

Most important  
Subtopics of  
Physics for  
JEE Mains  
for each chapter.

→ Designed on the  
basis of past  
10 years.

by your sankalp bhaiya

(\*) → No of questions in  
past 144 years

①

## Units and dimensions



Dimensions of  
Physical quantity (67)

Errors in measurement (67)

②

## Motion in straight Line



Non uniform motion  
(Graphs,  $y=at^2+bt+c$   
type equation) (40)

Motion under gravity (36)

, Relative Motion (12)

③

## Motion in Plane



Projectile Motion (45)

Vectors (24)

→ uniform  
circular  
motion (20)

④ Laws of Motion

- Simple 1st, 2nd, 3rd Law application (52)
- friction (52)
- Banking of road (26)  
Circular motion

⑤ Work, Energy and Power

- conservation of energy and momentum

(67)

→ collisions

(43)

⑥ Centre of Mass and  
Rotation

→ Moment of Inertia  
and Rotational KE  
(70)

→ Torque, couple,  
Angular momentum  
(43)

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## Gravitation



→ Motion of sat ellipse  
Escape Speed and  
Orbital velocity  
(53)

→ Effect on 'g' and  
different calculations  
(32)

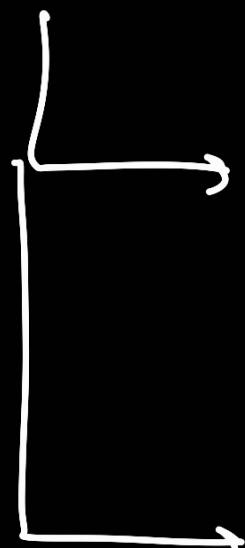
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## Mechanical Properties of Solids



→ Hooke's Law and  
Young modulus  
(47)

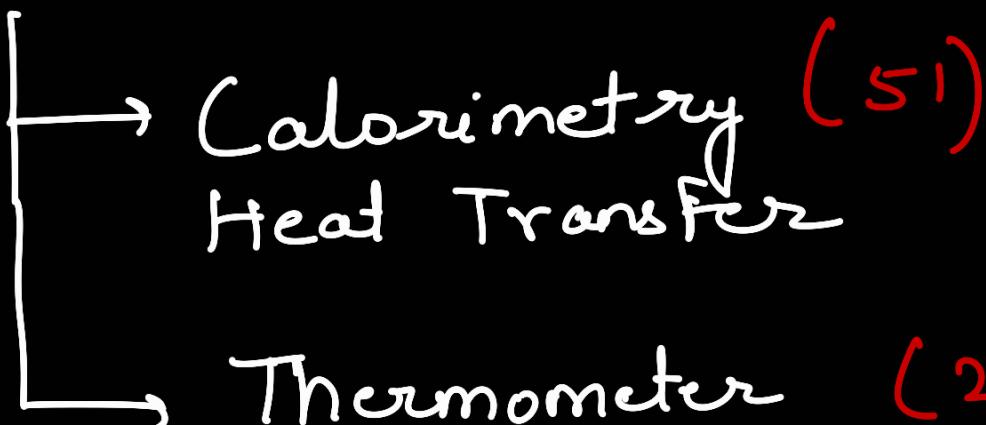
## ⑨ Mechanical Properties of fluid



Surface tension  
surface energy  
capillarity (33)

Fluid flow, Reynold's number, Bernoulli's principle (26)

## ⑩ Thermal properties of Matter



Calorimetry (51)  
Heat Transfer

Thermometer (27)  
Thermal expansion

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## Thermodynamics

- specific heat (66)
- Thermodynamical processes
- Carnot engine (39)  
refrigerator
- Second Law  
of Thermodynamics

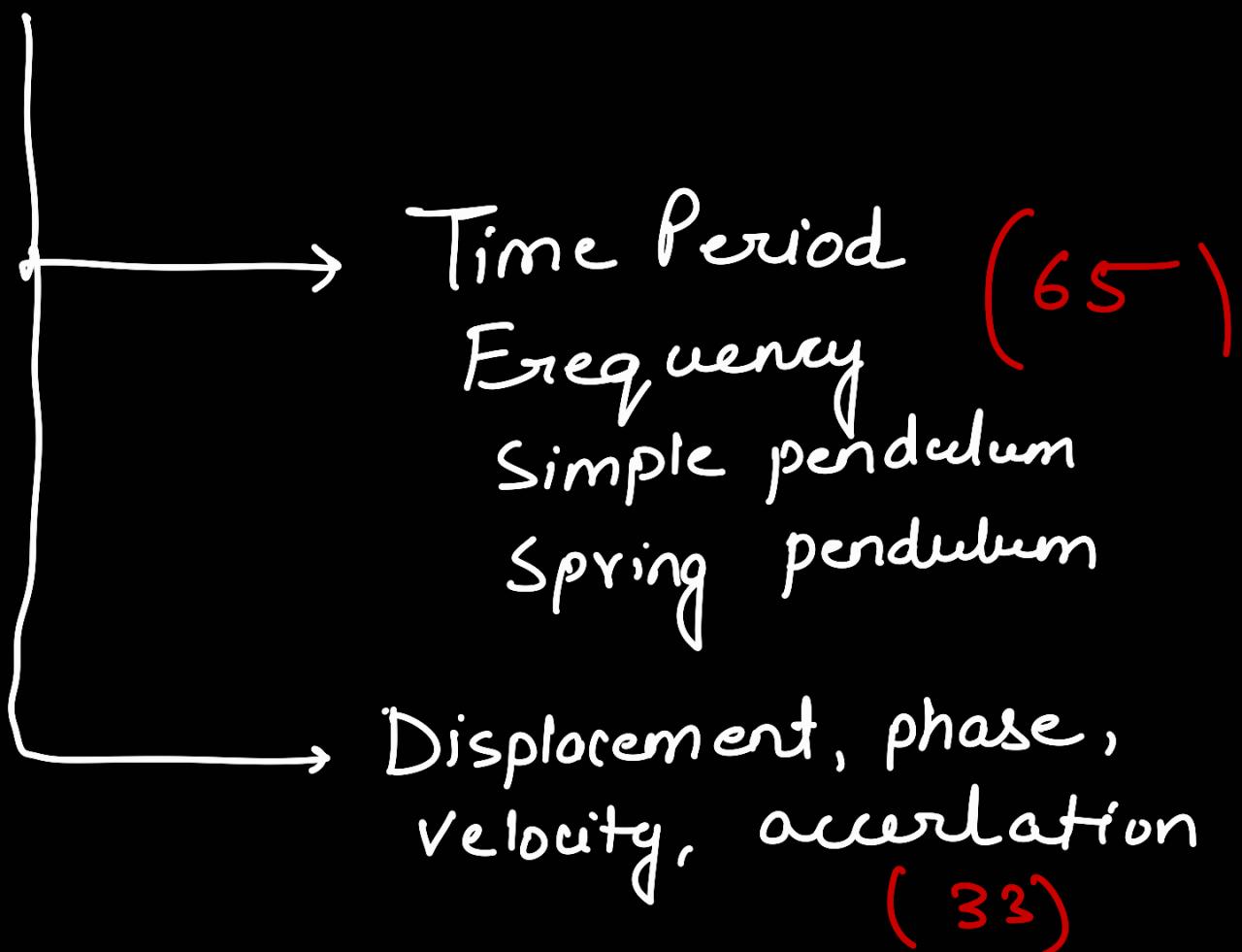
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## Kinetic Theory

- Speed of gas (40)
- Pressure
- Kinetic Energy
  
- Degree of freedom
- Specific Heat Capacity
- Mean free path (40)

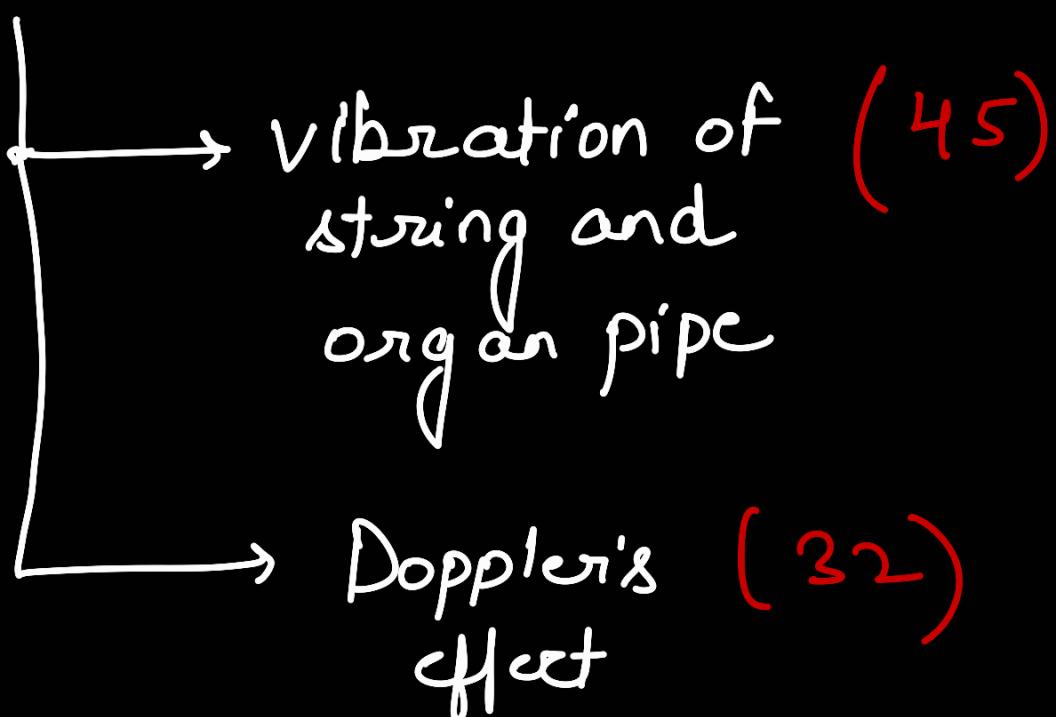
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## Oscillations



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## Waves



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## Electric charges and fields



→ Electric field and  
Field Lines (53)

→ Coulomb Law (30)

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## Electrostatic potential and capacitance



→ Electrostatic potential  
and equipotential  
surface  
(43)

→ Capacitor (70)  
Groups of capacitor  
Energy in capacitor

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## Current Electricity

→ Heat effect of current (97)

→ Electric current  
Ohm's Law, resistance  
resistivity, drift of electron (60)

Combination of Resistances (60)

18

## Moving charges and magnetism

→ Magnetic Field Lines (63)  
Ampere's Circuital Law

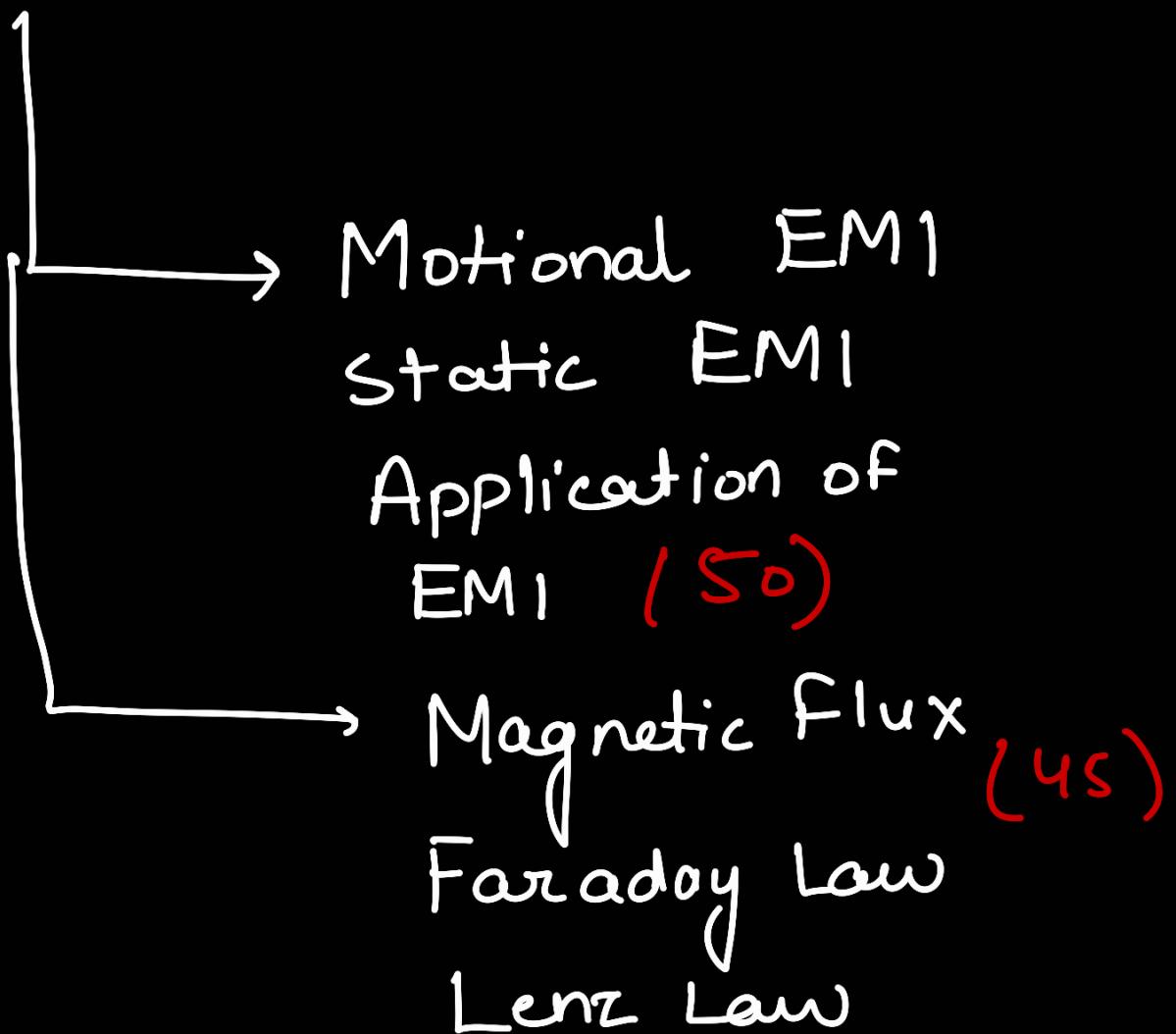
→ Motion of  
charged particles  
in magnetic  
Field (50)

19 Magnetism and matter

→ Earth magnetism  
Magnetic material  
and its properties  
(43)

20

## Electromagnetic Induction



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Alternating current



→ LCR circuit (108)  
Quality Factor  
Power factor

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EM waves



→ EM waves ( $E = Bc$ )  
conduction and  
displacement current  
(90)

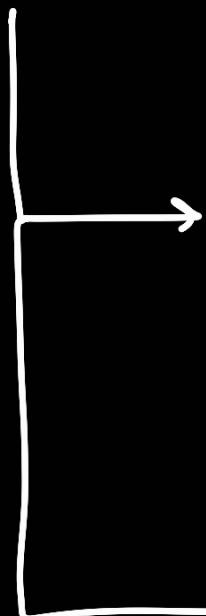
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## Ray optics

- Refraction  
at curved surface  
Lenses and  
power of Lens (61)
- Refraction of  
Light at Plane  
surface and  
Total Internal  
refraction (45)

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## wave optics



Young's double slit  
experiment (51)

Diffraction (50)  
Polarisation  
of Light

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## Dual nature of Radiation and matter

→ Photon, Photoelectric  
effect, Davisson  
Germer Experiment  
(70)

→ Matter waves  
cathode and (47)  
positive rays

26

## Atoms

→ Bohr model and  
spectra of  
Hydrogen atom  
(83)

27

## Nuclei

→ Radioactivity (60)

→ Mass Energy equivalence ( $\beta^2$ )  
Nuclear Reactions

28

## Semiconductor

→ P-N Diode  
Zener Diode (83)

Semiconductor  
basic properties, types

→ Logic gates (37)

→ Junction Transistor (36)

29 communication System

→ communication system (90)

(Full chapter  
important)

