

## LESSON PLAN

CAMPUS:       CENTURION      

Lecture's Name	Subject	Topic	Date From	Date To
KOEN	ELECTRO N4	Principles of Electricity	5/4/2020	5/8/2020
Week Number:1	Learning Objective / Learning Outcome To understand serie and parallel theory and calculations coils temp coeff capacitors		Teaching Resources/Aids textbook white board	Length of period 1hour15 min

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably,Discussions,Practical,etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
Monday	After this lesson the learner must be able to do the calculations and study the theory	Serie and parallel theory and calculations	Do class work and home work in exercises	Demonstration,Discussions,	Yes	
Tuesday	After this lesson the learner must be able to do the calculations and	Serie and parallel theory and calculations	Do class work and home work in exercises	Demonstration,Discussions,	Yes	

	<b>study the theory</b>					
<b>Wednesday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	<b>coils temp coeff</b>	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstration,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	<b>capacitors</b>	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	<b>Revision</b>	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	

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**Lecturer Signature**

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## LESSON PLAN

CAMPUS:     CENTURION    

Lecture's Name	Subject	Topic	Date From	Date To
KOEN	ELECTRO N4	AC THEORY	5/11/2020	5/15/2020
Week Number:2	<b>Learning Objective /Learning Outcome</b> <b>To understand</b> AC Circuit theory: The following are only to be applies to single phase systems: Generating an emf. Ohm's law (and units); inductance; capacitance; reactance; impedance; Lenz's law; simple phasors (vectors); leading and lagging power factors; simple calculations with RLC circuits; resonant frequency; introduction to types of waveforms; peak values of sine wave, rms value of sin wave, average value of sine wave, power in sine waves. <b>theory and calculations</b>		Teaching Resources/Aids textbook white board	Length of period 1hour15 min

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably,Discussions,Practical,etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
Monday	<b>After this lesson the learner must be able to do the calculations and</b>	Single phase systems: Generating an emf. Ohm's law (and units);	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	Yes	

	<b>study the theory</b>	inductance;capacitance ; reactance; impedance				
<b>Tuesday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	Lenz's law; simple phasors (vectors); leading and lagging power factor	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	
<b>Wednesday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	simple calculations with RLC circuits; resonant frequency; introduction to types of waveforms	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	peak values of sine wave, rms value of sin wave, average value of sine wave	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	Power in sine waves.	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	

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## LESSON PLAN

CAMPUS: CENTURION

Lecture's Name	Subject	Topic	Date From	Date To
KOEN	ELECTRO N4	INDUCTION MACHINES	5/18/2020	5/22/2020
Week Number:3	<b>Learning Objective / Learning Outcome</b> <b>To understand</b> Transformers: Principle of operation of single phase transformer. Construction of single phase transformers. Simple calculations involving: currents, volts), turns, flux, losses and. efficiency; elementary phasors; designing a simple single phase transformer <b>theory and calculations</b>		Teaching Resources/Aids <b>textbook white board</b>	Length of period <b>1hour15 min</b>

### ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably,Discussions,Practical,etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
Monday	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	Transformers: Principle of operation of single phase transformer	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	Yes	
Tuesday	<b>After this lesson the learner must be able to do the calculations and</b>	Construction of single phase transformers	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	Yes	

	<b>study the theory</b>					
<b>Wednesday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	. Simple calculations involving: currents, volts), turns, flux, losses	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	efficiency; elementary phasors	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	designing a simple single phase transformer	<b>Do class work and home work in exercises</b>	Demonstration,Discussions,	<b>Yes</b>	

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## LESSON PLAN

CAMPUS:     CENTURION    

Lecture's Name	Subject	Topic	Date From	Date To
KOEN	ELECTRO N4	AC MACHINES	5/25/2020	5/29/2020
Week Number:4	<b>Learning Objective /Learning Outcome</b> <b>To understand</b> AC Machines: Single and three phase motors (use, construction and operation. Single phase alternator (use, construction and operations. Induction motor, reverse phase and single phase faults. Starting and reversing circuits. Standard ratings. Temperature rise calculations and types/clauses of insulation <b>theory and calculations</b>		Teaching Resources/Aids <b>textbook white board</b>	Length of period <b>1hour15 min</b>

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably, Discussions, Practical, etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
Monday	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	AC Machines: Single and three phase motors (use, construction and operation	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	Yes	

<b>Tuesday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	Single phase alternator (use, construction and operations).	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Wednesday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	Induction motor, reverse phase and single phase faults	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	Starting and reversing circuits. Standard ratings	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to do the calculations and study the theory</b>	Temperature rise calculations and types/classes of insulation	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

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## LESSON PLAN

CAMPUS:     CENTURION    

Lecture's Name	Subject	Topic	Date From	Date To
<b>KOEN</b>	<b>ELECTRO N4</b>	Generation.and supply	<b>6/1/2020</b>	<b>6/5/2020</b>
<b>Week Number:5</b>	<b>Learning Objective /Learning Outcome</b> <b>To understand</b> Generation.and supply of AC power: Generation of supply. Sources of energy. Network diagram (supplier to consumer). <b>theory and calculations</b>		<b>Teaching Resources/Aids textbook white board</b>	<b>Length of period 1hour15 min</b>

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably,Discussions,Practical,etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
<b>Monday</b>	<b>After this lesson the learner must be able to explain the of</b> Generation.and supply	Generation.and supply of AC power	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Tuesday</b>	<b>After this lesson the learner must be able to explain the of</b>	Generation of supply	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

	Generation.and supply					
<b>Wednesday</b>	<b>After this lesson the learner must be able to explain the of</b> Generation.and supply	Sources of energy	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to explain the of</b> Generation.and supply	Network diagram (supplier to consumer).	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to explain the of</b> Generation.and supply	<b>REVISION</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

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## LESSON PLAN

CAMPUS:     CENTURION    

Lecture's Name	Subject	Topic	Date From	Date To
KOEN	ELECTRO N4	Measuring instruments	6/8/2020	6/12/2020
Week Number:6	<b>Learning Objective /Learning Outcome</b> <b>To understand</b> Measuring instruments: Moving coil and moving iron movement Ammeter, voltmeter and ohm—meter; range changing Wheatstone bridge and its practical applications <b>theory and calculations</b>		Teaching Resources/Aids textbook white board	Length of period 1hour15 min

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably,Discussions,Practical,etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
Monday	After this lesson the learner must be able to explain the of	Measuring instruments	Do class work and home work in exercises	Demonstration, Discussions,	Yes	
Tuesday	After this lesson the learner must be able to explain the of	: Moving coil and moving iron movement Ammeter, voltmeter and ohm—mete	Do class work and home work in exercises	Demonstration, Discussions,	Yes	

<b>Wednesday</b>	<b>After this lesson the learner must be able to explain the of</b>	range changing	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to explain the of</b>	Wheatstone bridge and its practical applications	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to explain the of</b>	<b>REVISION</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

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## LESSON PLAN

CAMPUS:     CENTURION    

Lecture's Name	Subject	Topic	Date From	Date To
KOEN	ELECTRO N4	REVISION	6/15/2020	6/19/2020
Week Number:7	Learning Objective /Learning Outcome To understand theory and calculations		Teaching Resources/Aids textbook white board	Length of period 1hour15 min

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably, Discussions, Practical, etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
Monday	After this lesson the learner must be able to explain the of Switchgear and protective devices	Switchgear and protective devices:	Do class work and home work in exercises	Demonstration, Discussions,	Yes	
Tuesday	After this lesson the learner must be able to explain the of Switchgear and protective devices	Electromagnetic control devices (contactors); fuses.	Do class work and home work in exercises	Demonstration, Discussions,	Yes	

<b>Wednesday</b>	<b>After this lesson the learner must be able to explain the of</b> Switchgear and protective devices	Solid state control:	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to explain the of</b> Decimal — binary number systems	Decimal — binary number systems. Logic gates and equivalent circuits. Truth table. Basic logic circuits.	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to explain the of</b> Rectification	Rectification: Single phase and three.phase operation. Single phase filter circuits and phase control	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

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## LESSON PLAN

CAMPUS:     CENTURION    

Lecture's Name	Subject	Topic	Date From	Date To
<b>KOEN</b>	<b>ELECTRO N4</b>	<b>Switchgear and protective devices</b>	<b>6/22/2020</b>	<b>6/26/2020</b>
<b>Week Number:8</b>	<b>Learning Objective /Learning Outcome</b> <b>To understand theory and calculations</b>		<b>Teaching Resources/Aids</b> <b>textbook white board</b>	<b>Length of period</b> <b>1hour15 min</b>

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably,Discussions,Practical,etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
<b>Monday</b>	<b>After this lesson the learner must be able to explain the of theory and calculations</b>	<b>theory and calculations</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Tuesday</b>	<b>After this lesson the learner must be able to explain the of theory and calculations</b>	<b>theory and calculations</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

<b>Wednesday</b>	<b>After this lesson the learner must be able to explain the of theory and calculations</b>	<b>theory and calculations</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to explain the of theory and calculations</b>	<b>theory and calculations.</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to explain the of theory and calculations</b>	<b>theory and calculations</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

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## LESSON PLAN

CAMPUS:       CENTURION      

Lecture's Name	Subject	Topic	Date From	Date To
KOEN	ELECTRO N4	REVISION	6/29/2020	7/3/2020
Week Number:9	Learning Objective / Learning Outcome To understand theory and calculations		Teaching Resources/Aids textbook white board	Length of period 1hour15 min

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably, Discussions, Practical, etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
Monday	After this lesson the learner must be able to explain the of theory and calculations s	theory and calculations	Do class work and home work in exercises	Demonstration, Discussions,	Yes	
Tuesday	After this lesson the learner must be able to explain the of Switchgear and protective devices	Electromagnetic control devices (contactors); fuses.	Do class work and home work in exercises	Demonstration, Discussions,	Yes	

<b>Wednesday</b>	<b>After this lesson the learner must be able to explain the of</b> Switchgear and protective devices	Solid state control:	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to explain the of theory and calculations</b>	<b>theory and calculations</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to explain the of</b> Switchgear and protective devices	Rectification: Single phase and three.phase operation. Single phase filter circuits and phase control	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

## LESSON PLAN

CAMPUS:     CENTURION    

Lecture's Name	Subject	Topic	Date From	Date To
KOEN	ELECTRO N4	REVISION	7/6/2020	7/10/2020
Week Number:10	Learning Objective / Learning Outcome To understand theory and calculations		Teaching Resources/Aids textbook white board	Length of period 1hour15 min

## ACTIVITIES

Week Days	Objectives	Activities		Teaching Methodology (Demonstrably, Discussions, Practical, etc)	Lesson Completed	
		What will the lecturer do?	What will students do?		Yes	No
Monday	After this lesson the learner must be able to explain the of theory and calculation	theory and calculation	Do class work and home work in exercises	Demonstration, Discussions,	Yes	
Tuesday	After this lesson the	theory and	Do class work and home	Demonstration,	Yes	

	<b>learner must be able to explain the of Switchgear and protective devices</b>	<b>calculation</b>	<b>work in exercises</b>	Discussions,		
<b>Wednesday</b>	<b>After this lesson the learner must be able to explain the of theory and calculation</b>	<b>theory and calculation</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Week Days</b>	<b>Objectives</b>	<b>Activities</b>		<b>Teaching Methodology</b> (Demonstrably,Discussions,Practical,etc)	<b>Lesson Completed</b>	
		<b>What will the lecturer do?</b>	<b>What will students do?</b>		<b>Yes</b>	<b>No</b>
<b>Thursday</b>	<b>After this lesson the learner must be able to explain the of theory and calculation</b>	<b>theory and calculation</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	
<b>Friday</b>	<b>After this lesson the learner must be able to explain the of theory and calculation</b>	<b>theory and calculation</b>	<b>Do class work and home work in exercises</b>	Demonstration, Discussions,	<b>Yes</b>	

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