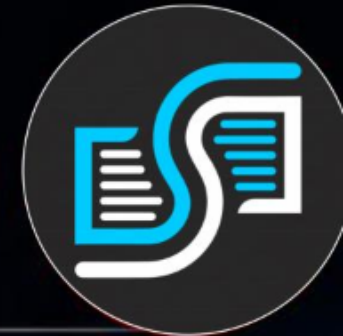




PHYSICS FOUNDATION

*Dream it.
Believe it.
Achieve it.*



COMPLETE BASICS TO ADVANCE

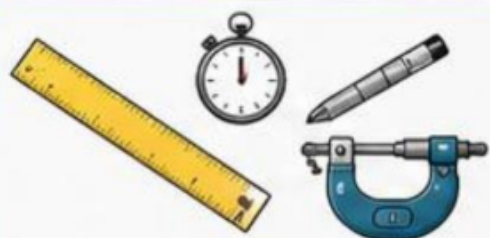
• **FOR RAILWAY EXAMS & ALL COMPETITIVE EXAMS** •



BATCH START
27 APRIL

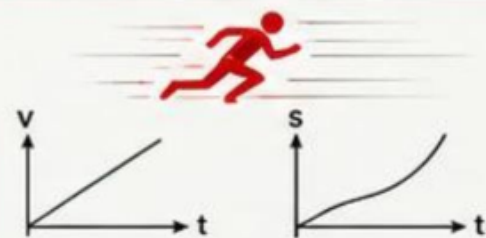
09:00 PM

1 UNITS & MEASUREMENTS



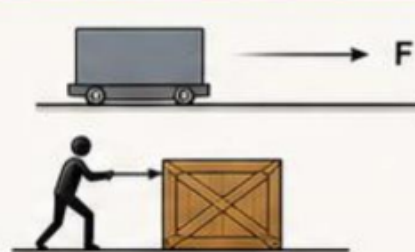
- SI Units & Derived Units
- Dimensional Formula
- Least Count
- Errors in Measurement

2 MOTION (KINEMATICS)



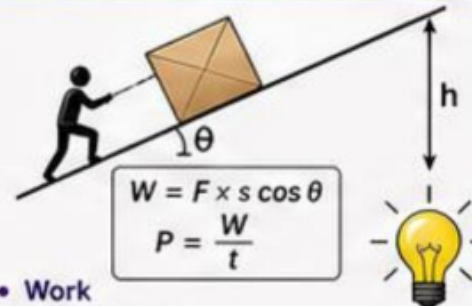
- Distance & Displacement
- Speed & Velocity
- Acceleration
- Graphs (v-t, s-t)
- Train Problems

3 FORCE & LAWS OF MOTION



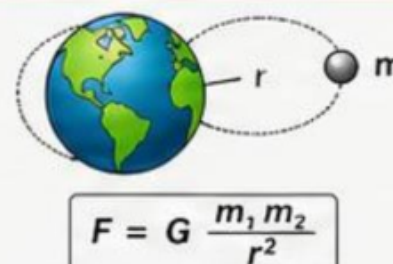
- Newton's Laws of Motion
- Inertia
- Types of Force
- Friction (Static, Kinetic, Rolling)
- Free Body Diagram

4 WORK, POWER & ENERGY



- Work
- Kinetic Energy
- Potential Energy
- Power
- Efficiency

5 GRAVITATION



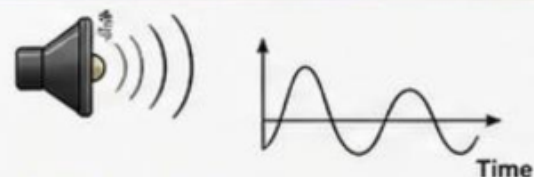
- Newton's Law of Gravitation
- Acceleration due to Gravity (g)
- Variation of g (Height, Depth, Latitude)
- Mass vs Weight
- Free Fall

6 HEAT & TEMPERATURE



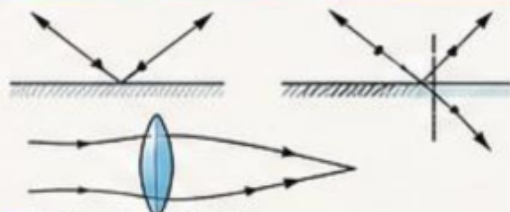
- Heat vs Temperature
- Modes of Heat Transfer (Conduction, Convection, Radiation)
- Thermometers
- Expansion of Solids, Liquids & Gases
- Change of State

7 WAVES (SOUND)



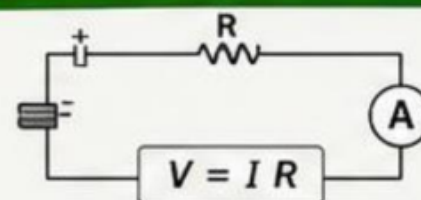
- Wave Nature of Sound
- Frequency, Time Period, Amplitude
- Echo & Reverberation
- Speed of Sound
- Applications of Ultrasound

8 LIGHT (OPTICS)



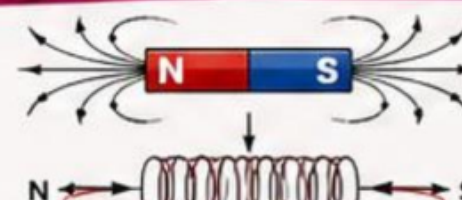
- Reflection of Light
- Refraction of Light
- Mirrors (Plane, Concave, Convex)
- Lenses (Convex, Concave)
- Human Eye & Colourful World

9 ELECTRICITY



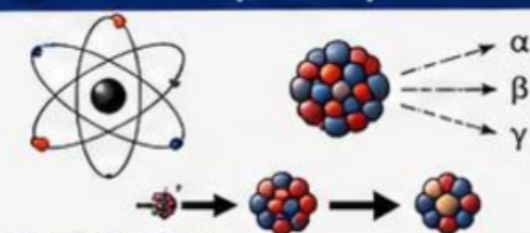
- Electric Current & Voltage
- Ohm's Law
- Resistance & Resistivity
- Series & Parallel Circuits
- Electrical Power & Energy

10 MAGNETISM



- Magnetic Field & Field Lines
- Magnetic Effects of Current
- Fleming's Left Hand Rule
- Electromagnetism
- Permanent Magnets

11 MODERN PHYSICS (BASIC)



- Atomic Structure
- Radioactivity (α, β, γ)
- Nuclear Fission & Fusion
- Photoelectric Effect (Basic)
- Uses of Nuclear Energy



CONCEPT + ANIMATION
EASY TO UNDERSTAND



LATEST MCQs
CHAPTER WISE PRACTICE



PYQ + EXPECTED
IMPORTANT QUESTIONS



BASIC TO ADVANCE
COMPLETE COVERAGE



SELECTION
IS OUR GOAL!

★ COMPLETE SYLLABUS ★ CONCEPT BUILDING ★ REGULAR PRACTICE ★ SUCCESS ASSURED ★

LET'S CRACK IT TOGETHER!





Classification of Physical Quantities भौतिक राशियों का वर्गीकरण

On The Basis Of
Measurement / Unit
माप/इकाई के आधार पर

**Fundamental
Quantities**
(मूल मात्रक)

**Derived
Quantities**
(व्युत्पन्न मात्रक)

On the basis of
Direction And Magnitude
दिशा और परिमाण के आधार पर

**Scalar
Quantities**
(अदिश राशियाँ)

**Vector
Quantities**
(सदिश राशियाँ)



Surface

लंबाई/दूरी के मात्रक

1 किलोमीटर (Km)	= 1000 मी० $10^3 m$
British 1 मील (Mile)	= 1.60934 किमी० $\approx 1.6 km$
1 नाविक मील <u>1 Nm</u> Nautical Miles (Nm)	= 1.852 किमी०
1 खगोलीय इकाई Astronomical Unit	= 1.495×10^{11} मी०
1 प्रकाश वर्ष Light Years (ly)	= 9.46×10^{15} मी० = <u>48612 A.U.</u>
Long distance 1 पारसेक (Parsec)	= 3.08×10^{16} मी० = 3.26 ly, 206,265 AU



milestone

समुद्र दूरी
measure



**ASTRONOMICAL UNIT , खगोलीय इकाई**

It is the average distance of the centre of the sun from the centre of the earth. यह पृथ्वी के केन्द्र से सूर्य के केन्द्र की औसत दूरी है।

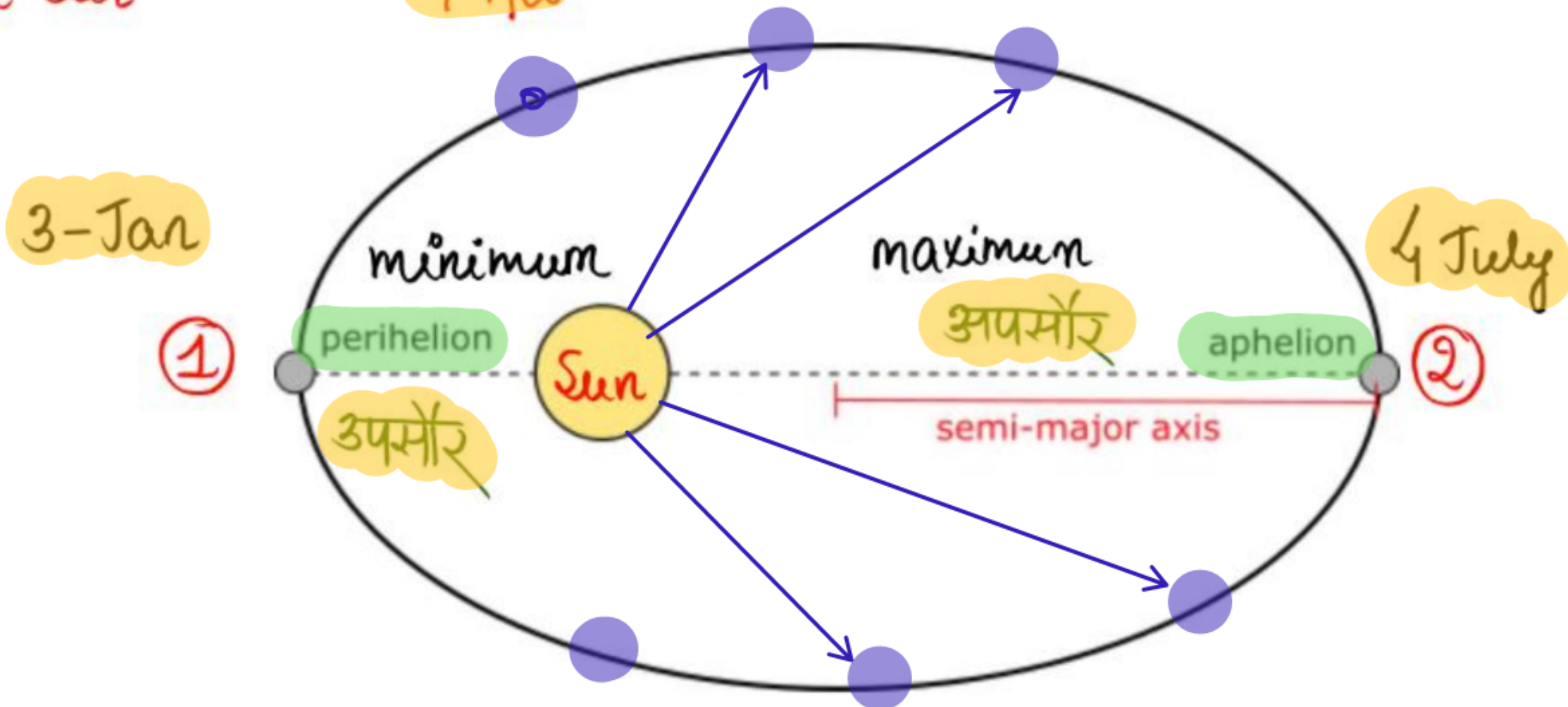
पृथ्वी सूर्य परिक्रमा

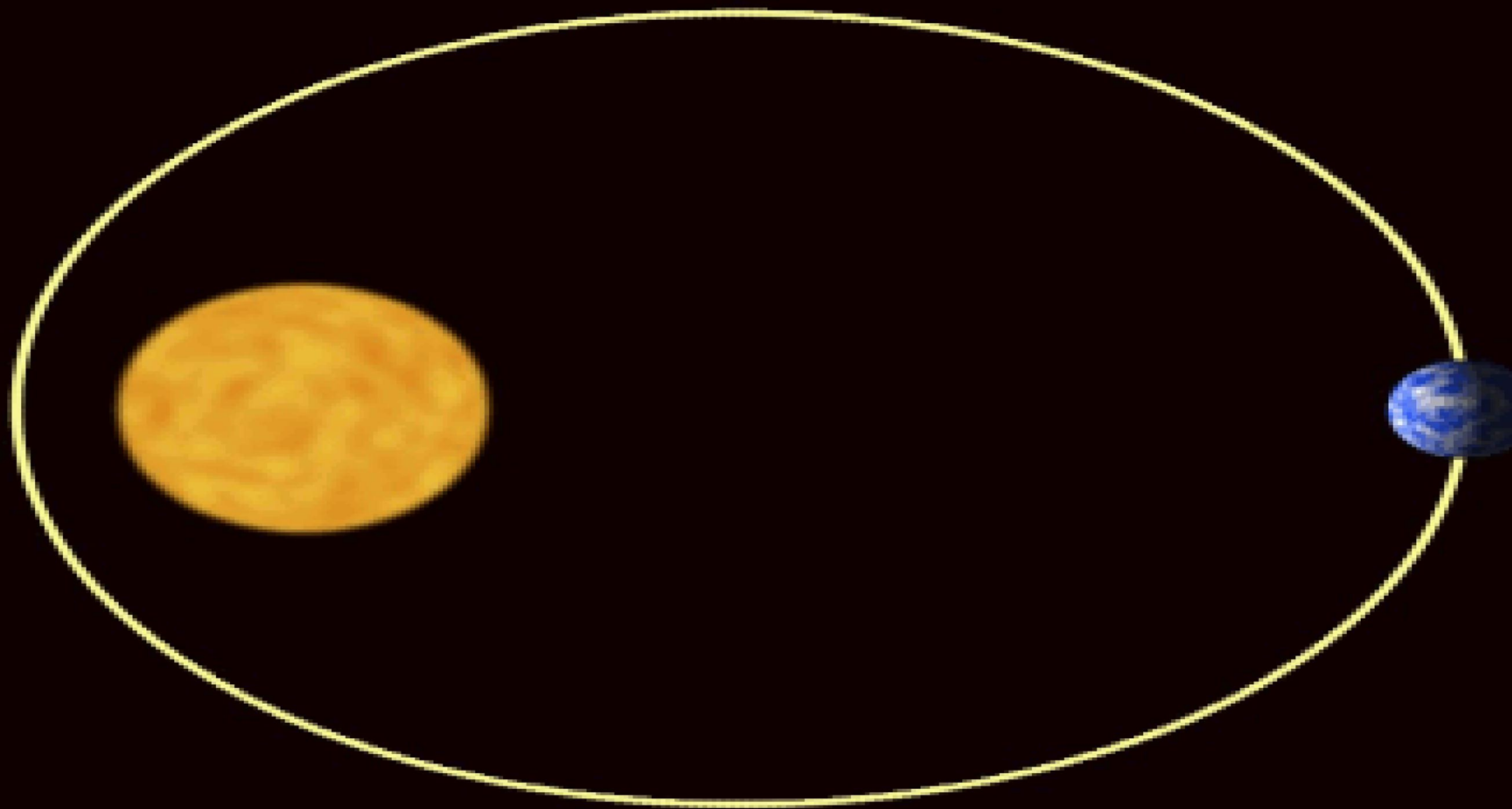
Earth → Revolve Sun

$$\approx 15 \text{ crore km} = \underline{1.495 \times 10^{11} \text{ m}} \approx 1.49 \times 10^8 \text{ km}$$

1. Au

- Ellipse
- दीर्घवृत्ताकार
- $e < 1$
- केपलर - Kepler

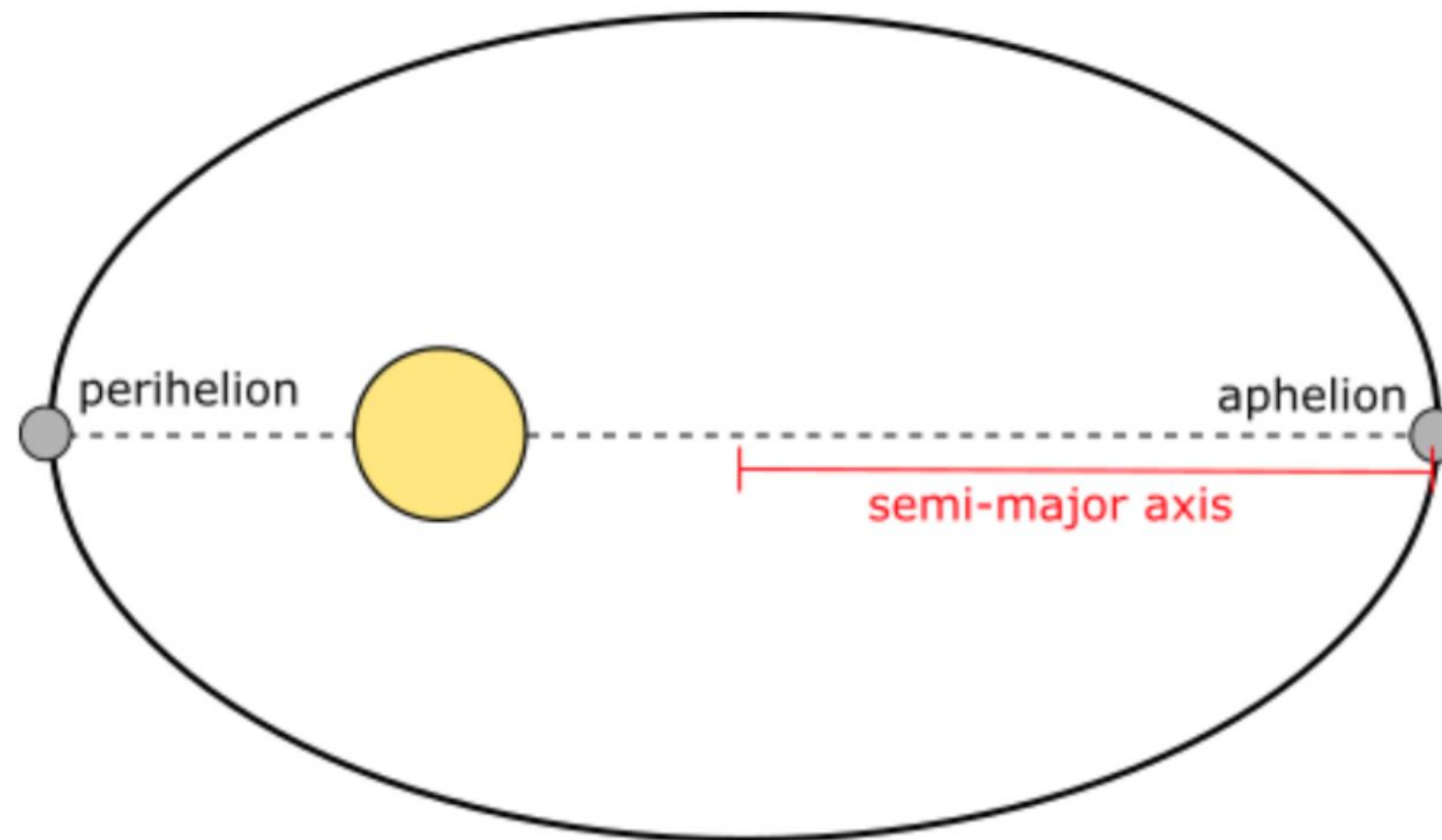


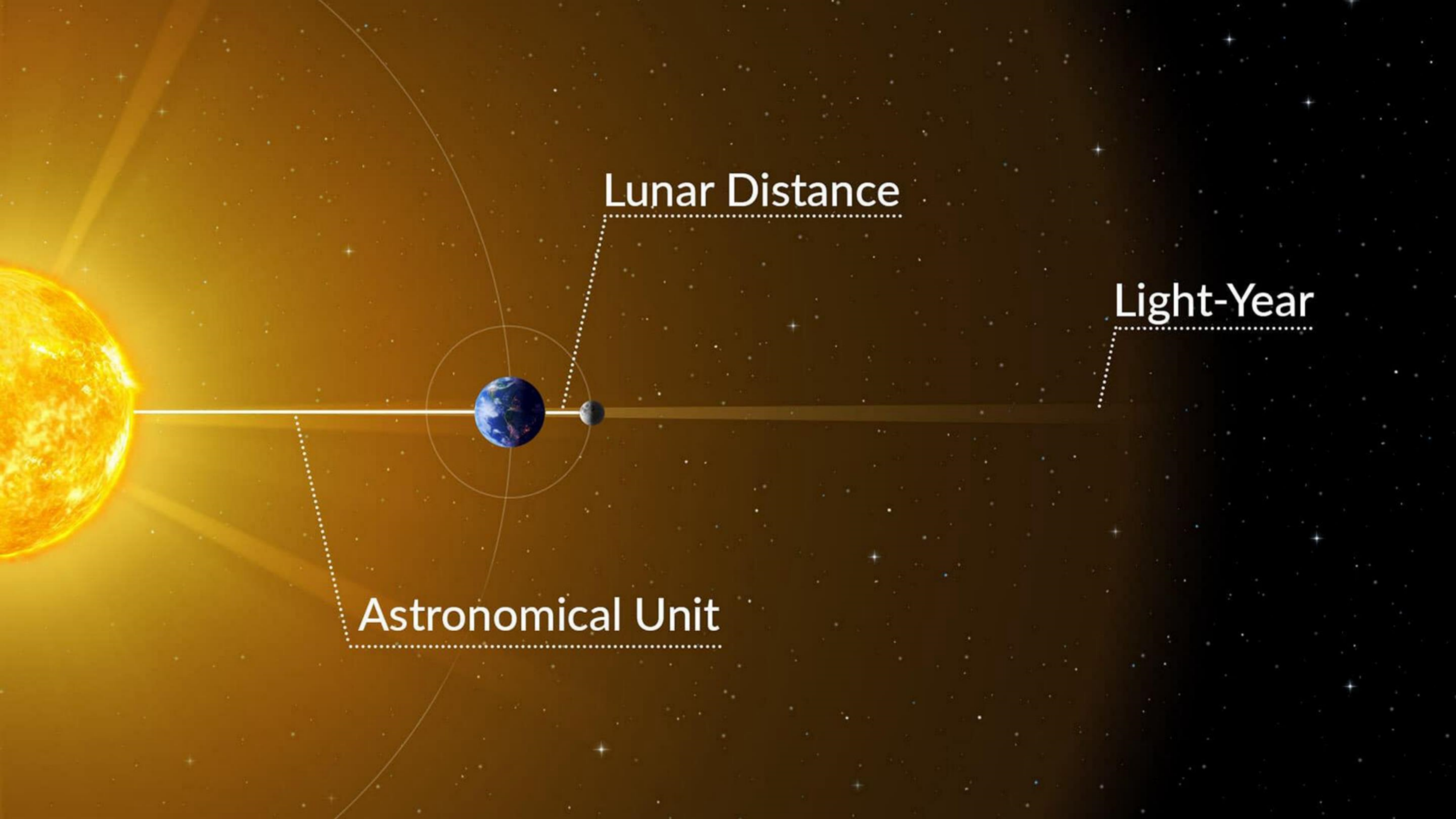




ASTRONOMICAL UNIT , खगोलीय इकाई

It Is The Average Distance Of The Centre Of The Sun From The Centre Of The Earth. यह पृथ्वी के केन्द्र से सूर्य के केन्द्र की औसत दूरी है।





Lunar Distance

Light-Year

Astronomical Unit





सौर दिवस /
Solar day

पृथ्वी द्वारा सूर्य के संबंध में अपनी धुरी पर एक चक्कर पूरा करने में लिया गया समय, यानी **23 घंटे, 56 मिनट और 4.0916 सेकंड**, Time taken by the Earth to complete one revolution on its axis with respect to the Sun, i.e. **23 hours, 56 minutes and 4.0916 seconds** 24 Hour

सौर वर्ष Solar Year

पृथ्वी द्वारा अपनी कक्षा में सूर्य के चारों ओर एक चक्कर पूरा करने में लिया गया समय, यानी, The time taken by the earth to complete one revolution around the sun in its orbit, i.e. **365 दिन, 5 घंटे, 59 मिनट और 16 सेकंड** — Periodic motion

Revolution - परिक्रमण

≈ 365 day, 6 Hour

4 year ↓

$$6 \times 4 = 24 \text{ Hour} \\ \underline{\hspace{1cm}} \\ 1 \text{ day}$$

366 Day
Leap year

Rotation | घूर्णन



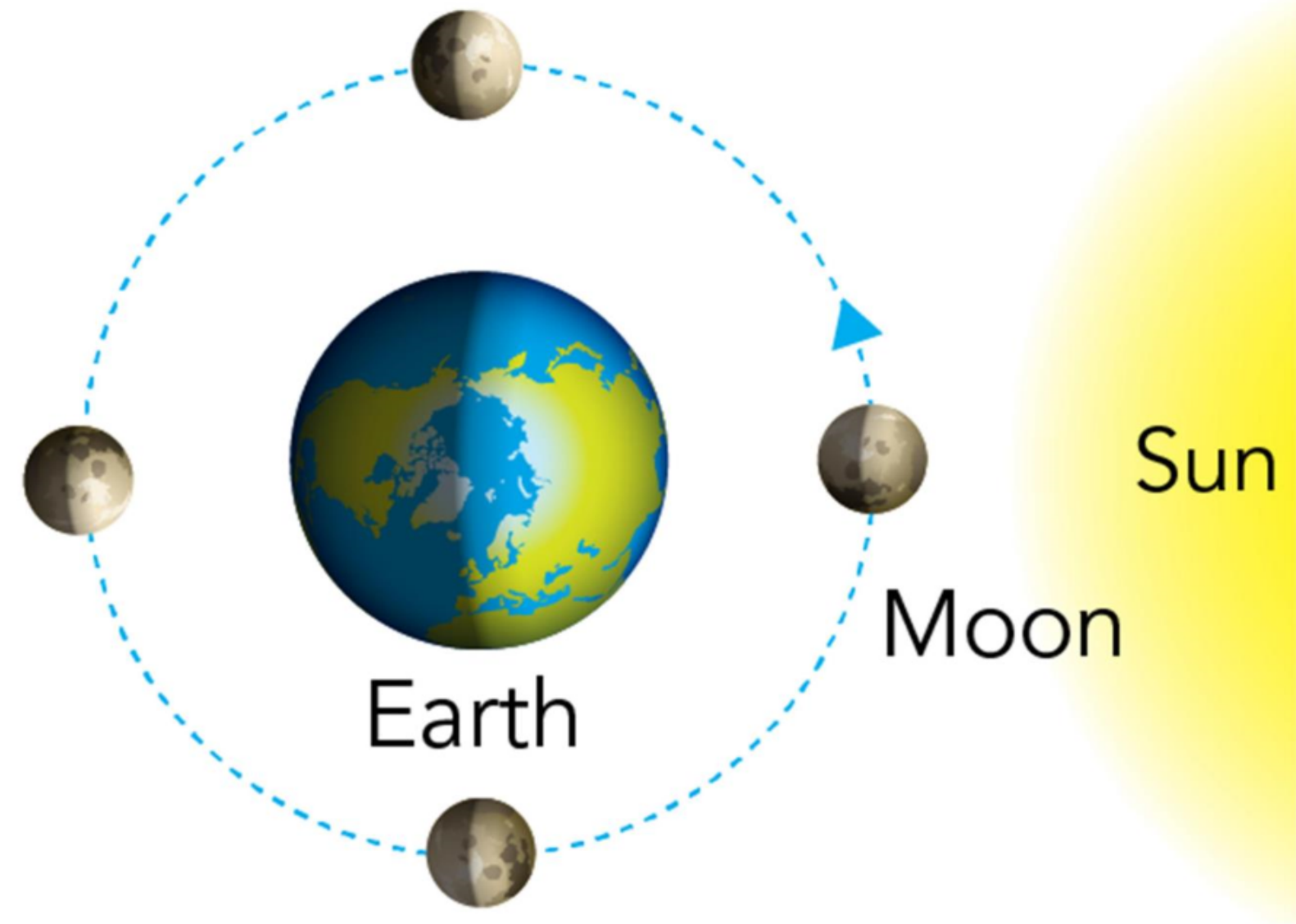


चंद्र मास / चंद्र मास

Lunar Month

चंद्रमा द्वारा अपनी कक्षा में पृथ्वी के चारों ओर एक चक्कर पूरा करने में लगने वाला समय, यानी The time taken by the moon to complete one revolution around the earth in its orbit, i.e. **27 दिन, 7 घंटे, 43 मिनट और 11.5 सेकंड**

Moon : Natural Satellite





• **UNCLOS (United Nation Convention On the Law of Sea) 1982** कहा जाता है। UNCLOS के आधार पर भारत की समुद्री सीमा तीन प्रकार की है-

$$\text{समुद्र दूरी} = 1 \text{ Nautical mile} = 1 \text{ nm} = 1.852 \text{ km}$$

1- प्रादेशिक समुद्री सीमा (Territorial Sea)

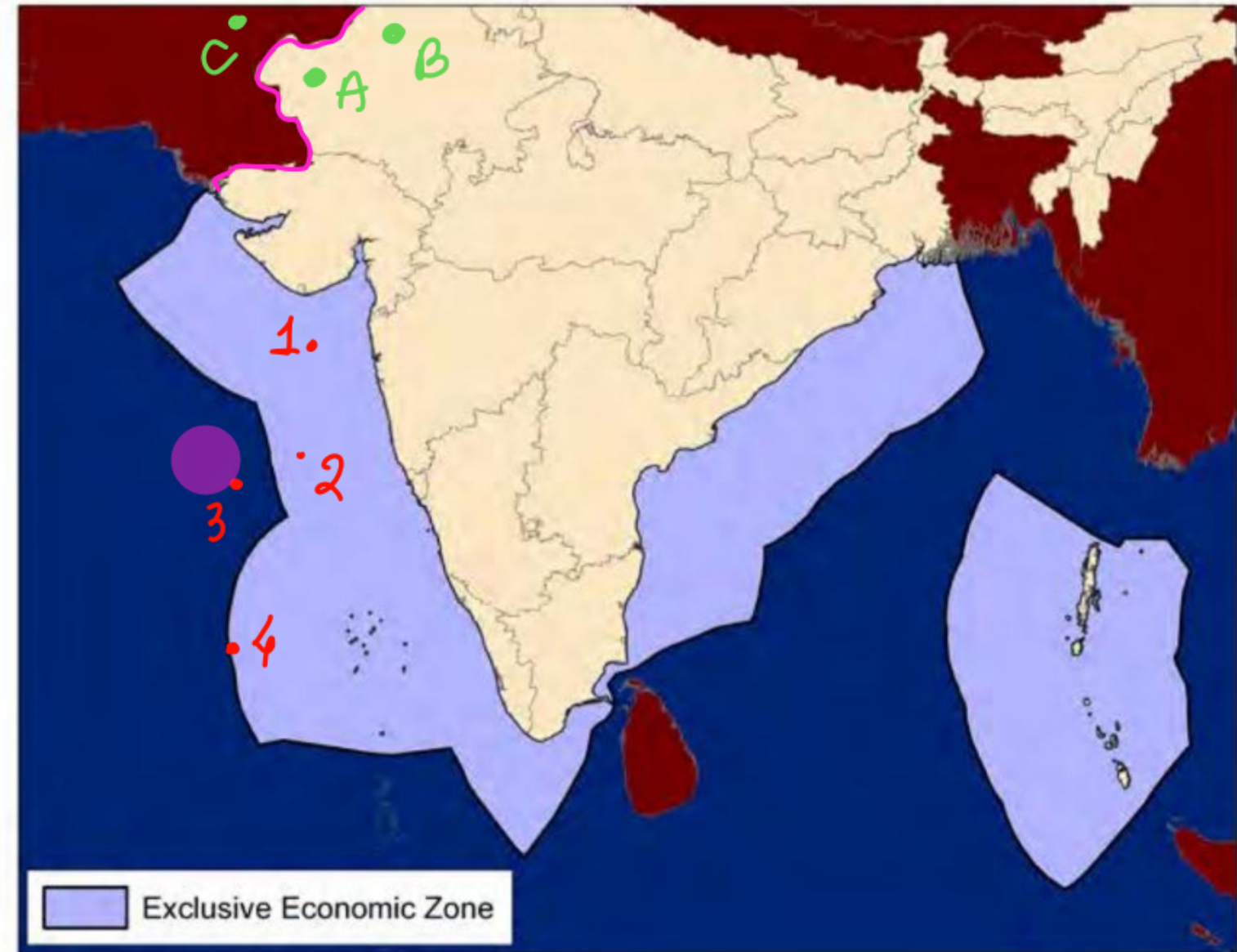
(12 नॉटिकल मील)

2- अविच्छिन्न मण्डल (Contiguous Zone)

(24 समुद्री मील)

3- अनन्य आर्थिक क्षेत्र (Exclusive Economic Zone – EEZ)

200 समुद्री मील



Live + VOD

Recording.

જલ્દ Revision

maths
↓

monday સે
Start

Physics

C -

B ✓

રાત્ર: 9 pm

