



आपकी सफलता का प्रवेश द्वार..... इन्दौर कौटिल्य एकेडमी



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प्रतियोगी परीक्षाओं के लिए सर्वश्रेष्ठ संस्थान

सामान्य अध्ययन / GENERAL STUDIES

निर्धारित समय: _____
Time Allowed: _____

अधिकतम अंक _____
Maximum Marks _____

नाम. Name: Anupriya Shrivastava

मोबाईल नं. Mobile No: 8982321510

ई-मेल पता. E-mail Address: anupriyashrivastava46@gmail.com

रोल नं. Roll No: _____ दिनांक (Date) 24/08/21

परीक्षा का माध्यम
(Medium of Exam) English
विद्यार्थी के हस्ताक्षर
(Student's Signature) Ash

प्रश्न - पत्र के लिये विशिष्ट अनुदेश

कृपया प्रश्नों का उत्तर देने से पूर्व निम्नलिखित प्रत्येक अनुदेश को ध्यानपूर्वक पढ़ें :

- इसमें 3 प्रश्न हैं तथा सभी प्रश्न अनिवार्य हैं।
- प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश-पत्र में किया गया है, और इस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यू.सी.ए.) पुस्तिका के मुख पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिखे गए उत्तर पर कोई अंक नहीं मिलेंगे।
- प्रश्नों में शब्द सामा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

Question Paper Specific Instructions

Please read each of the following instructions carefully before attempting questions :

- There are 3 question and all the questions are compulsory.
- The Number of marks carried by a question/part is indicated against it.
- Answer must be written in the medium authorized in the admission certificate which must be started clearly on the cover of this Question-cum-Answer (QCA) booklet in the space provide.
No marks will be given for answer written in a medium other than the authorized one.
- Word limit in questions, wherever specified, should be adhered to.
- Any page or portion of the page left blank in the answer book must be clearly struck off.

कुल प्राप्तांक (Total Marks Obtained) _____ टिप्पणी (Remarks) _____

प्रश्न
संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

1	A	Scatterometer is a form of radar used to measure surface wind from satellites by <u>scattered microwave radiation</u>
<input type="checkbox"/>	<input type="checkbox"/>	
1	B	Cities on the coast of mediterranean sea - 1) Port Said (Egypt) 2) Gaza city (State of Palestine)
<input type="checkbox"/>	<input type="checkbox"/>	
1	C	Keibul Lamjao national park is only floating national park of world situated in Bishupur district of Manipur. Famous for dancing deer
<input type="checkbox"/>	<input type="checkbox"/>	
1	D	Indira point is the southernmost part of India located in island of great Nicobar.
<input type="checkbox"/>	<input type="checkbox"/>	
1	E	Appalachian mountain is a type of old fold mountain present in North America
<input type="checkbox"/>	<input type="checkbox"/>	
1	F	P-wave and S-wave are type of body wave which help to <u>study Seismology</u> .
<input type="checkbox"/>	<input type="checkbox"/>	

प्रश्न
संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

- G Medium and shallow soil mainly found in Morena, Bhind, Gwalior, Shivpuri district of M.P.
- H Samuli river originated from Mandla district of Madhya Pradesh and important tributaries of Sharda river
- I Inland Container Transport Depot of M.P. is - Ratlam, Pithampur, Mandla, Jabalpur, Chhindwada, Kadi, etc.
- J Check dam are small structures constructed to slow down the flow of water backside of Dams.
- K Cold Chain is used in food processing industries in transportation of temperature sensitive product through refrigerated packaging.
- L Marine National Park is a protected sea or lake area which consist of many marine species. eg. Gulf of Kutch, Rani Thansi Marine National Park, Kakimetha marine Sanctuary

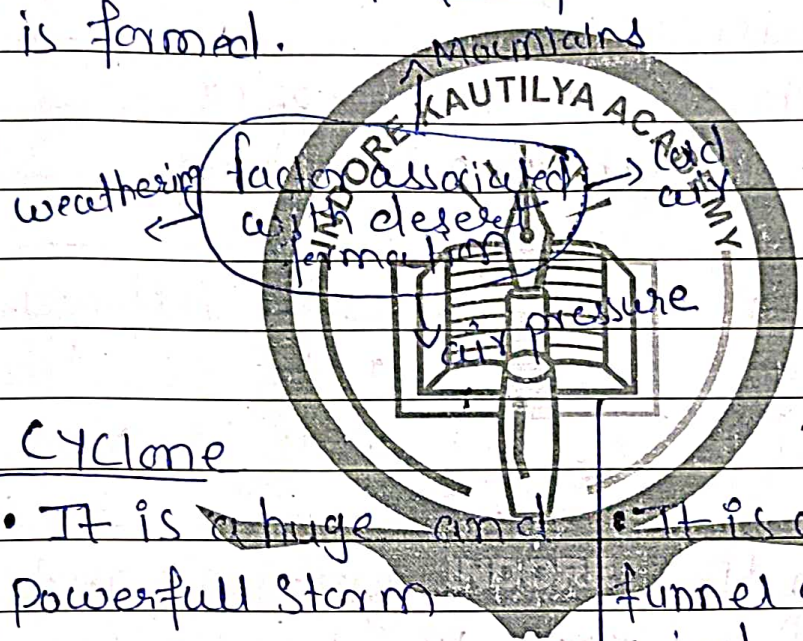
प्रश्न संख्या

- 1 M Shola forest are tropical forest found in high altitude areas. It is only found in Southern western Ghats in India.
- 1 N Geo-tagging is the process of adding geographical identification data on various media post directly from GPS system.
- 1 O Microwave is a short electric wave used to send audio message.
- 2 A Remote Sensing is a technology to gather information and analyzing an object without making any physical contact. This technology is used in various field like. Geography, hydrology, geology, Oceanography etc. A geographic information system (GIS) is used for mapping and analyzing events happen on earth. It is used for Building map for visual reference, Aerial photography for military surveillance, detecting land cover and forest cover, Study snow melt etc.

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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

2 B Desert are formed by weathering process as large variation in temperature between day and night put strain on the rock which consequently break into pieces. when the amount of evaporation is greater than the amount of precipitation then desert is formed.



- Type of desert
- Sub-tropical
 - Coastal
 - Cold winter
 - Polar

2 C Cyclone

Tornado

• It is a huge and powerful storm.

• It is a violent, twisted funnel of high speed wind.

• It is formed when a low pressure area with high pressure all around.

• It is formed when a funnel like column of cold air sink down from a story cloud.

• They have large diameters and high speed wind go around the centre violently and caused heavy rainfall.

• They have smaller diameters and warm air rises up which cause high speed circulating wind.

प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

2	D	<p>Chambal valley is feature of Badland topography which formed due a vertical erosion by streams and river flowing through this area. following factor helps to prevent soil erosion are—</p> <ul style="list-style-type: none"> • Crop rotation • Strip cropping • Contour ploughing • Mulching • Contour barrier • Check dam • Shelterbelts • Sand fence • Afforestation • Checking overgrazing • Terrace farming • Ploughing the land in Right direction
2	E	<ul style="list-style-type: none"> • Bhagoria Haat is the important and colorful festival of Bheel tribe • The week-long festival is organised at different Bhagoria haats (mainly in western madhya pradesh) • "Haat" is actually in nature of a mass svayamvara or a marriage market • During this the boy supposed to apply "gulal" on the face of girl whom he chooses as his wife, if the girl is willing, she also applies gulal on the boy's face, later they accepted as husband and

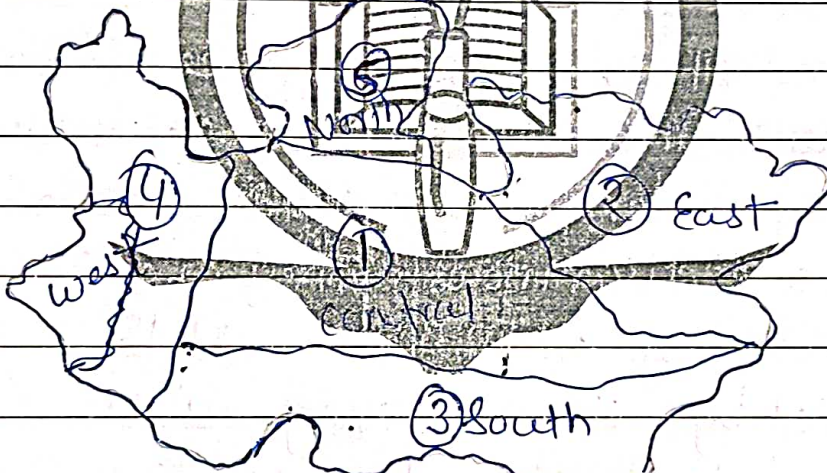
प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

<input type="checkbox"/>	<input type="checkbox"/>	wife by society.
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
2	F	Horticulture is a science of production, utilisation and improvement of horticultural crops such as fruits, vegetable, spices and medicinal and aromatic plants.
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	• M.P. has 4 th rank in total horticultural production
<input type="checkbox"/>	<input type="checkbox"/>	• M.P. is 7 th rank in flower production
<input type="checkbox"/>	<input type="checkbox"/>	• M.P. is largest producer of medicinal plants.
<input type="checkbox"/>	<input type="checkbox"/>	
2	G	Eastern Ghats Western Ghats
<input type="checkbox"/>	<input type="checkbox"/>	• It mark the eastern edge of deccan plateau
<input type="checkbox"/>	<input type="checkbox"/>	• They are discontinuous and irregular and dissected by rivers churning into Bay of bengal
<input type="checkbox"/>	<input type="checkbox"/>	• They lie parallel to eastern coast of India
<input type="checkbox"/>	<input type="checkbox"/>	• Highest height peak Mahendragiri with 1501 metres height
<input type="checkbox"/>	<input type="checkbox"/>	• It mark the western edge of deccan plateau
<input type="checkbox"/>	<input type="checkbox"/>	• They are continuous and crossed through passes only. eg - Thal ghat, Pal ghat
<input type="checkbox"/>	<input type="checkbox"/>	• They lie parallel to western coast of India
<input type="checkbox"/>	<input type="checkbox"/>	• Highest peak is Anai mudli with 2695 metre height.

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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

2 H	<p>A landslide is the movement of a mass of rock debris; they are type of mass wasting with downward movement of soil and rock under direct influence of gravity</p>		
	<p><u>Natural Cause of landslide</u> : <u>Man-made Cause</u></p>		
	<table border="0"> <tr> <td data-bbox="367 817 1021 929"> <ul style="list-style-type: none"> - Geological weak material - Intense rainfall </td> <td data-bbox="1021 817 1495 929"> <ul style="list-style-type: none"> - Human Excavation </td> </tr> </table>	<ul style="list-style-type: none"> - Geological weak material - Intense rainfall 	<ul style="list-style-type: none"> - Human Excavation
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	<table border="0"> <tr> <td data-bbox="367 929 1021 1041"> <ul style="list-style-type: none"> - Earthquake - Volcanic eruption </td> <td data-bbox="1021 929 1495 1041"> <ul style="list-style-type: none"> - Buried pipelines - Deforestation - Roads Construction </td> </tr> </table>	<ul style="list-style-type: none"> - Earthquake - Volcanic eruption 	<ul style="list-style-type: none"> - Buried pipelines - Deforestation - Roads Construction
<ul style="list-style-type: none"> - Earthquake - Volcanic eruption 	<ul style="list-style-type: none"> - Buried pipelines - Deforestation - Roads Construction 		
2 I			
			
	<p>1. Central region is for wheat</p>		
	<p>2. East region is for paddy and wheat</p>		
	<p>3. South region is for rice</p>		
	<p>4. West region is for Cotton, Soyabean, Sorghum</p>		
	<p>5. North region is for Jowar and wheat</p>		

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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

2	J	<p>Space program provide important inputs to handle disaster in various stage i.e. preparedness, vulnerability, mapping, etc. Role of satellite in disaster management are -</p> <p><u>Pre-Disaster</u> - Give weather forecasting, real time image about cyclone building speed, intensity</p> <p><u>During-Disaster</u> - Coordinating people, directing army and NDRF operations, Satellite phone</p> <p><u>Post-Disaster</u> - Use of GIS, creating a database of all past and planning forecasting system. Cooperating with ISRO, NASA, ESA etc.</p>
3	A	<p><u>Remote Sensing</u> is the science of obtaining information about objects or areas from a distance, typically from aircraft or satellite</p> <p><u>Principle of Remote Sensing</u></p> <ul style="list-style-type: none"> • <u>Electromagnetic energy</u> reaching the earth's surface from the sun is reflected, transmitted or absorbed. • Specific targets have an individual and characteristic manner of interacting with

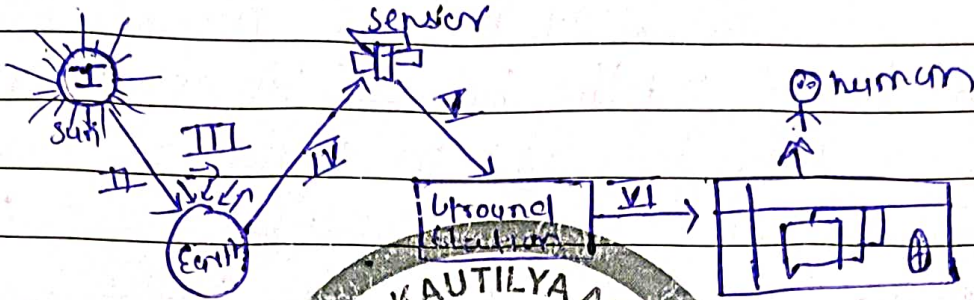
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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

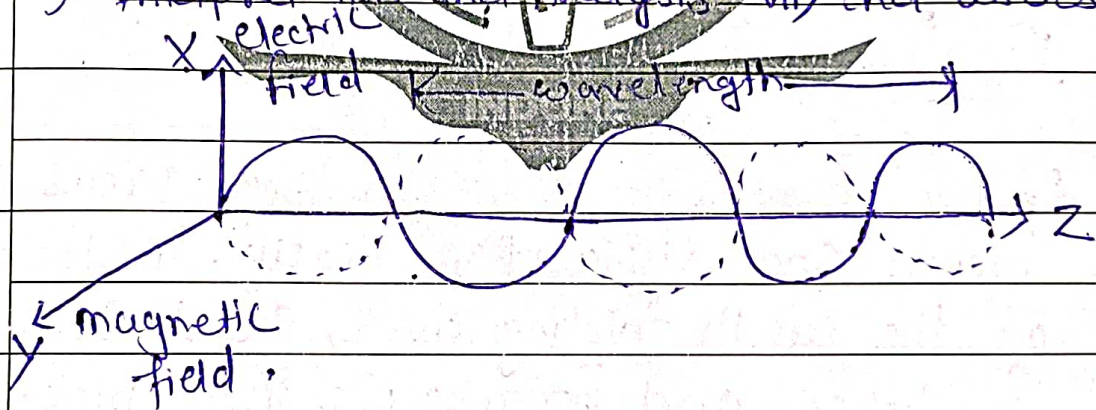
- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | incident radiation that is described by the spectral response of that target. |
| <input type="checkbox"/> | <input type="checkbox"/> | • eg. - Soils of differed types, water with varying degrees of impurities, or vegetation of various species, |
| <input type="checkbox"/> | <input type="checkbox"/> | ⇒ <u>Electromagnetic Radiation</u> - It's requirement for remote sensing is to have an energy source to illuminate the target. This energy is in the form of <u>electromagnetic Radiation</u> . |
| <input type="checkbox"/> | <input type="checkbox"/> | ⇒ <u>Electromagnetic Spectrum</u> - This ranges from the <u>shortest wavelength</u> to the longer wavelength. There are several regions of the electromagnetic spectrum which are useful for remote sensing for most of the purposes the <u>ultraviolet</u> or <u>UV ray</u> is used because it has <u>shortest wavelength</u> . |
| <input type="checkbox"/> | <input type="checkbox"/> | ⇒ Remote sensing deals with the energy visible, infrared rays, thermal and microwave region. these regions are |

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further divided into bands such as blue, green and Red near infrared, mid-infrared and microwave etc



- I) Source of illumination
- II) Radiation and the Atmosphere
- III) Interaction with the Target
- IV) Recording of energy by the sensor
- V) Transmission, Reception and processing
- VI) Interpretation and Analysis
- VII) End users



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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

3 B	<p>Mountains are uplifted portion of the earth surface. It may be narrow at top and broad at the base. Temperature reduce with increase in altitude. That's why high mountain usually covered with snow. Types of mountain are -</p>
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	<p>1. <u>Fold mountain</u> - It is most common type of mountain. It is formed when two plates collide & their edges crumbled when they pushed together. eg. <u>Himalayan mountain, Alps mountain, Rockies mountain, Ural mountain</u></p>
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	<p>2. <u>Block mountain</u> - When large areas are broken and displaced vertically, instead of the earth folding over, earth crust fractures and breaks up into blocks. eg. <u>Vosges mountain in France, Black forest in Germany, Vindhya and Satpura in India.</u></p>
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	<p>3. <u>Dome mountain</u> - It is formed as a result of great amount of magma pushing its way up under the earth crust without</p>
<input type="checkbox"/>	

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

actually erupting onto the surface. once magma cools, it creates a large dome of hard rock under the surface.

4. Volcanic mountains - formed due to volcanic activity, built up from the material ejected from fissures in the earth crust. They build up in successive layers, building volcanic cone. eg. Mt. Kilimanjaro, Mt. Fujiyama.

5. Plateau mountain - It is formed by erosion not by internal activity. Plateau are large flat areas that have pushed above sea level by forces within earth. It is describe as large areas of high level or eg. 600 meter above sea level. plateau mountain mostly found near folded mountains. As years passes streams and river erode the mountain.

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3 C	<p>Madhya Pradesh produces 23 major and minor minerals. <u>MP is India's 7th mineral rich state.</u> <u>MP is rank 3rd in mineral production of India.</u></p>
	<p>→ 1st mineral policy of MP come in 1995 and latest policy was on year 2016.</p>
	<p><u>Important Minerals</u></p>
	<ul style="list-style-type: none"> ● <u>Diamond</u> - <u>MP is only producing state found in</u> <u>Metamorphic rock group at Majhgawan, Rewa.</u>
	<ul style="list-style-type: none"> ● <u>Coal</u> - Also known as <u>Black diamond</u> and found in <u>sedimentary rock</u>. <u>MP ranked 4th in Coal production</u>
	<p>→ <u>Thickest coal layer of India found in</u> <u>Singrauli (135meters)</u>; <u>Sao Sohagpur is the largest coal Reserve of state</u></p>
	<ul style="list-style-type: none"> ● <u>Copper</u> - It is found in <u>igneous rock</u>
	<p>→ <u>Malajkhand is largest mine of copper in</u> <u>India.</u> <u>found in - Malajkhand (Balaghat)</u></p>
	<ul style="list-style-type: none"> ● <u>Lime Stone</u> - Except <u>Gondwana</u> rock <u>limestone is generally found in all type</u> <u>of sedimentary rock of states.</u> <u>found in -</u> <u>Katni, Jabalpur, Satna, Rewa</u>

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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

<input type="checkbox"/>	• <u>Magnese</u> - found in <u>sedimentary rock</u> . MP ranked 3rd in India for magnese production
<input type="checkbox"/>	found in - <u>Barveli (Balaghat), Katangi, Tivodi,</u>
<input type="checkbox"/>	• <u>Asbestos</u> - found in <u>igneous rock</u>
<input type="checkbox"/>	District - <u>Jhabua, Alirajpur, Betul, Dewas</u>
<input type="checkbox"/>	• <u>Bauxite</u> - ore of aluminium.
<input type="checkbox"/>	District - <u>Anuppur, Dindori, Jabalpur</u>
<input type="checkbox"/>	• <u>Mica</u> - mainly found in <u>Kadapa rock</u>
<input type="checkbox"/>	of <u>Gwalior, Chhindwada.</u>
<input type="checkbox"/>	• <u>Other minerals</u>
<input type="checkbox"/>	<u>Mineral</u> District
<input type="checkbox"/>	• <u>Tungsten</u> <u>Hoshangabad</u>
<input type="checkbox"/>	• <u>Dolomite</u> <u>Dewas, Chhateepur, Jabalpur</u>
<input type="checkbox"/>	• <u>fireclay</u> <u>Narsingpur, Katni</u>
<input type="checkbox"/>	• <u>Graphite</u> <u>Betul</u>
<input type="checkbox"/>	• <u>Lead</u> <u>Jabalpur, Datta</u>
<input type="checkbox"/>	• <u>Marble</u> <u>Jabalpur, Gwalior</u>
<input type="checkbox"/>	• <u>Uranium</u> <u>Shahdol</u>
<input type="checkbox"/>	• <u>Gypsum</u> <u>Shahdol</u>
<input type="checkbox"/>	• <u>Antimony</u> <u>Jabalpur</u>
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

प्रश्न संख्या

3 D	India's population is 17% of the Global population. Uttar Pradesh is the most populated state and
□ □	Sikkim is the least populated state. There are several factors affecting the distribution of the population.
□ □	1. <u>Geographical factor</u> - People prefer living on plains rather than plateaus and mountains since these areas are suitable for agriculture, industries setup and service activities. Ganga Plain is most densely populated area of world.
□ □	2. <u>Climate</u> - People stay away from extreme climate (very hot or very cold).
□ □	3. <u>Soil</u> - Fertile soils offer optimal land for farming. Fertile plain like Ganga, Brahmaputra are very highly populated.
□ □	4. <u>Water</u> - People prefer to live in those places where freshwater is easily available.
□ □	5. <u>Minerals</u> - Places with mineral deposits are naturally populated. Because here people get easy employment e.g. Chhota Nagpur in Jharkhand, Durgapur in West Bengal.
□ □	6. <u>Social</u> - Areas with better housing, health facilities and education are more populated.

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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

- Better transport facilities also contribute to the increased population of any region.
- 7. ~~Cultural~~ eg. - pune, delhi, Gujratom.
- 7. Culture - Places with cultural and religious impact attract people to settle down there. eg. - Varanasi, Mathura, Vrindawan.
- 8. Economic - Industrial areas offer employment opportunities. A large areas offer even more number of people make their income better to get better livelihood. eg - Noida, Mumbai, Bangalore.
- 9. Disaster prone Area - This makes people to migrate from this area and moved to another place because this areas are always on high risk. eg- Banks of river Kosi, Himalayan states.
- In reality, the distributions of population in India is highly Uneven.
- Arunachal Pradesh has density of 13 person/ square kilometers whereas Delhi has 9294 person/square kilometers. This shows the picture of Uneven distribution of population in India.

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मुख्य परीक्षा उत्तर पुस्तिका
 (Mains Answer Sheet)

3	E	Water Conservation is the practice of using water efficiently to reduce unnecessary water usage.
		<u>Need of water conservation</u> - It is important because fresh and clean water is a limited resource. So we need to conserve this natural resource for our environment.
		<u>ways to conserve water</u>
		→ water the plants wisely
		→ Install low flow shower head
		→ close tap while brushing/shaving etc.
		→ use the right amount of water for daily house chores.
		→ <u>Rainwater harvesting</u> is an effective technique of conserving water by guiding the rainwater that fall on rooftops to storage tank or underground pumps for future usage.
		→ <u>Drip irrigation</u>
		→ water should be recycled for reuse
		→ water should be declared as the national & valuable property

Steps taken by the government -

→ MBNRCHA for water conservation - through this govt. improve groundwater harvesting and build water conservation and storage mechanism

→ Jal Kranti Abhiyan - Jal Gram Scheme

Under this Abhiyan is aimed at developing two model villages in water-starved areas to lead the other villages for water conservation

→ National Water Mission This mission was launched with objective of conservation of water, minimizing wastage and equitable distribution

→ National Rural Drinking water Programme This provide every rural people with adequate safe water for drinking, cooking.

→ Niti aayog Composite water Management index - index is ready with the objective of achieving effective utilization of water.

→ Jal Shakti Ministry and Jal jeevan mission - This ministry tackle water issue and goal to provide piped water to all rural households by 2024.

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संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

Part-B

1 A

Prime meridian is a meridian which passes through Greenwich, where British Royal observatory is located.

1 B.

Russia is divided into 11 time zones

1 C

Mount Mayon is a active volcano present in Philippines, part of Pacific Ring of fire

1 D

1 E

Wrought iron is a sub-tribe of iron, making tools by melting iron.

1 F

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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

- 1 G Deenbandhu Yojana was launched on 30 June 2013 to waive electricity bill for poor people.
- 1 H RO and UV water purification are most common type of purifier. RO gives high level of purification while UV purifier combined with various form of filtration as UV light kills bacteria and virus.
- 1 I Medium earth orbit (MEO), closer to earth satellite move quickly in this orbit. This orbit is used by Global Positioning System.
- 1 J Chernobyl ~~ex~~ disaster is nuclear power plant meltdown in eastern USSR in 1986.
- 1 K Geo MGNREGA is a satellite based service to planning and monitoring livelihood security of rural people.
- 1 L Ground water Conservation is the key to create a water-secure future by managing

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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

<input type="checkbox"/>	<input type="checkbox"/>		<u>Present water resources</u>
1	M		<u>Umling La Pass</u> is <u>world's highest motorable road</u> constructed by <u>Border Roads Organisation</u> in <u>eastern Ladakh</u> under " <u>Project Himank</u> "
<input type="checkbox"/>	<input type="checkbox"/>		
1	N		<u>Great Nicobar Biosphere Reserve</u> is located in <u>Mt. Thullier</u> , which is also home of <u>Shompen</u> <u>tribe</u>
<input type="checkbox"/>	<input type="checkbox"/>		
1	O		<u>GPS</u> was launched in <u>1973</u> by <u>United State of America</u>
<input type="checkbox"/>	<input type="checkbox"/>		
2	A		<p>Coral are living animal found in shallow tropical water. They are formed when <u>Xanthallan</u> (algae) bind with coral polyps which is calcium made organism</p> <p style="text-align: right;">→ <u>(Fringing Reef)</u></p> <p>The coral got attached to landmass and move toward sea, creating a colony of coral by emitting <u>Xanthallan</u> and <u>CaCO₃</u></p>
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formation → Barrier Reef
These corals move towards sea with a water body such as lagoon separating the coral from main land

→ Atoll
As the land subsidies on which the coral grow it create a water body between coral colony and landmass.

2 B

GIS means Geographical Information System. It gives data by remote sensing. The data corresponds to changes on earth surface like Low pressure region, deforestation, etc.

Application -

- Agriculture → weather forecasting
- Soil health
- monsoon prediction
- usage of fertilizer based on soil.

- Defence → Troop movement along borders
- Detect changes in porous borders.

- Disaster management → Detection of low pressure region in ocean
- Early warning regarding floods or droughts
- Dissemination of information.

प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
 (Mains Answer Sheet)

2	C	<ul style="list-style-type: none"> ◦ Tundra vegetation is usually found between 60°–75° degree latitude lines. ◦ Temperature is between 0°–10°C only ◦ Soil is frozen and called as Permafrost ◦ It has low level of precipitation and harsh winter due to low sun insolation and high latitude ◦ Vegetation – mosses, algae, lichens. ◦ Area – Russia, Siberia, Alaska, Antarctica ◦ Animal – Polar Bear, muskox, Snow owl
2	D	<p>Different Component of Remote Sensing are-</p> <ol style="list-style-type: none"> 1. Energy Source → Active System 2. platforms → vehicles to carry sensor. 3. Sensors → Device to detect electro-magnetic radiation eg. Camera, Scanner 4. Detectors → Handling Signal data eg. Photographic, digital etc 5. Processing 6. Institutionalization → organization for execution of all stage of remote sensing technology eg. – ISRO

2 E

Cement is highly produced in madhyapradesh. Cement industry were established here before independence. first cement factory was setup by ACC in 1922 at Bamnour, (Morena). State has an abundance of limestone deposite. which used in first cement factory as raw material. M.P. produce 23% of cement of India and largest producer of India. Main centre of production are - Kosi, Satna, Maibhar, Neemach, Damoh. etc.

2 F

- Mahi river originated from vindhya mountain in Jabal district of M.P.
- It is one of the interstate west flowing river of India.
- It drains into Arabian Sea through the Gulf of Kambhat
- Main tributaries of Mahi is - Anas, Panam (left tributaries), Sonm (right tributaries)
- Vadodra is important city in bank of Mahi
- Mahi flow through Madhyapradesh, Rajasthan Gujarat with total length of 580 km

प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

2	G	<p><u>Watershed</u> is a geo-hydrological unit of land that feeds all the <u>water running</u> under it and drains at a common point. <u>management</u> is a process of <u>creating and implementing</u> plans, programs and project to sustain and enhanced watershed function within watershed boundaries with objective of <u>soil and water conservation</u>, employment generation, <u>Rainwater harvesting</u>, <u>ecological balance</u>.</p>
2	H	<p>Epidemic Disease Act introduced by British in 1897 to tackle "Bubonic Plague" in Bombay Aim - Better prevention of epidemic diseases - Enable state to ban social media - Penalise media for spreading misinformation</p> <p><u>Section 2A</u> - Central govt. Step to prevent epidemic Govt. can inspect any post, Detain any person <u>Section 3</u> - Penalties on disobaying any rules <u>Section 4</u> - Legal protection to implementing officers.</p> <p>• New rule added by ordinance during Covid-19 - Attack on any health care worker - Cognizable / Non-Bailable offence; Imprisonment - 3 month - 5 years • fine - 50k - 5lac + Liable for</p>

प्रश्न संख्या

Compensation to victim

१ I

Malwa Plateau

- Lies western part of M.P
- Height - 300-600 meter
- District - Indore, Ujjain

Dhar, Jabua, Dewas etc.

• Soil - Black soil
is made up of basaltic rocks

• Highest peak - 881 m
Singer top

• Climate - Temperate

• Temperature - 10°C - 43°C

• Rainfall - 75-125 cm

Baghelkhand Plateau

• Lies Eastern part of MP

• Height - 500 meter

• District - Rewa, Satna, Umaria, Shahdol, Sidhi

• Soil - Black, red, yellow
• Forest - Tropical deciduous forest

• Climate - Hot

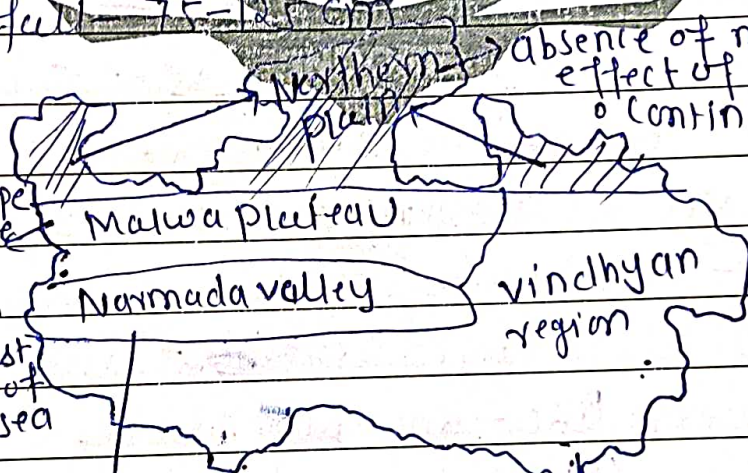
• Temperature - 15°C - 42°C

• Rainfall - 75-125 cm

२ J

absence of moderating effect of sea
• Continental climate

even type of climate
• Rain through south-west monsoon of Arabian sea



extremely hot due to proximity to tropic of cancer

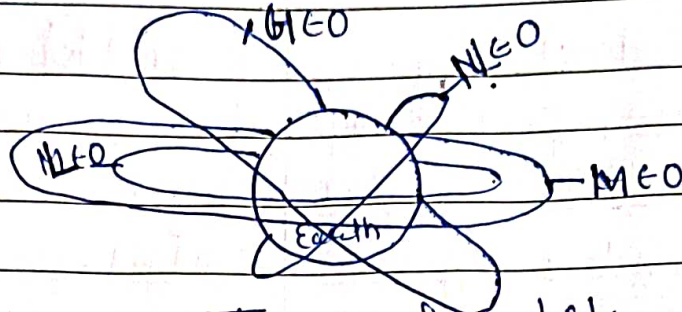
extremes of climate is not experienced

• Rainfall through Bay of Bengal and Arabian sea

प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

3 A



Types of orbit

Object orbiting around the Sun, earth, or any colossal body is known as satellite

• orbit - it is a regular and fix path of an object in space. An object in a space in orbit is called satellite. There are 2 type of satellite

- ① Natural - eg. Moon
- ② Manmade - they are -

- Near Earth orbit satellite - orbit closest to the earth satellite orbiting here has to overcome greater gravitational pull of earth.

eg - Aryabhata

- Low Earth orbit satellite - This orbit lies between 160 - 2000 km above earth surface.

LEO is a circular orbit in which Remote Sensing satellite are launched. Remote Sensing satellite

follow circular orbit from North pole to South pole. That's why it is also called as

Polar orbit

• Middle Earth orbit satellite - Satellite
launched between altitude between 2000km to 35786km. Most common use of satellite in this region is for navigation.

• Geosynchronous earth orbit satellite - It lies at the highest altitude approximately above 36000 km above earth equator. orbit period is earth rotation. Satellites in this orbit can track one spot of planet all time. Satellite is used for military, telephone, internet, television.

• Other types of satellite based on application

⇒ Communication Satellite

⇒ Remote Sensing Satellite

⇒ Navigation Satellite

⇒ Global Positioning System Satellite

⇒ Geo-Stationary: Satellite

⇒ Drone satellite

⇒ Ground satellite

⇒ Polar satellite

⇒ CubeSat, Nano satellite.

प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

3	B	<p>Lake is a water body, localized in a basin which is surrounded by land and it is not part of any river and ocean. Lake is larger and deeper than ponds. Lake can be broadly divided into -</p> <p>1) Natural lake - generally found in mountain area, rift zone, ongoing glaciation e.g. - Dead Sea</p> <p>2) Artificial lake - constructed by human for any purpose like for industrial, agricultural use, hydro electric project power generation or domestic water supply. eg. - Guru Gobind Sagar, Kodaikanal lake.</p> <p>Lakes are highly significant for human progress. The major uses of lakes are -</p> <ul style="list-style-type: none"> • <u>Communication and transportation</u> - in many region of the world, well connected lake system serve as cheap means of transport. • <u>Economic and industrial use</u>: Lake serve as a very cheap channel for transporting raw material. • <u>Irrigation</u> - Large lake serve as good source of irrigation for the surrounding
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प्रश्न संख्या

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• Hydroelectric projects - Man made lakes serve as a good source to produce hydroelectric power at the source of the lake

• Fresh water fishing - Most lakes are a good source of fresh water fishes and fishing in lake become a big industry

• Lake serve as reservoirs where rivers shed their excess water and silt. for avoiding floods.

Due to rampant exploitation, lakes are adversely affected. A glaring example of poor planning and exploitation is the case of the Aral sea, which is totally exploited due to industrialisation. Lake provided drinking water also due to this its a responsibility of not only government but people also to maintain cleanliness of lake. and build proper planning to save the environment of lake and its near around.

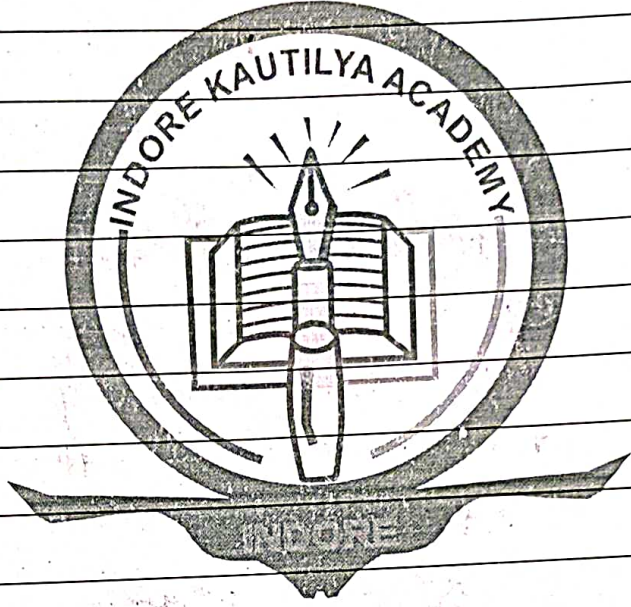
प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका (Mains Answer Sheet)

3 C	<p><u>Non-renewable Source</u> - It is a source of energy that will eventually run out, such as fossil fuels and nuclear material. This is also known as <u>Conventional Sources of Energy</u></p>																
	<p><u>Renewable Source</u> - It is a source of energy produced from source that do not deplete or can be replenished and it is continuously available. This is also known as <u>Non-Conventional Source</u></p>																
	<table border="0"> <tr> <td data-bbox="335 1108 654 1131">Renewable</td> <td data-bbox="542 873 1069 1489" rowspan="6"> </td> <td data-bbox="1133 1108 1460 1131">Non-Renewable</td> </tr> <tr> <td data-bbox="335 1131 654 1153">Solar energy</td> <td data-bbox="1133 1131 1460 1153">Coal</td> </tr> <tr> <td data-bbox="335 1153 654 1176">Wind energy</td> <td data-bbox="1133 1153 1460 1176">petroleum</td> </tr> <tr> <td data-bbox="335 1176 654 1198">Hydro electricity</td> <td data-bbox="1133 1176 1460 1198">Nuclear</td> </tr> <tr> <td data-bbox="335 1198 654 1220">Biogas</td> <td data-bbox="1133 1198 1460 1220">Natural Gas</td> </tr> <tr> <td data-bbox="335 1220 654 1243">Geo thermal</td> <td data-bbox="1133 1220 1460 1243">Shale Gas</td> </tr> <tr> <td data-bbox="335 1243 654 1265">Tidal energy</td> <td></td> <td></td> </tr> </table>	Renewable		Non-Renewable	Solar energy	Coal	Wind energy	petroleum	Hydro electricity	Nuclear	Biogas	Natural Gas	Geo thermal	Shale Gas	Tidal energy		
Renewable		Non-Renewable															
Solar energy		Coal															
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Tidal energy																	

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

प्रश्न
संख्या

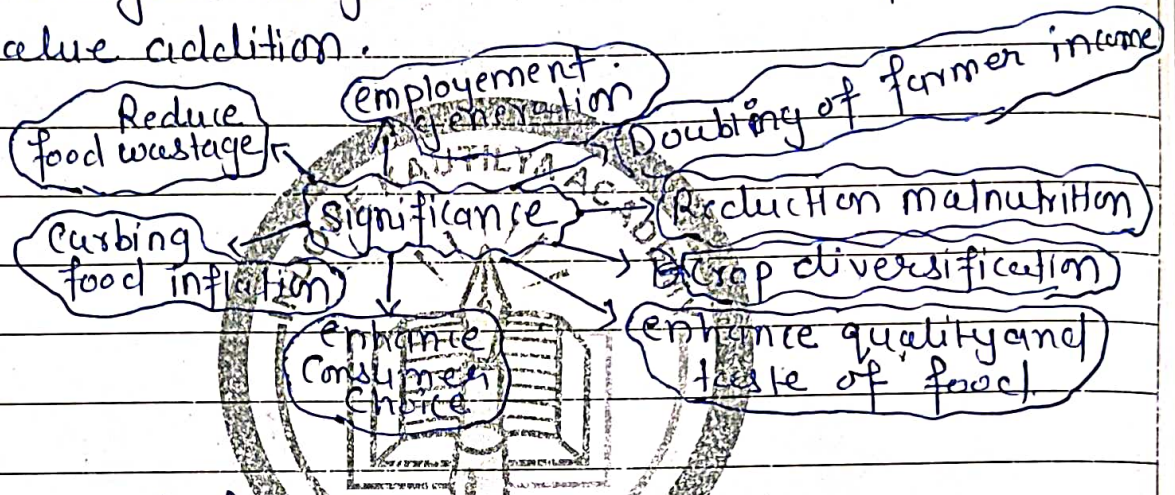


प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका (Mains Answer Sheet)

3 D

Food processing includes process under which any raw product of agriculture, dairy, meat, poultry, fishing etc. is transformed through a process in such a way that its original physical properties undergo a change and includes the process of value addition.



Status of food processing in India:

India is 2nd largest producer of fruits and vegetable in world but hardly 2% produce is processed. India is largest livestock population is world but only 1% of total meat production is converted to value added product

More than 70% industry is unorganized

Problems in food processing industries

- farm level problem
 - poor yield of farm produce and low return
 - stack of material resource necessary for development
 - primitive method of farming
 - vagaries of weather
 - Lack of storage facilities at farm

प्रश्न
संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

- Distributor's problem
- lack of modern transportation facilities and high cost
 - Inadequate cold storage facilities
- irregular quality and quantity of farm produce
- processing industries problem
- financing
 - Higher import duties
 - Higher cost of raw material and packaging
 - Limited domestic market
- Consumers discontent
- Does not get value for money
 - price variation is day to day affair.
- Reason for slow growth
- Majority of Indian's has low income level and cannot afford processed food. Indians prefer fresh food rather the use preserved food. There is no national character for food habit and these changing from region to region. Transport connectivity is also poor.
- Extensive use of fertilizer, pesticide
- Challenges
- Low value added in processing
 - Limited ability to control quality
 - Low consumer awareness
- Suggestion
- Storage capacities and infrastructure should be increased.
 - Centre of Excellence between centre and state
 - farm pattern diversification
 - Public investment should be increased
 - Encourage domestic startup and industry
 - New technology should be updated.

प्रश्न संख्या

मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

3	E	<p>• National disaster management Authority was established through the <u>Disaster management Act 2005</u> in <u>Dec 2006</u>. It is a Statutory body. Chairman - Prime minister.</p> <p>• Its primary purpose to coordinate the response to natural or manmade disaster and capacity building in disaster crisis response. It is a apex body to provide guideline; plans to ensure timely and effective response to disaster.</p> <p>Power and Responsibilities</p> <ul style="list-style-type: none"> • Implementing Policies related to disaster management. • Approving various plans <ul style="list-style-type: none"> - National plan - Plan by various ministries and department of government • Laying down guidelines for State government authorities with State plan • Issued guideline for different government authority in order to integrate the preventive measures for the disaster or in their development plans and project
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मुख्य परीक्षा उत्तर पुस्तिका
(Mains Answer Sheet)

- Recommending the provision of funds necessary for mitigation
- Coordinating with the workforce and implementing the policies.
- Issued guideline and broad policies for functioning of the NIDM.
- Provide support to countries affected by major disasters
- Community based disaster management including last mile integration of the policy.
- Compliance and co-ordination with agencies at regional, national and international level.
- Developing contemporary forecasting and early warning system by information technology support.
eg- Cyclone Fani - Odisha govt. preparedness efficient, timely action due to early warning system. Saves millions of life in sensitive coastal region.