

MPSC

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MAHARASHTRA ENGINEERING SERVICES

Group A & B Combined Preliminary Examination

2024

GENERAL STUDIES

with Special reference to Maharashtra

Comprehensive Theory

with Practice Questions and

Previous Years' Solved Papers

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MAHARASHTRA ENGINEERING SERVICES, Group A & B Combined Preliminary Examination: General Studies with Special reference to Maharashtra

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Preface

The compilation of this book **General Studies with Special reference to Maharashtra** is motivated by the desire to provide a concise book which can benefit students who are preparing for Maharashtra Engineering Services, Group A & B Combined Preliminary Examination.

This textbook provides all the requirements of the students, i.e. comprehensive coverage of General Studies topics and objective types questions articulated in a lucid language. This book not only covers the syllabus of Maharashtra Engineering Services in a holistic manner but is also useful for other competitive examinations. All the topics are given the emphasis they deserve so that mere reading of the book helps aspirants immensely.

Our team has made their best efforts to remove all possible errors of any kind. Nonetheless, we would highly appreciate and acknowledge if you find and share with us any printing and conceptual errors.

It is impossible to thank all the individuals who helped us, but we would like to sincerely thank all the authors, editors and reviewers for putting in their efforts to publish this book.



B. Singh (Ex. IES)

With Best Wishes

B. Singh (Ex. IES)

CMD, MADE EASY Group

GENERAL STUDIES

with Special reference to Maharashtra

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GENERAL STUDIES



GEOGRAPHY

with
Special reference
to
Maharashtra



MAHARASHTRA

At A Glance

Maharashtra: At A Glance	
Date of formation	May 1, 1960
Capital	Mumbai and Nagpur (Winter)
Area	3,07,713 sq. km
Neighbouring States/UTs	Gujarat, Madhya Pradesh, Andhra Pradesh, Karnataka, Goa, Dadra and Nagar Haveli, Chhattisgarh
Sea	Arabian Sea
Legislative Bodies	Bicameral Assembly (i.e.; Legislative Assembly and Legislative Council)
Assembly Seats	288
Legislative Council Seats	78
Lok Sabha Seats	48
Rajya Sabha Seats	19
Main Political Parties	Nationalist Congress Party(NCP), Indian National Congress, Shiv Sena, BJP, CPI-M, Maharashtra Nav Nirman Sena, Peasants and Workers Party of India etc.
Chief Language	Marathi
Zero Mile Stone	The Geographical Centre of India is located in Nagpur.
Rivers	Godavari, Krishna, Penganga, Bhima, Varna, Parvara, Mula, Koyna, etc.
Forests and wildlife sanctuaries	Pench National Park (NP), Tadoba NP, Nagzira National Park, Nawegoan NP, Devlagaon NP, Gugamal NP, etc.
State animal	Giant squirrel

Maharashtra: At A Glance	
State bird	Yellow-footed green pigeon
State flower	Jarul
State tree	Mango

Major Cities/Places

- **Mumbai:** Administrative capital of Maharashtra and also known as the financial and commercial capital of India
- **Amravati:** Amravati is the 2nd largest and most populous city of Vidarbha after Nagpur. It is also known as Cultural Capital of Vidarbha because of its education facilities and cultural heritage.
- **Trombay:** Bhabha Atomic Research Centre, BARC: India's first nuclear research facility is located here.
- **Tarapur:** The Tarapur nuclear power station houses two boiling water reactors (BWRs), each of 200MW, the first in Asia.
- **Jaitpur:** World's largest Nuclear Power Plant is being set up here having a capacity of 9,900 MW. Six reactors are coming up here in "Nuclear Park". The reactors are being made by the French company "AREVA".
- **Tembhali:** Ten Adivasis from the tribal hamlet of Tembhali became the first to receive the Unique Identity Numbers from Prime Minister Manmohan Singh and Congress Chief Sonia Gandhi. Tembhali, with a population of 1,098, became the first "Aadhar" village in the country.
- **Pune:** State's Cultural and Heritage capital. Pune has Head quarter of the Southern Military Command, National Defence Academy, The Armed Forces Medical College, CME. Pune is a major Information Technology Hub of India as well as a foremost destination for Automobile manufacturing and component Industry City.
- **Wardha:** Wardha is the sister of Sevagram. Both were major centres of the Indian Independence Movement. Annual meetings of Indian National Congress was held herein 1934. Mahatma Gandhi's Ashram is here. In Wardha, there is a village called Panvar where Acharya Vinoba Bhave lived.
- **Mahatma Gandhi Antarrashtriya Hindi Vishwa Vidyalaya** (Mahatma Gandhi International Hindi University) is established by the Parliament of India and run directly by the Government of India in Wardha.
- **Nagpur:** It was the capital of Nagpur Province in 1853. In 1861, it was made capital of Central Province, then in 1903, it was made capital of a Provincial Assembly. In 1950 Nagpur became the capital of Madhya Pradesh. Nagpur was recommended the capital of Vidarbha state by Hon. Fazal Ali Commission during the reorganisation of the States. It is known as the "orange city". It is the second Administrative Capital of Maharashtra. An International Cargo airport, MIHAN is coming up in the outskirts of the Nagpur City. Deekshabhoomi is a sacred monument of Buddhism. Here in Nagpur Babasaheb Ambedkar converted his followers to Buddhism. A great stupa is built at that place.
- **Shirpur:** India's first gold refinery is at Shirpur.
- **Ramtek:** The town serves as the venue of Kalidasa festival, held every year in the month of November

Maharashtra: Census 2001 and Census 2011		
Description	2011	2001
Population	112,374,333	96,878,627
Male	58,243,056	50,400,596
Female	54,131,277	46,478,031
Population Growth	15.99%	22.57%
% of total Population of India	9.28%	9.42%
Sex Ratio	929	922
Child Sex Ratio	894	953
Density/km ²	365	315
Area (km ²)	307,713	307,713
Literacy	82.34 %	76.88 %
Male Literacy	88.38 %	85.97 %
Female Literacy	69.87 %	67.03 %

Rural and Urban Area comparison as per Census 2011		
Description	Rural	Urban
Population (%)	54.78 %	45.22 %
Population Growth	10.36 %	23.64 %
Sex Ratio	952	903
Child Sex Ratio (0-6)	890	899
Average Literacy	77.01 %	88.69 %
Male Literacy	85.15 %	92.12 %
Female Literacy	64.80 %	75.75 %

Top Population Growth as per Census 2011		
Sl.	Area	Population
1.	Thane	36.01 %
2.	Pune	30.37 %
3.	Aurangabad	27.76 %
4.	Nandurbar	25.66 %
5.	Nashik	22.30 %

Cities of Maharashtra having High Literacy rate as per Census 2011		
Sl.	Area	Population
1.	Mumbai Suburban	89.91 %
2.	Mumbai City	89.21 %
3.	Nagpur	88.39 %
4.	Akola	88.05 %
5.	Amravati	87.38 %

High Density cities of Maharashtra as per Census 2011		
Sl.	Area	Population
1.	Mumbai Suburban	20980
2.	Mumbai City	19652
3.	Thane	1157
4.	Pune	603
5.	Kolhapur	504

Thermal Power Plants in Maharashtra

- Chandrapur Super Thermal Power Station
- Tirora Thermal Power Station
- Amravati Thermal Power Plant
- Bhusawal Thermal Power Station
- Trombay Thermal Power Station
- Khaperkheda Thermal Power Station
- Parli Thermal Power Station
- Nashik Thermal Power Station
- Koradi Thermal Power Station
- Wardha Warora Power Plant
- Dahanu Thermal Power Station
- Paras Thermal Power Station
- CESC Chandrapur Thermal Power Station

Famous Temples in Maharashtra

- Siddhivinayak Temple, Mumbai
- Mahalakshmi Temple, Mumbai
- Bhimashankar Temple, Pune
- Trimhakeshwar Temple, Nashik
- Kailash Temple, Ellora
- Walkeshwar Temple, Mumbai
- Mumbadevi Temple, Mumbai

Earth

We live on a beautiful planet called earth, along with a wide variety of plants, animals and other organisms. Our earth, however, is part of a vast universe. The universe is about 15 to 20 billion years old. The age of the earth is approximately 4 to 5 billion years. Our earth, with all its diversity along with other planets and their satellites, the sun, the moon, the many galaxies (huge groups of millions of stars) form the universe. Stars are huge balls of bright, hot glowing gases. The 'Sun' is also a star. It is the star nearest to earth – about 150 million kilometers away. A solar system consists of a star in the middle with a number of planets orbiting around it. The earth is a part of its solar system. It is one of the eight planets of the solar system that has the sun (a star) in the middle and the eight planets moving around it. Until recently solar system was believed to have nine planets. However, on the basis of the latest scientific assessment, Pluto, is no longer regarded as a planet of earth's solar system. Earth is the only planet known to sustain life.

Conditions necessary for sustaining life

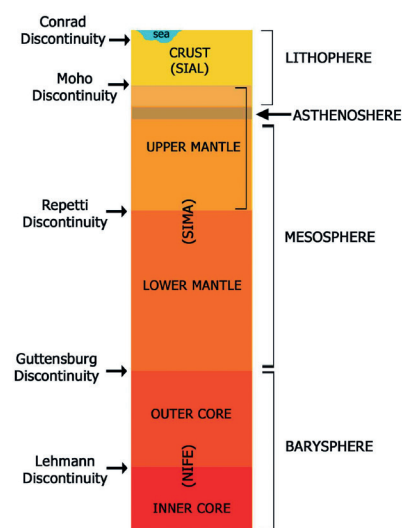
- **Presence of water:** During the evolution of the earth, water vapour in the primitive atmosphere condensed into liquid water. This gave rise to the formation of oceans, rivers and other fresh water bodies. Three-fourth of earth's surface is covered with water. Water is a universal solvent and life originated in water. Two thirds of a living organism consists of water and 90 percent of cell content is also water. Biochemical reactions in living organisms require an aqueous medium. Therefore, water is important for the survival of living organisms.
- **Atmosphere:** The earth is enveloped by a gaseous atmosphere that supports life. The earth's atmosphere consists of nitrogen (78%)

and oxygen (21%), small amounts of carbon dioxide, watervapour, ozone and rare gases like argon, neon etc. Oxygen from the atmosphere is used by the living organisms during respiration. Oxygen is necessary to oxidize food for liberating energy required for various activities in the living organisms. Green plants utilize carbon dioxide from the atmosphere during photosynthesis

- **Temperature:** The average temperature of the earth is 16°C. This is the most comfortable temperature for the living organisms to survive. Earth gets light from the sun, the star nearest to earth. It is the ultimate source of energy.
- **Buffering capacity of earth:** The most unique feature of the earth is its buffering action due to which a neutral pH (pH-7) is maintained in the soil and water bodies. The neutral pH is congenial for the survival and sustenance of living organisms.

Interior of the Earth

The configuration of the surface of the earth is largely a product of the processes operating in the interior of the earth. Exogenic as well as endogenic processes are constantly shaping the landscape. Structure of earth's interior is fundamentally divided into three layers – crust, mantle and core.



Crust	<ul style="list-style-type: none"> • It is the outermost solid part of the earth, normally about 8-40 kms thick. • It is brittle in nature. • Nearly 1% of the earth's volume and 0.5% of earth's mass are made of the crust. • The thickness of the crust under the oceanic and continental areas is different. Oceanic crust is thinner (about 5 kms) as compared to the continental crust (about 30 kms). • Major constituent elements of crust are Silica (Si) and Aluminium (Al) and thus, it is often termed as SIAL (Sometimes SIAL is used to refer Lithosphere, which is the region comprising the crust and uppermost solid mantle, also). • The mean density of the materials in the crust is 3 g/cm³. • The discontinuity between the hydrosphere and crust is termed as the Conrad Discontinuity.
Mantle	<ul style="list-style-type: none"> • The portion of the interior beyond the crust is called as the mantle. • The discontinuity between the crust and mantle is called as the Mohorovich Discontinuity or Moho discontinuity. • The mantle is about 2900 kms in thickness. • Nearly 84% of the earth's volume and 67% of the earth's mass is occupied by the mantle. • The major constituent elements of the mantle are Silicon and Magnesium and hence it is also termed as SIMA. • The density of the layer is higher than the crust and varies from 3.3 – 5.4 g/cm³. • The uppermost solid part of the mantle and the entire crust constitute the Lithosphere. • The asthenosphere (in between 80-200 km) is a highly viscous, mechanically weak and ductile, deforming region of the upper mantle which lies just below the lithosphere. • The asthenosphere is the main source of magma and it is the layer over which the lithospheric plates/ continental plates move (plate tectonics). • The discontinuity between the upper mantle and the lower mantle is known as Repetti Discontinuity. • The portion of the mantle which is just below the lithosphere and asthenosphere, but above the core is called as Mesosphere.
Core	<ul style="list-style-type: none"> • It is the innermost layer surrounding the earth's centre. • The core is separated from the mantle by Guttenberg's Discontinuity. • It is composed mainly of iron (Fe) and nickel (Ni) and hence it is also called as NIFE. • The core constitutes nearly 15% of earth's volume and 32.5% of earth's mass. • The core is the densest layer of the earth with its density ranges between 9.5-14.5 g/cm³. • The Core consists of two sub-layers: the inner core and the outer core. • The inner core is in solid state and the outer core is in the liquid state (or semi-liquid). • The discontinuity between the upper core and the lower core is called as Lehmann Discontinuity. • Barysphere is sometimes used to refer the core of the earth or sometimes the whole interior.

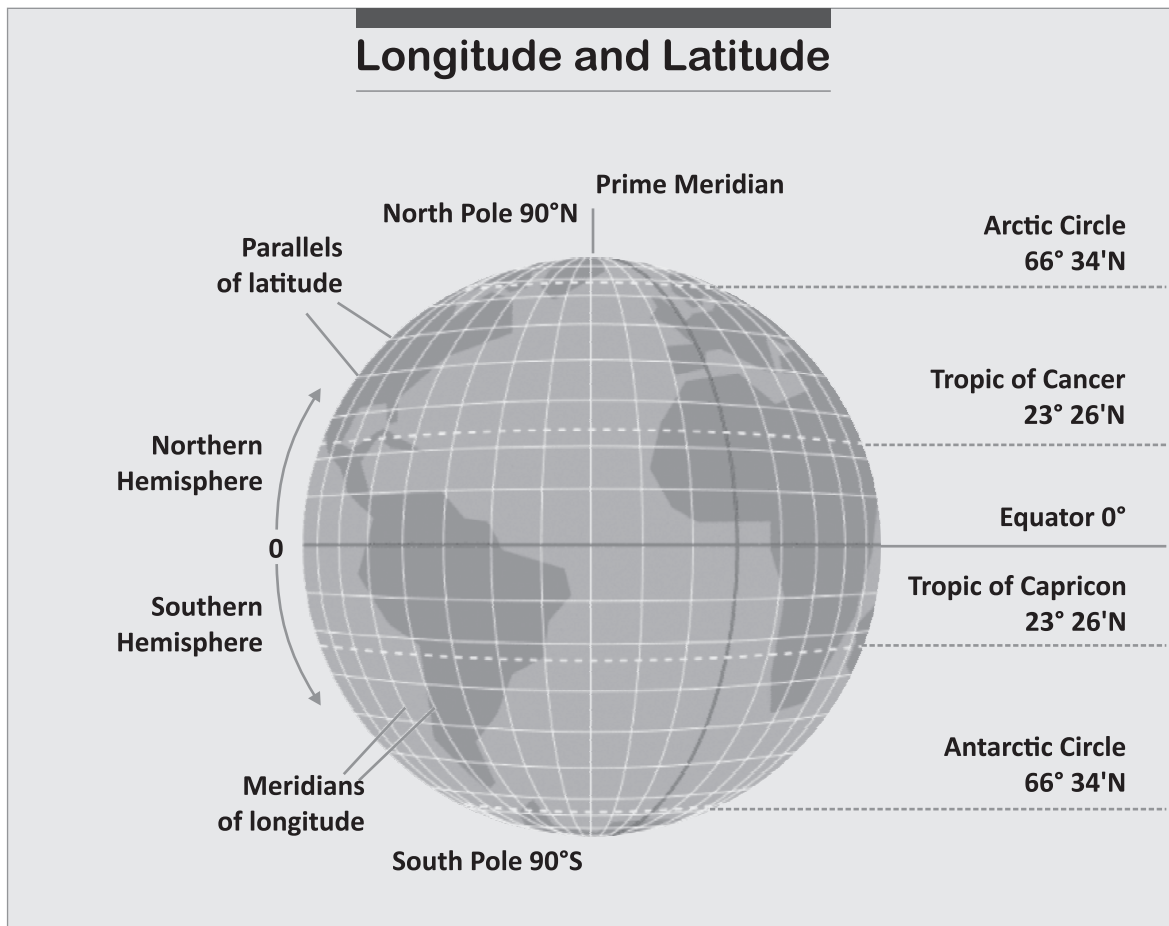
Latitudes & Longitudes

Latitudes and Longitudes are imaginary lines used to determine the location of a place on earth. The shape of the earth is 'Geoid'. And the location of a place on the earth can be mentioned in terms of latitudes and longitudes. Example: The location of Mumbai is 19.0760° N, 72.8777° E.

Latitudes	Longitudes
Latitude is the angular distance of a point on the earth's surface, measured in degrees from the center of the earth.	Longitude is an angular distance, measured in degrees along the equator east or west of the Prime (or First) Meridian.
As the earth is slightly flattened at the poles, the linear distance of a degree of latitude at the pole is a little longer than that at the equator. For example at the equator (0°) it is 68.704 miles, at 45° it is 69.054 miles and at the poles it is 69.407 miles. The average is taken as 69 miles (111 km).	On the globe longitude is shown as a series of semi-circles that run from pole to pole passing through the equator. Such lines are also called Unlike the equator which is centrally placed between the poles, any meridian could have been taken to begin the numbering of longitude. It was finally decided in 1884, by international agreement, to choose as the zero meridian the one which passes through the Royal Astronomical Observatory at Greenwich, near London. This is the Prime Meridian (0°) from which all other meridians radiate eastwards and westwards up to 180° .
Besides the equator (0°), the north pole (90° N) and the south pole (90° S), there are four important parallels of latitudes: <ul style="list-style-type: none"> • Tropic of Cancer ($23\frac{1}{2}^{\circ}$ N) in the northern hemisphere. • Tropic of Capricorn ($23\frac{1}{2}^{\circ}$ S) in the southern hemisphere. • Arctic circle at $66\frac{1}{2}^{\circ}$ north of the equator. • Antarctic circle at $66\frac{1}{2}^{\circ}$ south of the equator. 	As the parallels of latitude become shorter poleward, so the meridians of longitude, which converge at the poles, enclose a narrower space. They have one very important function, they determine local time in relation to G.M.T. or Greenwich Mean Time, which is sometimes referred to as World Time.

Latitudinal Heat zones of the earth

- The mid-day sun is exactly overhead at least once a year on all latitudes in between the Tropic of Cancer and the Tropic of Capricorn. This area, therefore, receives the maximum heat and is called the torrid zone.
- The mid-day sun never shines overhead on any latitude beyond the Tropic of Cancer and the Tropic of Capricorn. The angle of the sun's rays goes on decreasing towards the poles. As such, the areas bounded by the Tropic of Cancer and the Arctic circle in the northern hemisphere, and the Tropic of Capricorn and the Antarctic circle in the southern hemisphere, have moderate temperatures. These are, therefore, called temperate zones.
- Areas lying between the Arctic circle and the north pole in the northern hemisphere and the Antarctic circle and the south pole in the southern hemisphere, are very cold. It is because here the sun does not raise much above the horizon. Therefore, its rays are always slanting. These are, therefore, called frigid zones.



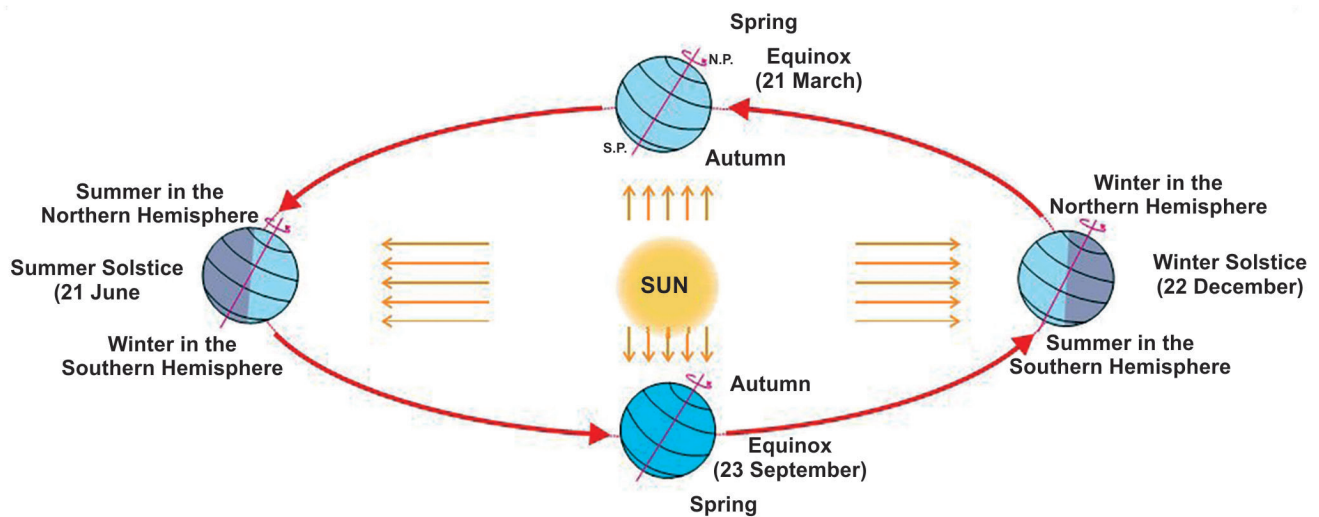
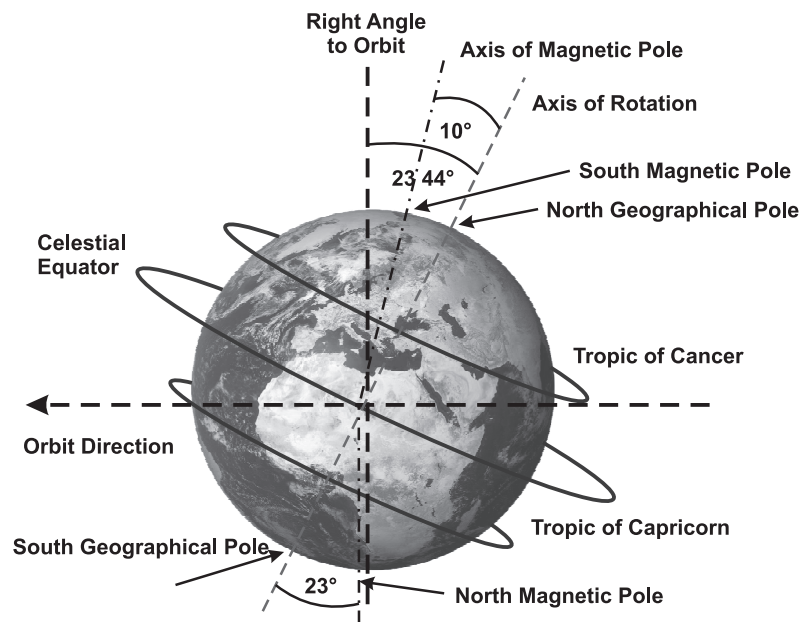
Longitude and Time

- Since the earth makes one complete revolution of 360° in one day or 24 hours, it passes through 15° in one hour or 1° in 4 minutes. The earth rotates from west to east, so every 15° we go eastwards, local time is advanced by 1 hour. Conversely, if we go westwards, local time is retarded by 1 hour.
- If each town were to keep the time of its own meridian, there would be much difference in local time between one town and the other. To avoid all these difficulties, a system of standard time is observed by all countries.
- Most countries adopt their standard time from the central meridian of their countries. In larger countries such as Canada, U.S.A., China, and U.S.S.R, it would be inconvenient to have single time zone. So these countries have multiple time zones.
- The Indian Government has accepted the meridian of 82.5° east for the standard time which is 5 hours 30 mins, ahead of Greenwich Mean Time. It passes through approximately the middle of India (from Mirzapur, near Allahabad). Indian Standard Meridian passes through UP, MP, Chhattisgarh, Orissa and Andhra Pradesh.

Motions of the earth: Rotation and Revolution

Rotation and Revolution are two motions of the earth. When earth spins or rotates around its axis, that movement of spinning is called Rotation of Earth. And when earth spins or revolves around the sun, that movement is called Revolution of Earth.

Rotation of Earth	Revolution of Earth
Earth rotates along its axis from west to east.	The second motion of the earth around the sun in its orbit is called revolution. It takes 365¼ days (one year) to revolve around the sun.
It takes approximately 24 hrs to complete on rotation.	Six hours saved every year are added to make one day (24 hours) over a span of four years. This surplus day is added to the month of February. Thus every fourth year, February is of 29 days instead of 28 days. Such a year with 366 days is called a leap year.
Days and nights occur due to rotation of the earth.	
The circle that divides the day from night on the globe is called the circle of illumination.	
Earth rotates on a tilted axis. Earth's rotational axis makes an angle of 23.5° with the normal i.e. it makes an angle of 66.5° with the orbital plane. Orbital plane is the plane of earth's orbit around the Sun.	



- **Summer Solstice:** The earth goes around the sun in an elliptical orbit. The nights are longer than the days of the winter season. This position of the earth is called the summer solstice.
- **Winter Solstice:** On 22nd December, the Tropic of Capricorn gets direct rays of the sun as the South Pole tilts towards it. It is summer in Southern hemisphere and winter in the Northern hemisphere. This is called winter solstice.
- **Equinox:** On 21st March and 23rd September, direct rays of the sun fall directly on the equator. During this period, the whole earth experiences equal days and equal nights. This is called an equinox.

International Day of Yoga, is celebrated annually on 21 June since its inception in 2015. The date of 21 June is chosen, as it is the longest day of the year in the Northern Hemisphere.



Practice Questions

GEOGRAPHY

- Which of the following rivers does not flow into the Arabian Sea?
(a) Tungabhadra (b) Sabarmati
(c) Mandovi (d) Narmada
- Tropic of Cancer passes through which of the following group of Indian States:
(a) Gujarat, MP, Chattisgarh, Manipur
(b) Rajasthan, Jharkhand, West Bengal, Mizoram
(c) UP, MP, Bihar, Jharkhand
(d) Maharashtra, Chattisgarh, Orissa, Andhra Pradesh
- The land frontier of India is about 15200 km. Which of the following countries shares the largest border length with India:
(a) Bangladesh (b) Pakistan
(c) China (d) Nepal
- Which of the following Mountain passes forms the 'tri-junction' of India, China and Myanmar?
(a) Nathu La (b) Jelep La
(c) Bomdi La (d) Diphu
- The Andaman and Nicobar Islands are submerged parts of mountain range called:
(a) Arakan Yoma (b) Pegu Yoma
(c) Askai Chin (d) Tien Shan
- Which of the following Indian States/UT has the maximum percentage of mangrove cover in the country ?
(a) Gujarat
(b) West Bengal
(c) Andaman and Nicobar
(d) Orissa
- Which of the following states is/are not a part of Western Ghats?
(a) Gujarat
(b) Tamil Nadu
(c) Andhra Pradesh
(d) Both b and c
- Jarawas and Sentinelese tribes are found in which among the following state / Union Territory of India?
(a) Andaman & Nicobar Islands
(b) Madhya Pradesh
(c) Lakshadweep
(d) Arunachal Pradesh
- How many states of India share its border with Bhutan?
(a) 2 states (b) 3 states
(c) 4 states (d) 5 states
- Garo Hills is a part of which among the following states of India?
(a) Nagaland (b) Meghalaya
(c) Manipur (d) Mizoram
- Majuli, the largest river island in the world is located in which among the following states of India?
(a) Assam
(b) Manipur
(c) Nagaland
(d) Tripura
- The Western Ghats region runs to a length of 1600 kilometers. Which among the following states are covered by the Western Ghats?
(a) Tamil Nadu, Karnataka, Kerala
(b) Tamil Nadu, Karnataka, Kerala, Goa
(c) Tamil Nadu, Karnataka, Kerala, Goa, Maharashtra
(d) Tamil Nadu, Karnataka, Kerala, Goa, Maharashtra, Gujarat
- Which among the following is a riverine (Inland River) port?
(a) Chennai
(b) Kandla
(c) Kolkata
(d) Tutikorin

- 14.** Consider the following statement(s) related to Regur soils or Black cotton soils.
1. It is formed by solidification of lava spread over large area of Deccan plateau.
 2. They are very rich in minerals contents because these soils were formed due to volcanic activities.
 3. They are found in Karnataka, Maharashtra, MP, Gujarat, AP and Tamil Nadu.
- Which of the above statement(s) is/are correct?
- (a) Only 1 (b) Only 2
(c) Both 1 and 2 (d) 1, 2 and 3
- 15.** Which of the following river system created the Jog waterfalls?
- (a) Tunga bhadra (b) Sharavathi
(c) Koyna (d) None of the above
- 16.** Which of the following is the largest river basin of Indian peninsular region?
- (a) Godavari (b) Mahanadi
(c) Krishna (d) Koyna
- 17.** Consider the following States:
1. Mizoram 2. Manipur
 3. Tripura 4. Arunachal Pradesh
- Which of the States given above share boundary with Myanmar?
- (a) 2 and 4 only (b) 1, 2 and 3 only
(c) 2, 3 and 4 only (d) 1, 2 and 4 only
- 18.** The Highest peak in the Eastern Ghats is:
- (a) Anai Mudi (b) Mahendragiri
(c) Doddabetta (d) Agasthamalai
- 19.** Which one of the following forest types is most widespread in India?
- (a) Tropical Evergreen Forest
(b) Tropical Deciduous Forest
(c) Semi Evergreen Forest
(d) Tropical Thorn Forest
- 20.** Consider the following characteristics of an Indian soil:
1. This soil resembles a brick in terms of its deep red colour and surface texture.
 2. It is a heavily leached soil.
 3. The red colour is imparted by the presence of iron oxide.
 4. It is widely found in Kerala.
- Which of the following soils is characterized by the above mentioned features?
- (a) Laterite soil (b) Alluvial soil
(c) Red soil (d) Saline soil
- 21.** Which of the following islands is separated from rest of the Lakshadweep Islands by the 'Nine Degree Channel'?
- (a) Agatti (b) Kalpeni
(c) Kavaratti (d) Minicoy
- 22.** A particular state in India has the following characteristics:
1. It lies on the same latitude which passes through Gujarat and Madhya Pradesh.
 2. It has over 40% of its area under forest cover.
 3. Its state animal is wild water Buffalo.
 4. It is drained by the Rihand River.
- Which among the following states has all the above characteristics?
- (a) Chhattisgarh
(b) Tripura
(c) Mizoram
(d) Jharkhand
- 23.** Which of the following pairs of 'Tributary' and their 'Parent River' is INCORRECTLY matched?
- (a) Son : Ganga
(b) Chambal : Yamuna
(c) Tungbhadra : Krishna
(d) Gandak : Indus
- 24.** Consider the following statements:
1. Total crop area in the state amounts to more than one-half of the total land area.
 2. World's largest ship breaking yard is located here.
 3. It is the largest processor of milk in India.
- The above statements refer to which state of India?
- (a) Maharashtra (b) Kerala
(c) Gujarat (d) Andhra Pradesh
- 25.** Which of the following river deltas has/have mangrove forest cover?
1. Mahanadi 2. Krishna
 3. Godawari 4. Kaveri
- Select the correct answer using the code given below:
- (a) 3 only
(b) 1, 2 and 3 only
(c) 2 and 3 only
(d) 1, 2, 3 and 4

Maharashtra Engineering Services

Preliminary Examination

2021

1. Which of the following features of the Indian Constitution are inconsistent with the Federal principle?

1. One Constitution for the States
2. Single citizenship
3. More legislative power to the Centre
4. Appointment of Governor by the Centre
5. States field of legislation cannot be invaded by the Centre

Answer Options :

- (a) 1, 2, 3, 4, 5 (b) 1, 2, 3, 4
(c) 1, 3, 4 (d) 2, 3, 5

2. Consider the following statements:

1. 'Fundamental Duties' is a salient feature of the Indian Constitution.
2. These were added by the 44th Constitutional Amendment Act in the Constitution.

Answer Options :

- (a) Only 1 is correct
(b) 1 is correct, 2 is wrong
(c) Both 1 and 2 are correct
(d) Both 1 and 2 are wrong

3. Which Article of the Constitution provides for the Finance Commission?

- (a) Article 324
(b) Article 280
(c) Article 224
(d) Article 380

4. What among the following is not true about the Public Accounts Committee?

1. The Committee was set up in 1921.
2. Its main function is to examine the annual reports of Comptroller and Auditor General of India (CAG).

3. It consists of 15 Lok Sabha members and 7 Rajya Sabha members.

4. The term of the office of the Public Accounts Committee is one year.

Answer Options :

- (a) Only 1 (b) Only 2
(c) Only 3 and 4 (d) All are true

5. Which of the following statements are correct about Lok Sabha sessions?

1. Lok Sabha shall meet at least twice in a year.
2. Interval between two consecutive sessions shall be less than six months.
3. The President summons the Lok Sabha to meet.
4. Speaker of Lok Sabha will decide time and place of Lok Sabha session.

Answer Options :

- (a) 1, 2, 3 and 4
(b) Only 1, 2 and 3
(c) Only 1, 3 and 4
(d) Only 1 and 2

6. Consider the following statements and choose the correct option.

1. A Constitutional Amendment Bill can be introduced in the Parliament only.
2. The President must give assent to the Constitutional Amendment Bill after it is duly passed by the Parliament and ratified by State Legislatures, where necessary.
3. Constitutional Amendment process is laid down in Article 365.

Answer Options :

- (a) Only 1 and 3 (b) Only 1 and 2
(c) Only 2 and 3 (d) All of the above

ANSWERS

1. (b) 2. (b) 3. (b) 4. (d) 5. (b) 6. (b)

7. The Chairman of National Human Rights Commission is appointed by the President on the recommendation of a Committee of certain persons. Who among the following is/are not member of that Committee?

1. The Prime Minister
2. The Home Minister
3. The Leader of the Opposition Party in the Lok Sabha
4. The Chairman of Rajya Sabha

Answer Options :

- (a) Only 1
- (b) Only 2 and 4
- (c) Only 3
- (d) Only 4

8. Which of the following is an exclusive power of Rajya Sabha?

- (a) Impeachment of President
- (b) setting up of All-India Services
- (c) Electoral power for Vice President's Election
- (d) Power related to introduce the Finance bill

9. 'To provide opportunities for education by Mother-Father or Guardian to their child or ward between the age of 6 and 14 years.' By which Constitutional Amendment Act was this Fundamental Duty added in the Constitution?

- (a) 85th Constitutional Amendment Act, 2002
- (b) 82nd Constitutional Amendment Act, 2000
- (c) 86th Constitutional Amendment Act, 2002
- (d) 81st Constitutional Amendment Act, 2000

10. Arrange the following Committees according to their establishment year in ascending order:

1. Ashok Mehta Committee
2. Balwant Rai Mehta Committee
3. G.V.K Rao Committee
4. K. Santhanam Committee

Answer Options :

- (a) 2, 3, 4, 1
- (b) 2, 1, 4, 3
- (c) 2, 1, 3, 4
- (d) 2, 4, 1, 3

11. Two wires A and B are made of same material and having their lengths in the ratio 6:1 are connected in series. The P.D. across the wires are 3 V and 2 V respectively. Find R_B/R_A , where R_A and R_B are the radii of the 2 wires.

- (a) 1/4
- (b) 1/2
- (c) 1/3
- (d) 1/6

12. Sound waves are longitudinal mechanical waves that can travel through which of the following mediums?

- (a) Gases
- (b) Liquids
- (c) Solids
- (d) In all of above mediums

13. The focal lengths of two lenses are 2 m and 1 m, then the total power of a combination of these lenses is

- (a) 3D
- (b) 1.5D
- (c) 1D
- (d) 0.5D

14. The chemical reagent used to remove permanent hardness of water is/are

- (a) only washing soda
- (b) only sodium hexametaphosphate
- (c) Both (a) and (b)
- (d) None of the above

15. The resultant dipole moment in NF_3 molecule is ____ and in the direction of ____ atoms.

- (a) low, nitrogen
- (c) high, nitrogen
- (b) high, fluorine
- (d) low, fluorine

ANSWERS

7. (d) 8. (b) 9. (c) 10. (d) 11. (b) 12. (d) 13. (b) 14. (c)
15. (d)

16. Which of the following set of quantum numbers is not possible ?
- (a) $n = 1, l = 0, m = 0, s = +\frac{1}{2}$
- (b) $n = 4, l = 0, m = 3, s = -\frac{1}{2}$
- (c) $n = 1, l = 1, m = 0, s = -\frac{1}{2}$
- (d) $n = 3, l = 2, m = 2, s = +\frac{1}{2}$
17. Over which of the following latitudes is the Geostationary satellite set?
- (a) The Equator
- (b) The Tropic of Cancer
- (c) The Antarctic Circle
- (d) The Poles
18. In interpreting the aerial photograph, the pair of adjacent aerial photographs is called
- (a) Aerial photograph
- (b) Stereoscope
- (c) Texture
- (d) Stereogram
19. State which of the following statements is true?
- (a) In the raster data model, the basic building block is the individual cell.
- (b) In the vector data model, the basic building block is the individual cell.
- (c) In the vector data model, well-defined boundaries are represented.
- (d) In the vector data model, locations are well represented.
20. What is the long form of the term 'HTML', used in relation to Internet?
- (a) Hyper Tool Markup Language
- (b) Hybrid Text Making Language
- (c) Hyper Text Markup Language
- (d) Hybrid Test Making Language
21. The emergence of electronic commerce can be defined as
- (a) The transaction of business on the Internet
- (b) Electronic education on the Internet
- (c) Electrical methodologies for transaction
- (d) Communication on the Internet
22. What is the full form of ASCII?
- (a) All Standard Characters for Information Identity
- (b) American Standard Code for Information Interchange
- (c) All Simple Codes for Infotainment Interests
- (d) American Standard Characters for Information Interchange
23. What is cyber bullying?
- (a) Spamming
- (b) Scareware
- (c) Threatening through Internet
- (d) Adware
24. In the Western Himalayas, fruit gardens are developed due to ____.
- (a) Soil in the Western Himalayan region being good for the growth of fruit gardens
- (b) the Western Himalayan region receiving rainfall in winter, which is favourable for the growth of fruit gardens
- (c) the amount of rainfall being generally low in the Western Himalayas
- (d) Mountain climate being favourable for the growth of fruit gardens
25. Which of the following atmospheric conditions is responsible for the occurrence of the Indian climatic phenomena 'Retreating Monsoon'?
- (a) Expansion of high pressure belt from north-west to south-east direction in India.
- (b) The south-west monsoon winds reach the foothills of the Himalayas, blocked by the Himalayan ranges, and then retreat from the Himalayas.
- (c) Apparent movement of the Sun.
- (d) Occurrence of steep pressure gradient in the Indian sub-continent.

ANSWERS

16. (c) 17. (a) 18. (d) 19. (a) 20. (c) 21. (a) 22. (b) 23. (c)
24. (b) 25. (a)