NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE& affiliated to SCTE&VT, Odisha)

LESSON PLAN

SUBJECT: EEEPC201(ELECTRICAL CIRCUITS & NETWORKS)

Name Of The Faculty :- Er. Chiranjib Sen
Branch :- Electrical & Electronics Engineering **Semester :-** 3rd
Academic Year : 2025-26 **Examination :-** 2025 (w)

CHAPTER WISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the Syllabus	No. of periods actually needed
1	Network Theorems in DC Circuits	5	7
2	A. C. Fundamentals & Sinusoidal Steady State Analysis	8	11
3	Resonance	8	12
4	Passive Filter	8	10
5	Laplace transform and its applications	7	11
6	Two Port Network	9	9
Total Period:		45	60

10/7/25

Sign of Faculty

10/07/25

Sign of H.O.D.

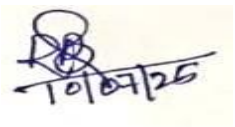
Name of the programme: Diploma in Electrical & Elecytronics Engineering	Semester: 3rd	**Name of the Teaching Faculty:** Er. Chiranjib Sen	
		Academic Year : 2025-26 **Examination :** 2025 (W)	
Course Code: EEEPC201 TH-1	**Course Year:** Second Year	**No. of Classes Alloted Per Week :**	4
		Planned Classes Required to Complete the Course	60

Week	Class Day	Topics to be Covered
1st	1st	1.1 Node & Mesh Analysis of Electrical Circuits with simple problem
	2nd	1.1 Node & Mesh Analysis of Electrical Circuits with simple problem
	3rd	1.2 Thevenin's Theorem, Norton's Theorem, Maximum Power transfer Theorem, Superposition Theorem, Millman Theorem, Reciprocity Theorem-Statement, Explanation & applications
	4th	1.2 Thevenin's Theorem, Norton's Theorem, Maximum Power transfer Theorem, Superposition Theorem, Millman Theorem, Reciprocity Theorem-Statement, Explanation & applications
2nd	1st	1.2 Thevenin's Theorem, Norton's Theorem, Maximum Power transfer Theorem, Superposition Theorem, Millman Theorem, Reciprocity Theorem-Statement, Explanation & applications
	2nd	1.3 Simple numerical problems above.
	3rd	1.3 Simple numerical problems above.
	4th	2.1 Definitions & explanation of Active & Passive elements.
3rd	1st	2.2 Concept of complex impedance, Rectangular & polar form. Simple problems.
	2nd	2.2 Concept of complex impedance, Rectangular & polar form. Simple problems.
	3rd	2.2 Concept of complex impedance, Rectangular & polar form. Simple problems.
	4th	2.3 Idea on Apparent, real, and active power
4th	1st	2.3 Idea on Apparent, real, and active power
	2nd	2.4 Sinusoidal response of a series R-L, R-C, R-L-C circuit
	3rd	2.4 Sinusoidal response of a series R-L, R-C, R-L-C circuit
	4th	2.5 Sinusoidal response of a parallel R-L, R-C, R-L-C circuit
5th	1st	2.5 Sinusoidal response of a parallel R-L, R-C, R-L-C circuit
	2nd	Numericals solved on Concept of complex impedance, Rectangular & polar form

Week	Class Day	Topics to be Covered
5th	3rd	3.1 Introduction to resonance circuits & Resonance tuned circuit,
	4th	3.1 Introduction to resonance circuits & Resonance tuned circuit,
6th	1st	3.2 Series & Parallel resonance
	2nd	3.2 Series & Parallel resonance
	3rd	3.3 Expression for seriesresonance, Condition for Resonance, Frequency of Resonance, Impedance, Current, Voltage, power, Q Factor and Power Factor of Resonance, Bandwidth in term of Q. Voltage Magnification,
	4th	3.3 Expression for seriesresonance, Condition for Resonance, Frequency of Resonance, Impedance, Current, Voltage, power, Q Factor and Power Factor of Resonance, Bandwidth in term of Q. Voltage Magnification,
7th	1st	3.4 Parallel Resonance Condition for Resonance, Frequency of Resonance, Impedance, Current, Voltage, power, Q Factor and Power Factor of Resonance, Bandwidth of resonant circuit / Tank circuit Current
	2nd	3.4 Parallel Resonance Condition for Resonance, Frequency of Resonance, Impedance, Current, Voltage, power, Q Factor and Power Factor of Resonance, Bandwidth of resonant circuit / Tank circuit Current
	3rd	3.5 Comparisons of Series & Parallel resonance & applications
	4th	3.5 Comparisons of Series & Parallel resonance & applications
8th	1st	3.6 Simple problems on above Circuits
	2nd	3.6 Simple problems on above Circuits
	3rd	4.1 Idea of Passive & Active Filter, Their relative advantages and disadvantages
	4th	4.1 Idea of Passive & Active Filter, Their relative advantages and disadvantages
9th	1st	4.2 Idea of Fourier Series & frequency spectrum. (concept only)
	2nd	4.2 Idea of Fourier Series & frequency spectrum. (concept only)
	3rd	4.3 Construction, Principle of operation, Characteristics of Low pass, High pass, Band pass & Band stop filter
	4th	4.3 Construction, Principle of operation, Characteristics of Low pass, High pass, Band pass & Band stop filter
10th	1st	4.4 Design of Low pass filter & High pass filter.
	2nd	4.4 Design of Low pass filter & High pass filter.
	3rd	4.5 Numerical problems on the above
	4th	4.5 Numerical problems on the above
11th	1st	4.5 Numerical problems on the above
	2nd	4.6 Composite filter (concept only).

Week	Class Day	Topics to be Covered
11th	3rd	5.1 Definition & properties of Laplace Transform (LT)
	4th	5.1 Definition & properties of Laplace Transform (LT)
12th	1st	5.2 LT of unit step, impulse, ramp, exponential, sine, cosine, pulse, impulse, Dirac delta function
	2nd	5.2 LT of unit step, impulse, ramp, exponential, sine, cosine, pulse, impulse, Dirac delta function
	3rd	5.3 Explanation of Laplace Transform theorems like Differential, integral, Time displacement, initial value & final value
	4th	5.3 Explanation of Laplace Transform theorems like Differential, integral, Time displacement, initial value & final value
13th	1st	5.4 Inverse Laplace Transformation. Simple problem
	2nd	5.4 Inverse Laplace Transformation. Simple problem
	3rd	5.5 Application of Laplace transformation in circuit theory
	4th	6.1 Idea on Linear & Non linear networks, Unilateral & Bilateral networks
14th	1st	6.2 Explanation of Z parameter (Open Circuit Impedance Parameter)
	2nd	6.3 Explanation of Y parameter (Short Circuit Admittance Parameter)
	3rd	6.4 Explanation of h -parameter (Hybrid Parameter)
	4th	6.5 Interrelation of above parameters
15th	1st	6.6 Inter Connection of Two Port Network
	2nd	6.6 Inter Connection of Two Port Network
	3rd	6.4 Simple problem on above parameters.
	4th	6.4 Simple problem on above parameters.

Sign of Faculty



Sign of H.O.D.