D-1

**Maharashtra State Board of Technical Education**

**TEACHING PLAN (TP)**

Academic Year: 2018-2019

Program: Electrical Engineering Course: Electrical Circuits Course Code: 22324

Semester: Third Name of Faculty:

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chapter  No.  (Allocated  Hrs.) | CO  (Mention  Only  Number) | UO  (Mention  Only  Number) | Title/Details | Plan  (From-  To & No.  Lectures.) | | Actual  Execution  (From-  To & No. Lectures.) | | Teaching  Method/  Media | Remarks |
| 01.(12) | a | 1a  1a  1b  1b  1c  1c  1c  1c  1d  1d  1e  1e | **I. Single Phase A.C. series circuits:**  1.1 Generation of alternating voltage  Phasor representation of sinusoidal quantities  1.2 R,L,C circuit elements its voltage and current  1.3 R-L,R-C,R-L-C combination of A.C series circuit,  impedance, reactance, impedance triangle,  power factor, active power,  reactive power, apparent power,  power triangle and vector diagram  1.4 Resonance,  Bandwidth,  Quality factor  and voltage magnification in series R-L, R-C, R-L-C circuit |  |  |  |  | White Board,  Marker pen, Reference books,  Notes,  PPT. | Completed  On date\_\_\_\_\_ |
| 02.(12) | b | 2a  2a  2a  2b  2c  2c  2c  2d  2d  2d  2d  2e | **II. Single Phase A.C. parallel circuits:**  2.1 R-L, R-C and R-L-C parallel combination of A.C. circuits.  Impedance, reactance,  phasor diagram, impedance triangle  2.2 R-L, R-C and R-L-C parallel A.C. circuits,  power factor,  active power, apparent power,  reactive power, power triangle.  2.3 Resonance in parallel R-L, R-C,  R-L-C circuits,  Bandwidth,  Quality factor  and voltage magnification. |  |  |  |  | White Board,  Marker pen, Reference books,  Notes,  PPT | Completed  On date\_\_\_\_\_ |
| 03.(10) | c | 3a  3a  3a  3a  3a  3b  3b  3c,3d,3e  3c,3d,3e  3c,3d,3e | **III. Three phase circuits**  3.1 Phasor and complex representation of three phase supply  3.2 Phase sequence  and polarity  3.3 Types of three-phase connections,  phase and line quantities in three phase star and delta system  3.4 Balanced and unbalanced load,  Neutral shift in unbalanced load  3.5 Three phase power,  active, reactive and apparent power in star  and delta system. |  |  |  |  | White Board,  Marker pen, Reference books, Notes,  PPT | Completed  On date\_\_\_\_\_ |
| 04.(14) | d | 4a  4b  4b  4c  4d,4e | **IV. Network Reduction and principles of DC circuit analysis**  4.1 Source transformation  4.2 Star/delta  and delta/star transformation  4.3 Mesh analysis  4.4 Node analysis |  |  |  |  | White Board,  Marker pen, Reference books, Notes,  PPT | Completed  On date\_\_\_\_\_ |
| 05.(16) | e | 5a  5b  5c  5d  5e  5e | **V. Network Theorems**  5.1 Superposition theorem  5.2 Thevenin’s theorem  5.3 Norton’s theorem  5.4 Maximum power transfer theorem  5.5 Reciprocity theorem  5.6 Duality in electric circuits |  |  |  |  | White Board,  Marker pen, Reference books, Notes,  PPT | Completed  On date\_\_\_\_\_ |

(Name and signature of faculty) (Name and signature of HOD)