

प्रश्न
संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)



भारत का नं. 1 संस्थान
कौटिल्य एकेडमी
सफलता का प्रवेश द्वार...

1	A	Temperature Inversion → Increase in temperature when go up, opposite to normal decrease with height
		Example — Vallys, cold weather, at Tropopause.
1	B	<u>Mixed farming</u> → Combination of various types of crop in one season of agriculture.
		eg → Treeplantation along with crop
		Benefit → Better income, Better fertility of soil.
1	C	Relief and Rehabilitation →
		• Providing safety, protection from disaster for short term eg — medical help, food, shelter.
		• Rehabilitation → providing alternate shelter, livelihood, its long term measure.
1	D	Relative Humidity → • Presence of moisture in air.
		• measured by = $\frac{\text{moisture in air present}}{\text{maximum saturation}}$.
		• help in analysis of weather condition, cloud studies, rainfall.

Trying to write as per New Booklet format.



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2	A	India has <u>5th</u> largest coal reserves in world at <u>320 Bmt.</u>
		main regions of coal are — Top 5 states
		• Jharkhand (1 st) • Odisha • Chhattisgarh • Bengal • Madhya Pradesh
		→ mines at Raniganj, Dhanbad, Bokaro, Singrauli,
		• Type of coal is Gondwana & Teritary (98%)
		• mainly Bituminous coal is found (60-80% C) Lignite & peat coal is in — Tamil Nadu (Neyveli)
		• Anthracite is in → Jammu & Kashmir.
		Coal fulfill <u>60%</u> power requirement in India.
2	B	Petroleum is found in following regions.
		① North East → Digboi, Naharkatia (Assam), Ampibazar.
		②. West coast → Bombay High (Maharashtra) — offshore
		↳ onshore → Gujrat — Ankleshwar, Malol field
		③ • Krishna — Godavari basin — Deltaic region
		↳ eg — Rawa oil field
		• Tamil Nadu → Cauvery basin



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2	C	Spring tide	Neap tide
<input type="checkbox"/>	<input type="checkbox"/>	• Rise in water more than normal & lower than normal lower in lower tide	• Rise in water less than normal and (high tide) and higher than low tide.
<input type="checkbox"/>	<input type="checkbox"/>	• Sun and moon along straight line (in same force)	• Sun and moon at right angle (counteract forces)
<input type="checkbox"/>	<input type="checkbox"/>	• Occurs every twice a month	• Also occur twice in month
<input type="checkbox"/>	<input type="checkbox"/>	• On full moon & New moon	• 7 days after each event of spring tide
<input type="checkbox"/>	<input type="checkbox"/>		
2	D	Volcanic Land forms	
<input type="checkbox"/>	<input type="checkbox"/>	(Intrusive)	(Extrusive)
<input type="checkbox"/>	<input type="checkbox"/>	→ Sill, dykes	→ Crater
<input type="checkbox"/>	<input type="checkbox"/>	→ Lopolith	→ shield, domes
<input type="checkbox"/>	<input type="checkbox"/>	→ Laccolith	→ caldera
<input type="checkbox"/>	<input type="checkbox"/>	→ Batholiths	→ caldera lakes (Lake Toba)
<input type="checkbox"/>	<input type="checkbox"/>	→ Foccolith.	→ lava plateau (Deccan)
<input type="checkbox"/>	<input type="checkbox"/>		Cratons
<input type="checkbox"/>	<input type="checkbox"/>		

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2	E	India has adopted following methods — Soil conservation	
		1. <u>Afforestation</u> → by planting tree through MGNREGA, National Bamboo mission	
		2. <u>Farming methods</u> → Contour bunding, Terrace farming, strip cultivation, checking shifting cultivation.	
		3. <u>International cooperation</u> — REDD+, Paris Agreement	
		4. INDC → increase forest cover.	
		4. <u>National mission</u> → • Promote Agro forestry, Green mission, pm Krishi sinchai yojana	
		5. <u>Irrigation methods</u> → Drip, micro irrigation, PM Kisan	
		6. Others → mulching, Rock dam, inter cropping etc.	
2	F	Industry require following	
		(Back ward linkages)	(Forward linkages)
		→ Easy availability of cheap raw material	→ low cost of logistics
		→ efficient machines	→ Transportation link from unit to market
		→ Accessibility to low interest credit/capital	→ Easy access to market & growth centre
		→ skilled labour force	→ Storage facilities
		→ modern technology, Transfer of technology	→ Packaging
		→ Transportation from mines to manufacturing units	→ Communication easy.



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२	I							
२	J	<p style="text-align: center;">Interior of Earth</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Crust</th> <th style="width: 33%;">Mantle (upper & lower)</th> <th style="width: 33%;">Core</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> • outer most part • Thickness - 8-40 km • Brittle • oceanic crust & continental crust • consist of silica & Al </td> <td> <ul style="list-style-type: none"> • middle part • 2900 km thick • Lithosphere = upper mantle + crust • Asthenosphere = 80-200 km ↳ viscous </td> <td> <ul style="list-style-type: none"> • inner most part • consist of iron and Nickel • outer core - molten • inner core - solid • Denser • Thickness = 3200 km </td> </tr> </tbody> </table> <p>The diagram shows a vertical cross-section of the Earth's interior. From top to bottom, the layers are: Crust, Lithosphere, Asthenosphere, Mesosphere, Outer Core, and Inner Core. The boundary between the Lithosphere and Asthenosphere is labeled as the Moho discontinuity. The boundary between the Mesosphere and the Outer Core is labeled as the Gutenberg discontinuity. The Outer Core is further divided into an outer part and an inner part, collectively labeled as the Barysphere.</p>	Crust	Mantle (upper & lower)	Core	<ul style="list-style-type: none"> • outer most part • Thickness - 8-40 km • Brittle • oceanic crust & continental crust • consist of silica & Al 	<ul style="list-style-type: none"> • middle part • 2900 km thick • Lithosphere = upper mantle + crust • Asthenosphere = 80-200 km ↳ viscous 	<ul style="list-style-type: none"> • inner most part • consist of iron and Nickel • outer core - molten • inner core - solid • Denser • Thickness = 3200 km
Crust	Mantle (upper & lower)	Core						
<ul style="list-style-type: none"> • outer most part • Thickness - 8-40 km • Brittle • oceanic crust & continental crust • consist of silica & Al 	<ul style="list-style-type: none"> • middle part • 2900 km thick • Lithosphere = upper mantle + crust • Asthenosphere = 80-200 km ↳ viscous 	<ul style="list-style-type: none"> • inner most part • consist of iron and Nickel • outer core - molten • inner core - solid • Denser • Thickness = 3200 km 						

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3	A	Peninsular Plateau is part of Gondwanaland and hence very old and subjected to denudation by various agents.
		It consist of many hill ranges, rich in mineral resources and divided as follows -
		. physiographic division
		↓ ↓ ↓ ↓
		Central Highlands Deccan Plateau Northeastern Ranges Plateaus.
		(1) <u>Central highland</u> - It is northern part and lies between North plains and Narmada. In west lies Aravallis and Satpura in South.
		It is subdivided as -
		(a) <u>marwar uplands</u>
		↳ East of Aravallis
		↳ Rolling plain by Banas river.

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<input type="checkbox"/>	<input type="checkbox"/>	(b) <u>Madhya Bharat Pathar.</u>
<input type="checkbox"/>	<input type="checkbox"/>	→ lies east of malwa uplands
<input type="checkbox"/>	<input type="checkbox"/>	→ districts Neemuch, Mandla, Gwalior etc.
<input type="checkbox"/>	<input type="checkbox"/>	(c) <u>malwa plateau</u>
<input type="checkbox"/>	<input type="checkbox"/>	→ western madhya pradesh, between Aravalli and vindhya
<input type="checkbox"/>	<input type="checkbox"/>	→ Rivers → Chambal, Kshipra,
<input type="checkbox"/>	<input type="checkbox"/>	→ Basalt rock structure.
<input type="checkbox"/>	<input type="checkbox"/>	⊙
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Fig. <u>Peninsular plateau region</u>



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<input type="checkbox"/>	<input type="checkbox"/>	d) Bundelkhand - In mp & UP, South of Yamuna
		e) Baghelkhand - East of Malwa range
<input type="checkbox"/>	<input type="checkbox"/>	f) Chotanagpur plateau → In Jharkhand, Chattisgarh, ↳ sub divided - Rajmahal hill, Hazaribagh etc
<input type="checkbox"/>	<input type="checkbox"/>	(2) Deccan plateau - South of Narmada River
<input type="checkbox"/>	<input type="checkbox"/>	Inverted triangle
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Basaltic
		• Deccan traps • Malnad plains
<input type="checkbox"/>	<input type="checkbox"/>	(3) North East plateau → Meghalaya plateau
<input type="checkbox"/>	<input type="checkbox"/>	separated by Rajmahal Gurb Gap.
		• subdivided as Garo, Khasi, Jaintia.
<input type="checkbox"/>	<input type="checkbox"/>	These also include ranges like Aravalli, Satpura, Vindhyan, Eastern & western Ghats.
<input type="checkbox"/>	<input type="checkbox"/>	The Peninsular is rich in mineral resources like coal, Iron, Aluminium, copper etc. boosting economy, supporting ecosystem & diversity.

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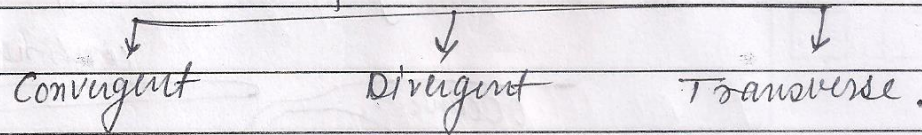
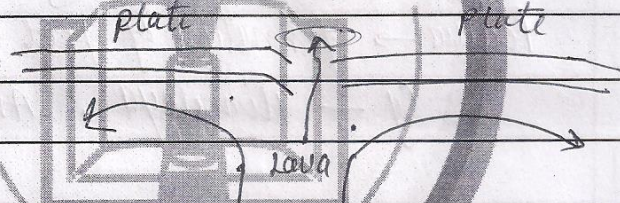
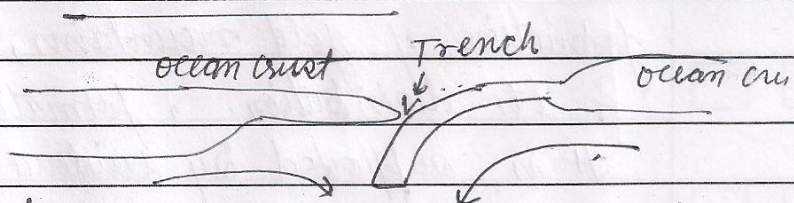
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	B	Plate Tectonic theory is the most modern and evolving that aim to give answers to motion of plates relative to each other. These are based on & developed over convectional current hypothesis and sea floor spreading theory.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			It has following postulates —
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			(1) Outermost layer is lithosphere — consist of (crust + upper mantle) and it floats over asthenosphere
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			(2) Types of plates —
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			(a) oceanic plates — completely in ocean
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			(b) continental crust (C.C)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			(c) : oceanic & continental both (O.C-)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			→ It divides crust into 7 - major plates 20 - minor plates
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			(3) Plate move under influence of mantle cells and resulting into interactions.

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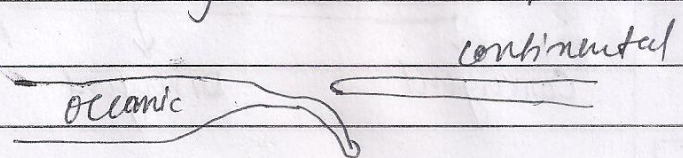
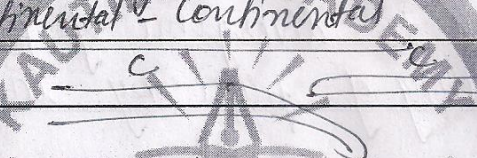
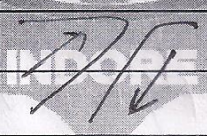
<input type="checkbox"/>	<input type="checkbox"/>	There are 3 types of Boundary Interaction
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	① Divergent plate interaction —
<input type="checkbox"/>	<input type="checkbox"/>	also known as Constructive plate interaction .
<input type="checkbox"/>	<input type="checkbox"/>	• Due to divergence of plate and filling of place by lava
<input type="checkbox"/>	<input type="checkbox"/>	• Ex: 
<input type="checkbox"/>	<input type="checkbox"/>	example → • African Rift valley
<input type="checkbox"/>	<input type="checkbox"/>	• formation of Atlantic ocean.
<input type="checkbox"/>	<input type="checkbox"/>	② Convergent plate interaction →
<input type="checkbox"/>	<input type="checkbox"/>	3 types
<input type="checkbox"/>	<input type="checkbox"/>	(a) ocean-ocean crust collision —
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	features → • formation of Trench, Archipelago due to volcano.

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<input type="checkbox"/>	<input type="checkbox"/>	(b) Ocean-Continental Collision —
		↳ subduction of cont oceanic plate (heavy)
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	• Example → along west pacific coast →
<input type="checkbox"/>	<input type="checkbox"/>	Japan.
<input type="checkbox"/>	<input type="checkbox"/>	(c) Continental-Continental
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	feature → formation of fold mountains
		Eg — Himalaya, Andes etc
<input type="checkbox"/>	<input type="checkbox"/>	(3) Transform Boundary → plates slip each other
<input type="checkbox"/>	<input type="checkbox"/>	Eg → Los Angeles - San Francisco
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Plate tectonic give answers to
<input type="checkbox"/>	<input type="checkbox"/>	formation of fold mountains, Earthquake
<input type="checkbox"/>	<input type="checkbox"/>	& its distribution, formation of Archipelagos
<input type="checkbox"/>	<input type="checkbox"/>	It is supported by evidence like magnetic
<input type="checkbox"/>	<input type="checkbox"/>	rocks, eg mapping etc.

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<input type="checkbox"/>	<input type="checkbox"/>	As per prospects
<input type="checkbox"/>	<input type="checkbox"/>	As per 'The world Population Prospects 2019'
<input type="checkbox"/>	<input type="checkbox"/>	by UN, India will surpass China to
<input type="checkbox"/>	<input type="checkbox"/>	become largest country by population by 2027.
<input type="checkbox"/>	<input type="checkbox"/>	This demands for Population
<input type="checkbox"/>	<input type="checkbox"/>	stabilisation which means size of population
<input type="checkbox"/>	<input type="checkbox"/>	remains unchanged i.e. zero population
<input type="checkbox"/>	<input type="checkbox"/>	growth. India's National Population Policy
<input type="checkbox"/>	<input type="checkbox"/>	aims to achieve stabilisation by <u>2045</u>
<input type="checkbox"/>	<input type="checkbox"/>	Parameters of population stability are -
<input type="checkbox"/>	<input type="checkbox"/>	① Total fertility rate (TFR) → It is number of
<input type="checkbox"/>	<input type="checkbox"/>	children a woman will have in her reproductive
<input type="checkbox"/>	<input type="checkbox"/>	age. <u>2.1</u> is the replacement level.
<input type="checkbox"/>	<input type="checkbox"/>	India has achieved — TFR of <u>2.3</u> (2017)
<input type="checkbox"/>	<input type="checkbox"/>	with 25 states achieving TFR of 2.1
<input type="checkbox"/>	<input type="checkbox"/>	② Crude Birth Rate — It is live birth per 1000
<input type="checkbox"/>	<input type="checkbox"/>	population.
<input type="checkbox"/>	<input type="checkbox"/>	It has declined from 24 (2005) → 20 (2017)
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	



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<input type="checkbox"/>	<input type="checkbox"/>	(3) <u>Decadal growth rate</u> — growth of population in 10 years.
<input type="checkbox"/>	<input type="checkbox"/>	Declined from 21% (1999) → 17.5% (2010)
<input type="checkbox"/>	<input type="checkbox"/>	(4) <u>Mortality rates</u>
<input type="checkbox"/>	<input type="checkbox"/>	Infant mortality, under 5 mortality, maternal mortality
<input type="checkbox"/>	<input type="checkbox"/>	• IMR declined from 140 (1950) → 34 (2017)
<input type="checkbox"/>	<input type="checkbox"/>	(5) <u>Level of migration</u> → International and Internal.
<input type="checkbox"/>	<input type="checkbox"/>	(6) <u>Population pyramid and structure.</u>
<input type="checkbox"/>	<input type="checkbox"/>	(7) <u>Age of marriage, family planning, contraceptive use etc.</u>
<input type="checkbox"/>	<input type="checkbox"/>	Government has taken various Policy measures to control population rise in India.
<input type="checkbox"/>	<input type="checkbox"/>	* <u>National Population Policy, 2000</u>
<input type="checkbox"/>	<input type="checkbox"/>	→ Targets population stabilization by, 2045
<input type="checkbox"/>	<input type="checkbox"/>	→ Reduce IMR from 140 to less than 30
<input type="checkbox"/>	<input type="checkbox"/>	→ Based on Voluntary and informed choice
<input type="checkbox"/>	<input type="checkbox"/>	→ Reduce MMR to less than 100 per 1 lakh live.
<input type="checkbox"/>	<input type="checkbox"/>	→ universal immunisation
<input type="checkbox"/>	<input type="checkbox"/>	→ Promote family planning.
<input type="checkbox"/>	<input type="checkbox"/>	→ Institutional deliveries — 80%
<input type="checkbox"/>	<input type="checkbox"/>	→ Trained deliveries — 100%

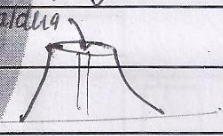
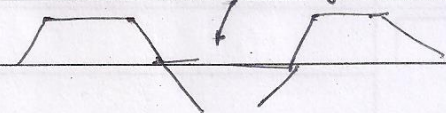
PART-B

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1	A	<ul style="list-style-type: none"> • It is land which is used for agricultural production. • It can be $\left\{ \begin{array}{l} \text{arable} \rightarrow \text{plowing, tillage done} \\ \text{fallow} \rightarrow \text{not growing presently.} \end{array} \right.$ • India has around 44% land as cultivable.
1	B	<p>(Loo) are hot, seasonal winds over north India.</p> <ul style="list-style-type: none"> • Carry heat^{dust} & cause of heat wave, cloudburst. • During summer season from western part.
1	C	<ul style="list-style-type: none"> • Caldera - large hollow portion on top of volcanoes • accumulation of water form lake • formed by accumulation of lava. 
1	D	<p>① Corals losing its coral due to loss of Zooxanthellae</p> <p>② Reason - High temperature, acid rain, climate change</p> <p>③ Affected area \rightarrow Great barrier reef (Australia), coast of India etc.</p>
1	E	<ul style="list-style-type: none"> • Rift valley are low land between 2 high lands • Formed by faults & subsequent subsidence • Eg - Narmada, Damodar, Mahanadi Rift valleys 

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1	F	① Region in North Pacific Ocean surrounded by East Asia & West America. → Horse shoe shape or Ring
		② Named because of huge number of volcanoes here.
		③ world's 70% Earthquake occur here.
		④ features → Trenches, Volcanoes, Archipelago, etc
1	G	• Moraines are rocks carried down by the glaciers as it moves down the mountain.
		• It forms large blocks varying size & form lake
		• can lead to glacial lake outburst flood.
1	H	(Inselsberg) - Free standing rock structure
		↳ steep sides and flat top
		↳ region - Africa, Brazil etc. o
1	I	• It means using resources for present generation by keeping needs of future generation in mind.
		• Given by Brundtland Report in 1987 of UN.
		• UN SDG 2015-30 promotes 17 Goals 169 targets
1	J	
		Problems of soil - • Alkalinisation & Salinisation (Eg - Punjab)
		• Soil erosion eg - Chambal ravine (Gully erosion)
		• Degradation due to deforestation, poor farming practices, excessive fertilizers etc.

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1	K	What → Human disaster, caused by Nuclear Plant fault when & where → 26 April 1986, Pripyat, Chernobyl, Soviet
		Impact → Environment damage, loss of life, Economic losses. efforts → Protective dome / shield, Rehabilitation.
1	L	• means use of water in efficient manner for irrigation • methods → Drip Irrigation, Sprinkler or manual
		• Scheme → PM Krishi Sinchai Yojana (more drop per drop) • Benefit → Saves water, Power, prevents soil erosion.
1	M	Death valley → Desert valley in Mojave desert of California USA. one of the hottest places on earth.
1	N	① what → deposits of remains of organism and salts. ② where → Pelagic (floor of sea), Neritic (shelf floor)
		③ types → Terrigenous (mud - Red, Blue Green) Biogenous like oozes; Polymetallic Nodules
		Extraction govern by UN law of sea.
1	(O)	• Region of 30° North & South hemisphere around Earth. • Very calm, dry wind, zone of descending wind • Ancient time, horse were thrown to reduce load of ship.

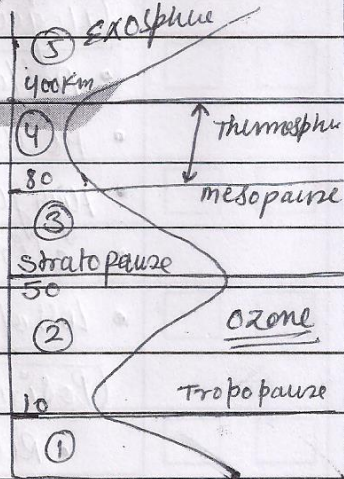
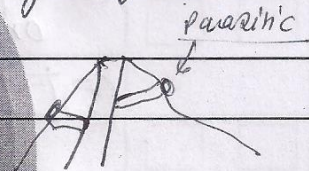
प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)



भारत का नं. 1 संस्थान
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2	A	Cones are volcanic landform, formed by accumulation of lava. Types of cones are —
		① (Composite cone) — very high and steep Composite cone. ↳ alternate layers of lava & Ash ↳ Also called Strato volcanous
		② (Cinder cone) — smaller volcano but very explosive. ↳ accumulation of cinders, scoria around cone.
		③ (Parasitic cone) → subsidiary dykes from main cone act as parasite
		④ Others — spatter and tuff
		Features like caldera lake form by broken collar at top.
2	B	Atmosphere is classify on basis of Temperature, Pressure, —
		① (Troposphere) (upto 10 km from earth) ↳ with height temperature (T) decreases
		② (Stratosphere) — (10 km — 50 km) ↳ with height temperature increases.
		↳ <u>Ozone</u> present at around 30 km.
		③ (mesosphere) (50 — 80 km) Temp decrease with height
		④ (Thermosphere) — upto 400 km ↳ Temperature rises due to ions presence
		⑤ Exosphere — Beyond 400 km ↳ Rarefied air ↳ Temperature increases.



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<input type="checkbox"/>	<input type="checkbox"/>	Soil supports plants & formed by following factors —
<input type="checkbox"/>	<input type="checkbox"/>	① (Climate) → Tropical climate faster decomposition → Temperate coniferous → acidic soil
<input type="checkbox"/>	<input type="checkbox"/>	② (Topography) — like mountain (Himalaya) → thin profile → North Plain → depositional alluvial soil.
<input type="checkbox"/>	<input type="checkbox"/>	③ (Parent rock) — eg — Deccan lava plateaus forms Black Cotton soil; Heta
<input type="checkbox"/>	<input type="checkbox"/>	④ (Vegetation) and (living organism) — organism decompose organic matters into humus
<input type="checkbox"/>	<input type="checkbox"/>	⑤ (Time) → Dense basalt takes long time to form soil.
<input type="checkbox"/>	<input type="checkbox"/>	ICAR has classify 8 type of soil in India.
<input type="checkbox"/>	<input type="checkbox"/>	Ecosystem has been affected by human activities — (Negative Impact)
<input type="checkbox"/>	<input type="checkbox"/>	• Deforestation for agriculture land, wood etc
<input type="checkbox"/>	<input type="checkbox"/>	• Pollution — air pollution, Land & water pollution.
<input type="checkbox"/>	<input type="checkbox"/>	• High fertilizer use → eutrophication • Coral bleaching.
<input type="checkbox"/>	<input type="checkbox"/>	• climate change • Biodiversity loss — extinction high.
<input type="checkbox"/>	<input type="checkbox"/>	• loss of habitat • forest fires •
<input type="checkbox"/>	<input type="checkbox"/>	(Positive impact) — • Afforestation • wildlife sanctuaries
<input type="checkbox"/>	<input type="checkbox"/>	• Recycling • creation of Laws for environment protection
<input type="checkbox"/>	<input type="checkbox"/>	• International agreement — Paris agreement (UNFCCC)
<input type="checkbox"/>	<input type="checkbox"/>	• cleaning of seas, lakes, wetland — Ramsar sites.
<input type="checkbox"/>	<input type="checkbox"/>	caused
<input type="checkbox"/>	<input type="checkbox"/>	Human have both positive and negative changes in Ecosystem.

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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>PVTGS are more vulnerable amongst Tribals.</p> <ul style="list-style-type: none">• Debar Commission classified them in 1975.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Defined as —</p> <ul style="list-style-type: none">• Declining population or stagnant• low literacy• Threat to culture
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none">• Living in Isolation from mainstream• Economically backward
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none">• Poor agriculture technology like Ponds.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>odisha. Total PVTG are 75,</p> <ul style="list-style-type: none">• odisha has highest PVTG.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>MP has 3 PVTG — Bhauiya, Baiga & Sahariya</p>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Jute is cash crop and is prime factor for industry.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none">• Location → most number in west Bengal, Bihar, odisha• Raw material → jute is prime raw material
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none">• Usage → jute bag for sugar, ropes etc
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none">• Problem →• jute region to Bangladesh after partition• old machine → inefficiency• Synthetic products → Low demand.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none">• Programmes —• Golden fibre Revolution• Jute-ICARE• Mandatory 100% packaging of grain.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none">• Requirements → Modernization, Research and development
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>jute is ecofriendly hence a suitable replacement.</p>

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2	I	Indian monsoon originates from south west by 15 June.
		Process —
		① By June ITCZ over North India, heating and low pressure
		② It creates low pressure and wind from Indian Ocean
		③ This takes moisture and
		divides into (a) Bay of Bengal branch
		(b) Arabian Sea branch.
		④ This is intercepted by mountains & cause of Orographic rainfall.
		• Other factors are → La Niña, EL Niño, Dipole, • North East rain caused by reversal of Trade winds.
2	J	As per NDMA, 12% of India's land is prone to flooding.
		→ Affected areas → Ganga-Brahmaputra basin, Cauvery basin,
		→ Urban flooding — Mumbai, Chennai, Hyderabad, Pune etc.
		→ Problems = Agriculture loss, life & property loss, economic loss.
		→ Reason = climate change, poor urbanisation, siltation etc.
		Solution & Approach → ① Early warning system.
		② World Bank's DRIP → Dam management programme.
		③ Smart cities → urban planning
		④ Interlinking of rivers like Ken-Betwa project.
		⑤ Implementing Sendai framework — Risk Reduction.
		⑥ NDMA Guideline of Urban Flooding, 2016
		Preparedness and creating resilience help tackle flood.

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कौटिल्य एकेडमी
सफलता का प्रवेश द्वार...

<input type="checkbox"/>	<input type="checkbox"/>	3	<input type="checkbox"/>	c	Non-Conventional sources of energy are those which have been developed in recent past
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		and are compared to conventional sources like coal, oil and gas and synonymous to
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Renewable sources in India.
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important sources are —
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		1. Solar energy — converting sun light into electricity using solar panels.
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		2. Wind energy — wind's kinetic speed into electricity
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		offshore, onshore.
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		3. Bio mass — energy from. Jirwood, cow dung etc
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		4. Geothermal energy — energy from heat beneath
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		earth like hot rock, geysers, lava etc
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		5. waste to energy — municipal solid waste,
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		and sewage, through → Incineration,
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		gasification
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		6. fuel cells, Bio fuels etc
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		7. Tidal energy — energy from changes in high low tide.
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		

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कौटिल्य एकेडमी
सफलता का प्रवेश द्वार...

<input type="checkbox"/>	<input type="checkbox"/>	Present status in India —
<input type="checkbox"/>	<input type="checkbox"/>	• Renewable & non-conventional energy installed capacity = 87000 MW i.e. <u>23%</u>
<input type="checkbox"/>	<input type="checkbox"/>	Others
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Solar energy
<input type="checkbox"/>	<input type="checkbox"/>	→ leading states are Rajasthan, Madhya Pradesh, Maharashtra, Gujarat etc
<input type="checkbox"/>	<input type="checkbox"/>	wind → • Jaisalmer wind park - 1600 MW
<input type="checkbox"/>	<input type="checkbox"/>	• Tamil Nadu • Maharashtra • Madhya Pradesh (4000 MW)
<input type="checkbox"/>	<input type="checkbox"/>	tidal → proposed in Gulf of Kutch, Gujarat
<input type="checkbox"/>	<input type="checkbox"/>	Biomass → Andhra Pradesh, Tamil Nadu, U.P.
<input type="checkbox"/>	<input type="checkbox"/>	Thermal → potential regions are Himalaya, Godavari basin.

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कौटिल्य एकेडमी
सफलता का पथ है द्वारा...

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Oceanic salinity is the measure of amount of salts present in ocean per million.
<input type="checkbox"/>	<input type="checkbox"/>	These salts include NaCl, $MgCl_2$, $MgSO_4$ & $CaSO_4$ etc. Average salinity of ocean is taken as 35 ppm.
<input type="checkbox"/>	<input type="checkbox"/>	Reason for salinity → physical and chemical actions like hydrolysis, volcanic activity inside ocean, reaction of water on rock containing salt.
<input type="checkbox"/>	<input type="checkbox"/>	Salts follow principle of conservation i.e. total salts in ocean is constant.
<input type="checkbox"/>	<input type="checkbox"/>	There are various controlling factor of salinity —
<input type="checkbox"/>	<input type="checkbox"/>	① Rate of Evaporation from sea water. Eg → Red sea has high salinity.
<input type="checkbox"/>	<input type="checkbox"/>	② Rate of precipitation → high precipitation decreases salinity Eg — Tropical region less due to frequent precipitation than Subtropical.

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<input type="checkbox"/>	<input type="checkbox"/>	(3) Addition of fresh water → due to rivers eg. Black sea, Persian gulf
<input type="checkbox"/>	<input type="checkbox"/>	(4) High temperature → leads to high evaporation & high salinity
<input type="checkbox"/>	<input type="checkbox"/>	(5) Region of Glaciers → <ul style="list-style-type: none">• melting adds fresh water → decreases salinity• freezing adds reduces fresh water, so high salinity → Region of North poles.
<input type="checkbox"/>	<input type="checkbox"/>	(6) Enclosure of ocean → eg. Mediterranean sea has high salinity, no intermixing.
<input type="checkbox"/>	<input type="checkbox"/>	# (Distribution of salinity)
<input type="checkbox"/>	<input type="checkbox"/>	(A) Horizontal distribution
<input type="checkbox"/>	<input type="checkbox"/>	• North hemisphere more saline than south due to less ocean, high temperature.
<input type="checkbox"/>	<input type="checkbox"/>	• So Salinity decreases pole wards
<input type="checkbox"/>	<input type="checkbox"/>	• But Tropical don't have highest salinity due to Rainfall, upwelling.

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सफलता का प्रवेश द्वार...

<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	• <u>Nuclear testing</u> Eg - North Korea.
<input type="checkbox"/>	<input type="checkbox"/>	(Earthquake in Kutch)
<input type="checkbox"/>	<input type="checkbox"/>	what • what — Earthquake occurred
<input type="checkbox"/>	<input type="checkbox"/>	in Kutch region of Gujarat
<input type="checkbox"/>	<input type="checkbox"/>	• Intensity and magnitude — 7.9 Richter scale
<input type="checkbox"/>	<input type="checkbox"/>	• when — 26 January 2001
<input type="checkbox"/>	<input type="checkbox"/>	• Area affected — 21 of 25 districts
<input type="checkbox"/>	<input type="checkbox"/>	↳ most affected: Kutch, Ahmedabad,
<input type="checkbox"/>	<input type="checkbox"/>	Jamnagar, Rajkot.
<input type="checkbox"/>	<input type="checkbox"/>	• Epicentre → North East of Bhuj, 25 km.
<input type="checkbox"/>	<input type="checkbox"/>	(Impact)
<input type="checkbox"/>	<input type="checkbox"/>	→ <u>Casualties</u> → Nearly 19,000 died
<input type="checkbox"/>	<input type="checkbox"/>	→ 1.5 lakh people injured
<input type="checkbox"/>	<input type="checkbox"/>	→ <u>Economic losses</u> — Loss of building infrastructure
<input type="checkbox"/>	<input type="checkbox"/>	— 10 thousand industrial units affected
<input type="checkbox"/>	<input type="checkbox"/>	— Loss of ₹ 150 billion.
<input type="checkbox"/>	<input type="checkbox"/>	— Reconstruction cost = ₹ 100 billion.

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कौटिल्य एकेडमी
सफलता का प्रवेश द्वार...

<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Social Impact → affected health infrastructure ↳ children education, psychological problem.
<input type="checkbox"/>	<input type="checkbox"/>	Immediate issues ↳ shelter, food, medical aid, livelihood etc
<input type="checkbox"/>	<input type="checkbox"/>	(Government Response)
<input type="checkbox"/>	<input type="checkbox"/>	Short term
<input type="checkbox"/>	<input type="checkbox"/>	↳ Rescue & relief operations ↳ Temporary food, shelter provided
<input type="checkbox"/>	<input type="checkbox"/>	mid term
<input type="checkbox"/>	<input type="checkbox"/>	↳ Reconstruction and Rehabilitation of 3 lakh families ↳ GSDMA created
<input type="checkbox"/>	<input type="checkbox"/>	Long term
<input type="checkbox"/>	<input type="checkbox"/>	↳ Capacity building of GSDMA ↳ Reduction and mitigation plan for future ↳ Early warning system.
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	It was worst earthquake in past 200 years but Kutch converted it into opportunity and they Build back better and resilient infrastructure today.
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	