do-	-Do-	-Do-
8.	Related Problems solved	-Do-	-Do-	-Do-

On completion of this lesson the student shall be able to (Outcomes)

1. Had understood the importance of DC Generator in Electrical Engineering.

2. Had understood the Principle of working of a Generator.

3. Basic Shunt, Series & Compound Generator connections are taught & its losses had helped students solve complicated problems in a simple way.

4. Solve problems related to DC Generator.

Assignment / Questions 1. Give the basic Principle of operation of a DC Generator. & its Construction.

2. What are the different types of Generators. Explain the difference in them.

3. What are the different tests that can be performed on a Dc Generator & what are their

inferences.

FATIMA AZRA
Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

	LESSON PLAN Unit-VI	2013-14
		Regulation: R12

NAME OF THE FACULTY : FATIMA AZRA
DESIGNATION   : ASSOCIATE PROFESSOR
SUBJECT : NETWORK THEORY   **SUBJECT CODE :6753025**
** UNIT   : 6**

INSTRUCTIONAL OBJECTIVES :To impart basic knowledge in DC MOTORS.

Session No	Topics to be covered	Time	Ref	Teaching Method
1	**Principle of operation of dc motors.**	1 Period	Class Notes & Text Book on Machines	Classroom Board
2	Types of DC Motor	-Do-	-Do-	-Do-
3	Losses & Torque Equation	-Do-	-Do-	-Do-
4	Losses & Efficiency calculation	-Do-	-Do-	-Do-
5	**Characteristics of a DC Motor**	-Do-	-Do-	-Do-
6	**Power Stages of a DC MOTOR**	-Do-	-Do-	-Do-
7	Related problems solved.	-Do-	-Do-	-Do-
8	Related problems solved.	-Do-	-Do-	-Do-

On completion of this lesson the student shall be able to (Outcomes)

1. Had understood the importance of DC Motor in Electrical Engineering.

2. Had understood the Principle of working of a Motor.

3. Basic Shunt, Series & Compound Motor connections are taught & its losses had helped students solve complicated problems in a simple way.

4. Solve problems related to DC Motor.

	ASSIGNMENT Unit-VI	2013-14
		Regulation: R12

Assignment / Questions   **1. Give the basic Principle of operation of a DCMotor. & its Construction.**

       2. What are the different types of Motor. Explain the difference in them.

       3. What are the different tests that can be performed on a Dc Motor & what are their

         inferences.

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FATIMA AZRA
Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

<table>
<tr><td rowspan="2"></td><td rowspan="2">LESSON PLAN
Unit-VII</td><td>2013-14</td></tr>
<tr><td>Regulation: R12</td></tr>
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NAME OF THE FACULTY : FATIMA AZRA
DESIGNATION   : ASSOCIATE PROFESSOR
SUBJECT : NETWORK THEORY   **SUBJECT CODE :6753025**
 UNIT   : 7

INSTRUCTIONAL OBJECTIVES :To impart basic knowledge in Induction Motors.

Session No	Topics to be covered	Time	Ref	Teaching Method
1	Introduction of a Three phase induction motor.	1 Period	Class Notes & Text Book on Machines	Classroom Board
2	Principle of operation of an Induction motor	-Do-	-Do-	-Do-
3	Slip & rotor frequency calculation	-Do-	-Do-	-Do-
4	Rotor frequency calculation.	-Do-	-Do-	-Do-
5	Torque calculation.	-Do-	-Do-	-Do-
6	**Power Stages of an Induction motor**	-Do-	-Do-	-Do-
7	**Characteristics of an Induction Motor**	-Do-	-Do-	-Do-
8	Related problems solved	-Do-	-Do-	-Do-

On completion of this lesson the student shall be able to

1. Had understood the importance of Induction Motor in Electrical Engineering.

2. Had understood the Principle of working of a Induction Motor.

3. Induction Motor connections are taught & its losses had helped students solve complicated problems in a simple way.

4. Solve problems related to Induction Motor.

	ASSIGNMENT Unit-VII	2013-14
		Regulation: R1

Assignment / Questions . 1. Give the basic Principle of operation of a Induction Motor. & its Construction.

2. What is the basic application of an Induction Motor.

3.What are the different tests that can be performed on a Induction Motor .

FATIMA AZRA
Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.

		2013-14
	LESSON PLAN **Unit-VIII**	Regulation: R12

Name of the Faculty: **Ms FATIMA AZRA**

ASSOCIATE PROFESSOR

Subject   **NETWORK THEORY**   Subject Code   6753025

Unit   **7**

INSTRUCTIONAL OBJECTIVES: **To impart basic knowledge on instruments**

Session No	Topics to be covered	Time	Ref	Teaching Method
1	Introduction & classification of Basic Instruments	1 Period	Class Notes & Text Book on Machines	Classroom Board
1	Operating principles	-Do-	-Do-	-Do-
1	Essential features of measuring instruments,	-Do-	-Do-	-Do-
1	Moving coil permanent magnet (PMMC) instrument	-Do-	-Do-	-Do-
2	Moving Iron of Ammeters And Voltmeters	-Do-	-Do-	-Do-
2	APPLICATIONS OF THESE INSTRUMENTS	-Do-	-Do-	-Do-

On completion of this lesson the student shall be able to

1. Had understood the importance of Instruments in Electrical Engineering.

2. Had understood the Principle of working of different Instruments.

3. Solve problems related to different Instruments..

Assignment / Questions . **1. Give the basic Principle of operation of different Instruments.**

2. What is the basic application of a Voltmeter , Ammeter & Tachometer in Electrical Engineering   .

3.What are the different tests that can be performed on a these instruments.

FATIMA AZRA
Signature of Faculty

Note: Mention for each question the relevant objectives and outcomes.