DIGITAL EDUCATION
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ELECTRICAL ENGINEERING

DC Circuit

Hand Notes For GATE, IES, PSUs etc…

Hand Notes

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Note : *We also providing IIT JEE, Advance, NEEt, JEE UG, GATE, IES, PSUs & Competitive Exam Materials [Handnotes, Shortnotes & Books], All Reports [Seminar Reports & PPT]*

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Covered Topics :

- Network of Circuits
- Classification
- DC Circuits
- Series & Parallel Connections
- Voltage Division Rule
- Source Transformation
- Laws
- Star to Delta Transformation
- Node Analysis
- Mesh Analysis
- Superposition Theorem
- Thevenins Theorem
- Norton's Theorem

DATE 08/05/2017.

Networks or Circuits

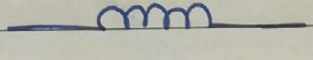
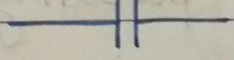
- DC circuit.
- AC Circuit.
  - single phase.
  - Three phase.
    - Star
    - Delta.

Electrical Circuits & Networks :—

- **Network or Circuit** :⟹.

  A network or circuit is an electrical arrangement in which circuit elements (R, L & C) & sources (voltage & current source).

- **Circuit Elements** :⟹.

(Energy Waste)	(Energy stored in Magnetic field)	(Energy stored in Electrical field)
1) Resistor	2) Inductor	3) Capacitor.
		
(R).	(L)	(C)
unit :— Ω	Henry (H)	Farade (F).
$R = \rho \cdot \frac{l}{a}$	$L = \frac{N\Phi}{I}$	$C = \epsilon \frac{A}{d}$
$R = \frac{V}{I}$		$C = \frac{Q}{V}$

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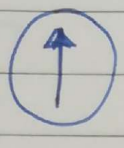
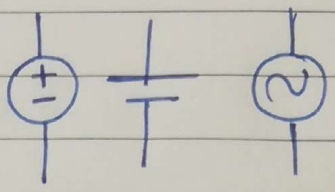
Sources

- Current Source
- Voltage Source.

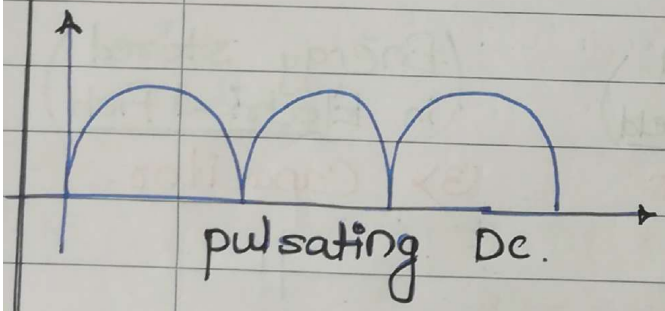




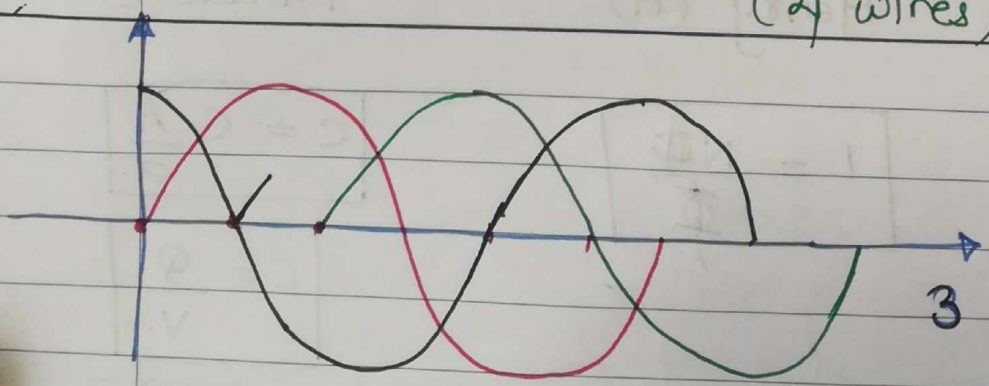
Depending upon Source

classification of Network or Circuits.

- DC Circuit. (Resistor only)
  - V
  - Pure DC.
  - (2 wires used).
- AC Circuit. (R-L-C असतात)
  - 1 ϕ (2 wires)
  - 3 ϕ (3 wires.
    - Star (4 wires)
    - Delta. (3 wires).



pulsating Dc.



3 phase pulses

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