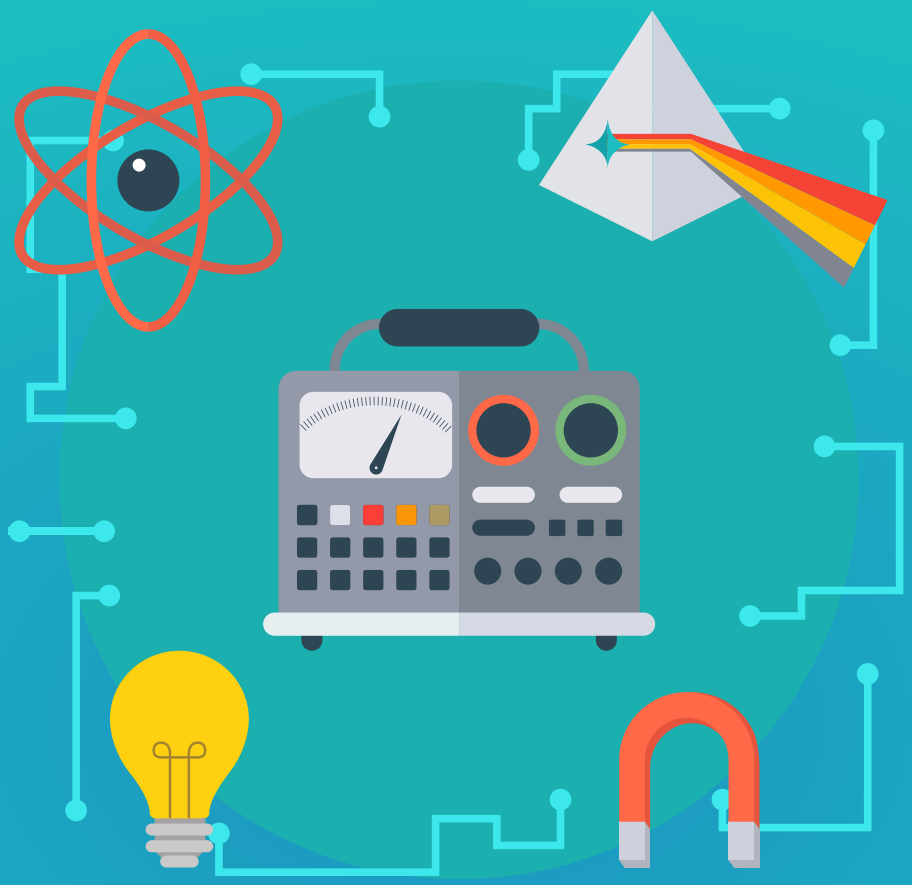
shiksha

IMPORTANT PHYSICS FORMULAE

For Success in Engineering Entrance Exams



MANIPAL
ACADEMY of HIGHER EDUCATION
(Deemed to be University under Section 3 of the UGC Act, 1956)

Circle – Arc and Measurements

Formula 1

$$\text{Arc} = \frac{\theta}{360^\circ} \times 2\pi r$$

θ = Central angle (degrees)
r = Radius

Formula 2

$$\text{Area of sector} = \frac{\theta}{360^\circ} \times \pi r^2$$

θ = Central angle (degrees)
r = Radius

Circle Area in Polar Coordinates

Formula 1

$$A = \int_{\alpha}^{\beta} \frac{1}{2} r^2 \, d\theta$$

A = Area
r = Radius
α = Lower limit of integration
β = Upper limit of integration
$d\theta$ = Differential of angle

Circle Area in Polar

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Circle Area in Polar Coordinates (Alternate Form)

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Circle Area Using Integration

Formula 1

$$A = \int_{a}^{b} \left[f(x) - g(x) \right] dx$$

A = Area
$f(x)$ = Upper function
$g(x)$ = Lower function
a = Lower limit of integration
b = Upper limit of integration
dx = Differential of x

Circle Area Using Integration (Alternate Form)

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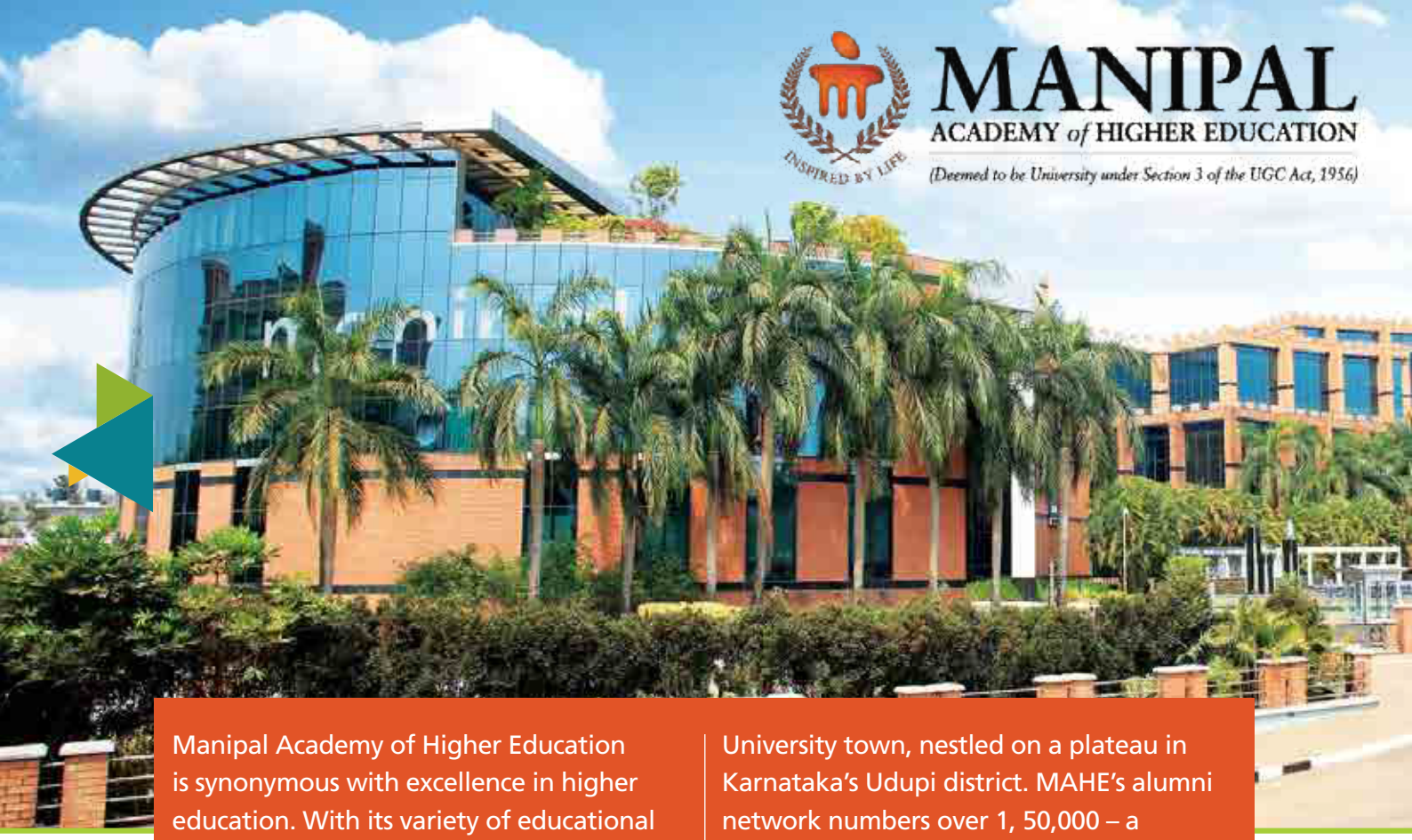

Manipal Academy of Higher Education is synonymous with excellence in higher education. With its variety of educational and professional skill enhancement courses, MAHE has been building up its strength year to year, and is being recognized now as a leading quality education service provider and has significantly contributed in continuously improving the standards of higher education in India. It is a pioneer of the 'Inspired Learning' approach to higher education. Its academic delivery model goes beyond classroom education to provide a holistic learning experience. It offers 280+ career centric courses across 20 diverse disciplines.

Over 33,000 students from 67 different nations live, learn and play in the sprawling University town, nestled on a plateau in Karnataka's Udupi district. MAHE's alumni network numbers over 1, 50,000 – a community as important to us as the new students who walk in.

Backed by an infrastructure that is comparable to some of the best in the world along with a highly qualified and respected faculty, MAHE presents an evolved environment of teaching and research and is a chosen destination for students across the globe.

The University has off-campuses in Mangalore and Bangalore, and off-shore campuses in Dubai (UAE) and Melaka (Malaysia).

VISION & MISSION

Vision

- Global leadership in human development, excellence in education and healthcare

Mission

- Be the most preferred choice of students, faculty and industry
- Be in the top 10 in every discipline of education, health sciences, engineering and management

RANKINGS

- Manipal Academy of Higher Education Ranked #1 among Top Private and Deemed Universities in India according to the QS World University Rankings 2018
- Kasturba Medical College, Manipal Ranked #2 among Private Medical Institutes in India by The Week in 2017
- Manipal College of Dental Sciences, Manipal Ranked #1 among Dental Colleges in India by The Week & Outlook in 2017
- Manipal Institute of Technology, Manipal Ranked #4 among Private Engineering Colleges in India by Education World in 2017
- Welcomgroup Graduate School of Hotel Administration Ranked #1 as Supreme Institute by GHRDC in 2017
- Manipal College of Pharmaceutical Sciences, Manipal Ranked #2 among Pharmacy Institutes in India by Careers360 in 2017
- Faculty of Architecture, Manipal Ranked #2 among top Private Architecture Institutes in India by Outlook in 2017
- Kasturba Medical College, Manipal ranked in 451-500 range among Top Institutes in World for Medicine
- Manipal College of Pharmaceutical Sciences, Manipal Ranked in 251-300 range among Top Institute in World for Pharmacy

CENTRES OF EXCELLENCE

- Manipal Centre for Natural Sciences
- Manipal Centre for Philosophy & Humanities

FAMOUS ALUMINI

Over a 1,50,000 people across the world are proud members of the Manipal Academy of Higher Education Alumni network, many of whom have reached the top of their chosen field including:

- Satya Nadella, CEO of Microsoft
- Rajeev Suri, CEO of Nokia
- Vikas Khanna, celebrity chef
- RC Deka, ENT surgeon, expert in cochlear implants
- MV Kamath, veteran journalist, former chairman of Prasar Bharti

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