



दृष्टि मेंटरशिप टेस्ट DRISHTI MENTORSHIP TEST



GENERAL STUDIES (Test-9)

निर्धारित समय: तीन घंटे
Time allowed: Three Hours

DTVF/25 (D-A)-M-GSM (M-I)-2509

अधिकतम अंक: 250
Maximum Marks: 250

Name: Amar Baghel Mobile Number (as registered on DLA): _____
Medium (English/Hindi): English Reg. Number: _____
Center & Date: Indore 11/July UPSC Roll No. (If allotted): 6601416.

प्रश्न-पत्र के लिये विशिष्ट अनुदेश

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

इसमें बीस प्रश्न हैं तथा हिन्दी और अंग्रेजी दोनों में छपे हैं।

सभी प्रश्न अनिवार्य हैं।

प्रत्येक प्रश्न के अंक उसके सामने दिये गए हैं।

प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहियें 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 चाहिये। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिखे गए उत्तर पर कोई अंक नहीं मिलेंगे।

प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिये।

प्रश्न-सह-उत्तर-पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिये।

QUESTION PAPER SPECIFIC INSTRUCTIONS

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

There are TWENTY questions printed both in HINDI and ENGLISH.

All the questions are compulsory.

The number of marks carried by a question is indicated against it.

Answers must be written in the medium authorized in the Admission Certificate which must be stated clearly on the cover of this Question-cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers 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 Question-cum-Answer Booklet must be clearly struck off.

केवल मूल्यांकनकर्ता द्वारा भरा जाए (To be filled by Evaluator only)

Question Number	Marks	Question Number	Marks
1.		11.	
2.		12.	
3.		13.	
4.		14.	
5.		15.	
6.		16.	
7.		17.	
8.		18.	
9.		19.	
10.		20.	
Grand Total (सकल योग)			

मूल्यांकनकर्ता (हस्ताक्षर)

Evaluator (Signature)

पुनरीक्षणकर्ता (हस्ताक्षर)

Reviewer (Signature)



Feedback

1. Context Proficiency (संदर्भ दक्षता)
 2. Introduction Proficiency (परिचय दक्षता)
 3. Content Proficiency (विषय-वस्तु दक्षता)
 4. Language/Flow (भाषा/प्रवाह)
 5. Conclusion Proficiency (निष्कर्ष दक्षता)
 6. Presentation Proficiency (प्रस्तुति दक्षता)
-



1. वैश्विक पारिस्थितिक संतुलन के लिये भारत में जैवविविधता हॉटस्पॉट के महत्त्व का आकलन कीजिये। इन हॉटस्पॉट्स के प्रमुख संकटों की जाँच कीजिये। (150 शब्द) 10
Assess the significance of biodiversity hotspots in India for global ecological balance. Examine the major threats to these hotspots. (150 words) 10

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

Biodiversity hotspot are are with diverse flora-fauna and unique ecosystem that sustain various endangered, vulnerable species eg western Ghats

Significance \Rightarrow
Global ecological balance

① Protection of umbrella species

eg Tiger for various ecosystem

② Hydrological cycle is balanced

eg wetland of Sunder ban,

③ Protecting rare plant species.



- 1 - western Ghat
2 \rightarrow Sunderban
3 \rightarrow North Eastern forest
4 \rightarrow Himalayan hotspot.



(4) research to ensure study of diseases.

(5) overall high forest cover
⇒ better rains, protect soil erosion etc.

Threat to Hotspots

(1) Deforestation: Rapid for economic gain eg rapid in manipur

(2) mining: western ghats is threatened due to mining

(3) Poaching of wild animal

(4) Spread of invasive species
eg cat fish.

(5) Diseases among flora-fauna.

(6) Illegal trade of fauna-flora.

Thus there is need to implement recommendation of Gadgil & Kasturirangan committee

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



2.

सतत् ग्रामीण विकास में जैव-ऊर्जा संसाधन किस प्रकार योगदान कर सकते हैं?

How can bio-energy resources contribute to sustainable rural development?

(150 शब्द) 10

(150 words) 10

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)

Bio-energy is energy
produced by waste of animals,
plants etc. eg Biofuel,
crabbar gas etc.

Bio energy \Rightarrow Sustainable
growth

- ① Economic gain to farmer
eg Sale of Bio gas.
- ② Export increase eg export
of sugar can.
- ③ Alternate income eg
Ethanol production (labor
intensive)
- ④ Diversification of crop
in form of oil seed \Rightarrow
better income.



⑤ Crop like soybean oil is good for soil & Land conservation & Sustainable

⑥ Required less input ⇒ no more debt.

⑦ Bioenergy is labor intensive thus ~~produce~~ reduce disguised unemployment.

⑧ High demand of bio fuel ⇒ protection of rural economy from market failure.

Way forward ① MSP for oilseed

② R&D for bio energy production

③ Train SHG, FPO in bio energy production.

Thus bio energy can solve dual problem of SDG-7 (energy) and SDG-1 (poverty) leading to Gramodaya

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



3. कच्चे तेल उत्पादन क्षेत्रों के स्थान पर बंदरगाहों के पास स्थापित की जा रही पेट्रोलियम रिफाइनरियों के आर्थिक और सामरिक प्रभावों पर चर्चा कीजिये। (150 शब्द) 10

Discuss the economic and strategic implications of petroleum refineries increasingly being located near ports rather than crude oil production sites. (150 words) 10

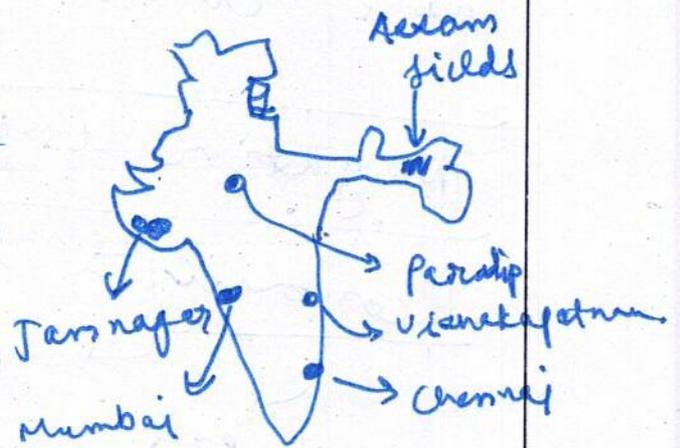
उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

Petroleum refineries are generally placed near market or near raw material availability as per Weber's Least Cost theory.

Positive.
Economic implication

① Cheaper production as cost of transport of crude (imported) oil reduced.



oil refineries.

② Availability of labors near coast

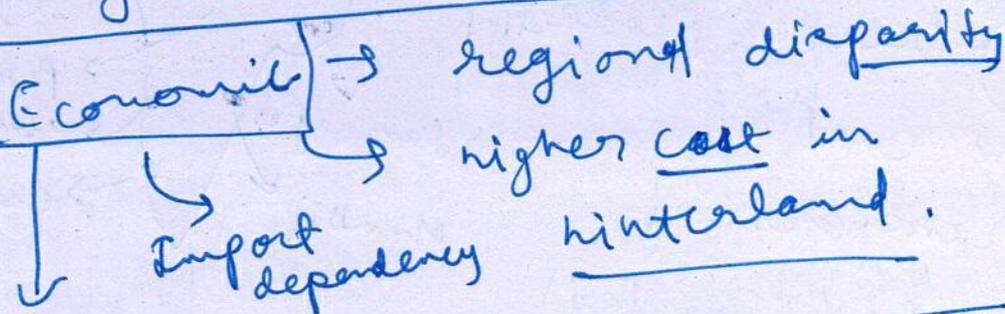
③ Export of petroleum product reduced as it is exported via ports.



④ Strategic (Positive) impact

- ① Easier energy security as it ~~can~~ ^{can be} ~~imported~~ ^{imported}.
- ② Better infra-connectivity & ties eg IMEC project will have direct access to Jamnagar field.

Negative implication



over urbanisation of port cities

Strategic

- ① Threat from border attack eg Gujrat borders Pakistan.
- ② Energy security at risk as fields are too concentrated.

Thus, there is need of better & cheaper transport for increasing hinterland refineries.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



4. भारत में आर्थिक विकास को बढ़ावा देने में औद्योगिक गलियारों की भूमिका का मूल्यांकन कीजिये। उनके कार्यान्वयन में प्रमुख चुनौतियों की पहचान कीजिये। (150 शब्द) 10

Evaluate the role of industrial corridors in fostering economic development in India. Identify the key challenges in their implementation. (150 words) 10

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

Industrial corridors are set of industries set up along a particular route and well connected infrastructure is developed along that route.

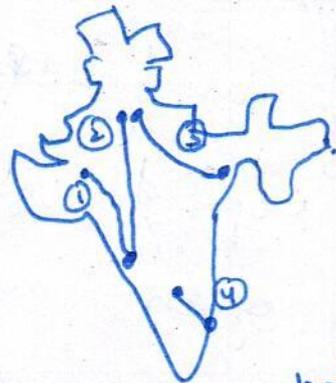
eg Delhi Mumbai corridor,

Role of corridor
↓
Economic development

① Reduce logistic cost from earlier higher rate of 12% (GDP)

② Promote agglomeration economics

③ Reduce turn around time for logistic transport.



1 → Delhi Mumbai - Ahmedabad

2 → Delhi Mumbai

3 → Delhi Kolkata

4 → Chennai Bangalore

Industries of corridor.



- ④ Band - wagen cost minimisation
- ⑤ Dispersed industrial growth
- ⑥ Labor intensive \Rightarrow Reduce unemployment.

Challenges in implementation

- ① Capital intensive - require large investment.
- ② Land acquisition is difficult
- ③ Rapid delay in project.
- ④ often not sustainable as they do not justify cost.
- ⑤ Concentrated in few area.
- ⑥ High dependence on roads
- ⑦ less on railway.
- ⑦ Problem of railway cross subsidisation.

Thus, India need to integrate Pragati mechanism for better accountability

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



5. भारत में इलेक्ट्रॉनिक अपशिष्ट (ई-अपशिष्ट) के पर्यावरणीय और स्वास्थ्य प्रभावों का विश्लेषण कीजिये। ई-अपशिष्ट के प्रबंधन में मौजूदा नियमों की प्रभावशीलता पर चर्चा कीजिये। (150 शब्द) 10

Analyse the environmental and health impacts of electronic waste (e-waste) in India. Discuss the effectiveness of existing regulations in managing e-waste. (150 words) 10

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

E-waste is waste generated via electronic devices waste eg old phones, wires, display etc. India produces 4th largest e-waste in world.

Environment Impact

- ① Land degradation due to ineffective disposal.
- ② Heavy metal contamination eg waste of cadmium used in displays.
- ③ Higher carbon footprint.

Health Impact

- ① Heavy metal exposure eg minamata disease - via mercury exposure.
- ② Explains nature of batteries
- ③ Problem of bioaccumulation.



Five success of existing mechanisms

- ① Separate treatment of e-waste
- ② Extended producer responsibility
- ③ Focus on recycle.
- ④ Provision of five ~~or~~ industries
- ⑤ Ban on import of e-waste

Limitation of these.

- ① Poor compliance
- ② Poor audit mechanism.
- ③ Lack of awareness of consumers
- ④ Limited technology to recycle
- ⑤ Definition of e-waste not clear

way forward

- ① green credit for waste reduction
- ② promote reuse & refurbished market.

Overall, e-waste need global cooperation & need of technology to ensure effective reuse.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



6. इलेक्ट्रिक वाहन (EV) विनिर्माण केंद्रों का उद्भव भारत के औद्योगिक परिदृश्य को नया आकार दे रहा है। इस बदलाव को प्रभावित करने वाले प्रमुख कारकों की जाँच कीजिये। (150 शब्द) 10

The emergence of electric vehicle (EV) manufacturing hubs is reshaping India's industrial geography. Examine the key factors influencing this shift. (150 words) 10

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

② .

EV sector has seen double digit growth in India and now selling around 1 lakh EV cars annually in India.

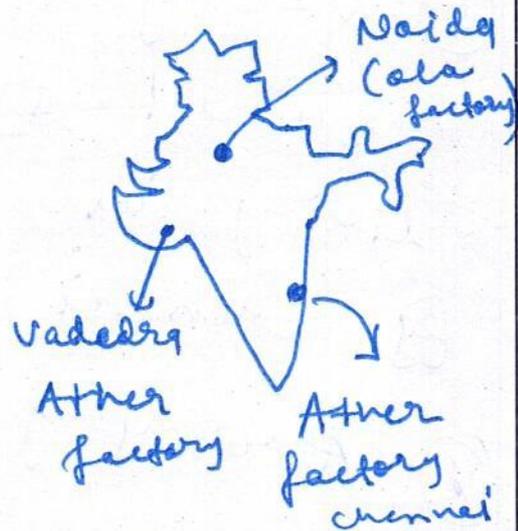
Reshaping industrial geography

① located near to market as oppose to old sector

which was located near raw material. eg) ola Noida plant.

② PLI scheme allowing spread of ancillary industries across India

③ Technology allowing route





of material thus manufacturing units are closer to markets.

④ New entrepreneurs setting factories in new area
eg. modern EV plant.

⑤ Use of technology extensively required trained engineers living in tech cities.
eg. Chennai After plant.

⑥ Arrival of new supply chain.

Thus location of new EV industries is evolving & moving forward market &

trained labor &
engineering experts

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



7. "पर्यावरणीय प्रभाव आकलन" (EIA) सरकारों को आर्थिक विकास और पर्यावरण संरक्षण के बीच संतुलन बनाने में सहायता करने के लिये एक साधन के रूप में उभरा है।" टिप्पणी कीजिये। (150 शब्द) 10

"Environmental Impact Assessment (EIA) has emerged as a mechanism to aid nations in walking the tightrope between economic development and environmental protection." Comment. (150 words) 10

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

EIA is rigid inspection to do predictive analysis of environmental implication of a particular project.

Balancing Economic Growth & Environment concern

- ① Liberal or exemption for non-polluting industries, but rigid inspection for polluting industry. ⇒ Balance
- ② Special protection of coastal zone, protected zone by mandatory EIA. ⇒ Protection.
- ③ Faster clearance by EIA authority by setting timeline. ⇒ growth.



④ Involvement of environment experts, NGO and locals. \Rightarrow protection

⑤ Provision of compensatory afforestation

Limitations of EIA

- ① Lack of expertise - to assess ^{input}
- ② Misuse of exemption.
- ③ Non-disclosure of all fact by companies.
- ④ Non-inclusion of locals.
- ⑤ Opaqueness in EIA process.

Way forward ① Use of technology

② A expert committee to decide exemption.

overall, EIA need to be implemented in effective manner for inclusive growth.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



8. विश्वभर में शहरी आपदाओं पर जलवायु परिवर्तन के प्रभाव का विश्लेषण कीजिये। शहर अपनी शहरी विकास नीतियों में जलवायु अनुकूलन कैसे शामिल कर सकते हैं? (150 शब्द) 10

Analyse the impact of climate change on urban disasters worldwide. How can cities integrate climate resilience into urban development policies? (150 words) 10

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)

Urban disasters includes
urban flood, stampedes,
heat dome, heatwave etc.

Impact of climate change

- ① Sea water rise level ⇒
flooding in urban
coast cities eg chennai.
- ② Rapid warming ⇒ heat
dome effect, or heat island.
- ③ Extreme weather event like
cloudburst ⇒ ~~Flash~~ flood.

Steps to climate resilience

- ① Effective construction eg
concrete construction of road
to pavement construction via
percolating tiles.



- ② Hydro-climatic modelling of drainage \Rightarrow reduce flood
- ③ Growing urban forest.
of Miyawaki technology.
- ④ Embankment building near river to reduce overflow of river.
- ⑤ Spaced urbanisation, de-congestion to reduce heat island effect.
- ⑥ Public transport to reduce use of vehicle (personal)

Thus, there is need of training municipal officers in the line to adopt to modern climatic needs to provide sustainable urbanisation (500-11)

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



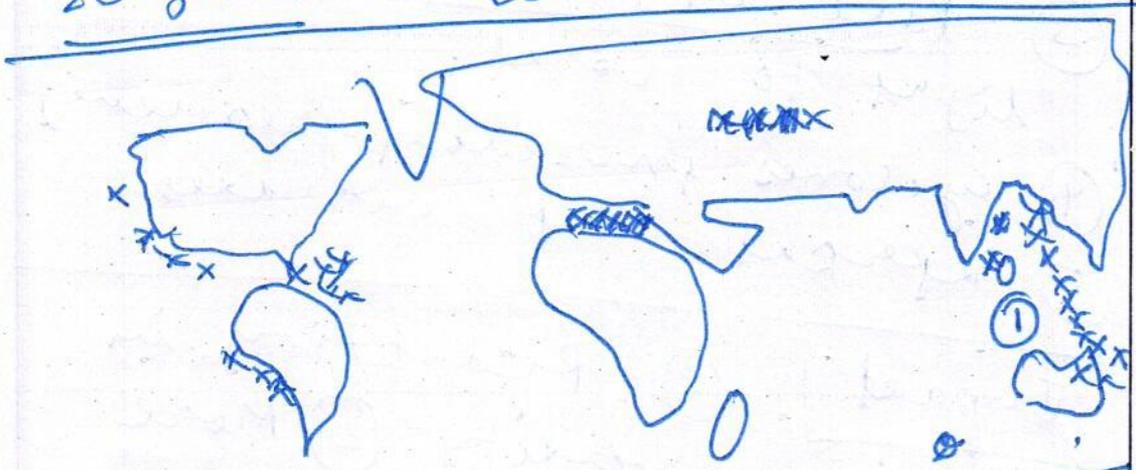
9. प्रवाल भित्तियों का विरंजन इतना व्यापक क्यों है? इस घटना के पर्यावरणीय प्रभाव का मूल्यांकन कीजिये। (150 शब्द) 10

Why are coral reefs experiencing widespread bleaching? Assess the environmental repercussions of this phenomenon. (150 words) 10

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

Coral reef are marine vegetation having symbiotic relation between corals & zooxanthellae. (eg) Great Barrier reef



In India: Lakshadweep, Andaman, Gujrat, Coorbat MH / KR

Great Barrier reef of Australia, reef along mediterranean, Panama

Bleaching Recently Australian great barrier reef experience white band disease \Rightarrow widespread bleaching.



Causes (1) Rise of sedimentation

due to increased river flow

(2) Increase in fresh water reducing salinity (3) Reefs of Sundarbans.

(3) Rise in sea level \Rightarrow less light to coral.

(4) cyclones increased frequency.

(5) spread of diseases

Impact

(1) Reduction in marine diversity (2) More acidification & CO₂ release in ocean as it absorb CO₂.

(3) Reduction in minerals.

Thus, there is need of R&D to protect corals. And making of coral protection zones.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



10.

आर्कटिक सागर में हिम के पिघलने और प्रजातियों के प्रवासन पैटर्न को परिवर्तित करने में समुद्री हीटवेव की भूमिका की जाँच कीजिये। इन प्रभावों को कैसे कम किया जा सकता है? (150 शब्द) 10

Examine the role of marine heatwaves in accelerating Arctic Sea ice loss and altering species migration patterns. How can these effects be mitigated? (150 words) 10

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

Marine heatwaves are consistent hot wind generally present in the ocean areas. It leads to low pressure zone creation in that area.

Marine heatwave \Rightarrow Arctic ice loss & species migration

- ① Reduction of glaciers \Rightarrow reduced albedo \Rightarrow more warming.
- ② Increasing fresh water concentration \Rightarrow reducing salinity \Rightarrow threat to saline marine species.
- ③ Melting lead to rise in sea level \Rightarrow threat to marine life.



- ④ overall increase in temperature \rightarrow threat to polar species.
- ⑤ weakening of ocean circulation.

way to mitigate effect

- ① Establishing laboratories to study environment \Rightarrow do some correction, eg. ozone.
- ② Strict restriction on anthropogenic activities in arctic region.
- ③ Overall effort of combating global warming.
- ④ Use of technology eg. cloud seeding for improved albedo.

Loss of glaciers is irreversible thus urgent coordinated effort is required.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



11.

भारत में सार्वजनिक स्वास्थ्य पर जलवायु परिवर्तन के प्रभाव पर चर्चा कीजिये। इन चुनौतियों में वृद्धि करने वाले सामाजिक-आर्थिक और भौगोलिक कारकों पर प्रकाश डालिये। जलवायु अनुकूलन और स्वास्थ्य सुरक्षा बढ़ाने के लिये नीतिगत उपाय सुझाइये।

(250 शब्द) 15

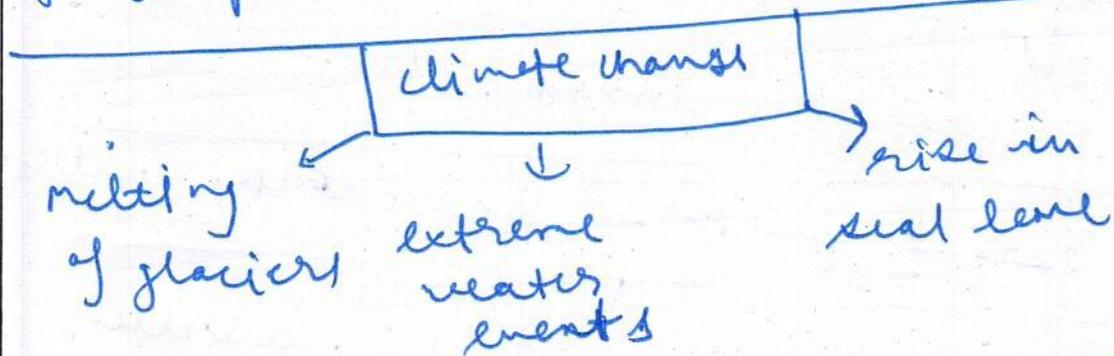
Discuss the impact of climate change on public health in India. Highlight the socio-economic and geographical factors that exacerbate these challenges. Suggest policy measures to enhance climate resilience and health security.

(250 words) 15

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

As per IPCC report India will likely breach 1.5°C target in next 20 years. and UN secretary general called this phase as phase of "baiting"



Impact of climate change on public health

- ① water scarcity & contamination
→ cholera, typhoid diseases
- ② Absence of contamination of ground water. due to over exploitation.



3) Salt water intrusion \Rightarrow
lack of clean water in
coastal area.

4) Reduced productivity \Rightarrow
further malnutrition & hunger

5) Public health hazard due
to climate change induced
drought, flood, etc.

~~Social~~ factors exacerbate challenges

Social factors

① Slum dwellers

\Downarrow

③ excessive gender
burden ~~eg~~ water
bringing.

more polluted
water, contamination

② Poor person \rightarrow cannot afford food
due to inflation caused by
climate change induced agriculture
disruption.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



Economic → Poor lack insurable

eg crop failure due to drought
⇒ best trap.

rich → mindless consumption ⇒
further climate change.

Geographical factors ① People

living on coast are more
vulnerable eg sea level rise,
salt water invasion..

② People in developing nation,
island nation are worst victim.

Policy measure ⇒ climate resilience
& health

- ① Agro-climatic planning
- ② Afforestation
- ③ drought prone crop development.
- ④ loss & damage funding.
- ⑤ Green credit
- ⑥ Strengthening of
Adaptation fund.
- ⑦ vulnerability mapping
- ⑧ Resilience building via training
- ⑨ Strengthening of public health system
- ⑩ Study of diseases caused by invasive
species.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



12.

पश्चिमी एवं दक्षिणी भारत में सौर ऊर्जा उद्योग के विकास के लिये उत्तरदायी प्रमुख कारक क्या हैं? सौर ऊर्जा उत्पादन में क्षेत्रीय असमानताओं का परीक्षण कीजिये। (250 शब्द) 15

What are the key factors responsible for the growth of the solar energy industry in western and southern India? Examine the regional disparities in solar power generation. (250 words) 15

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

India's current solar energy installed capacity is 80 GW. and India has potential of 728 GW.

factors responsible for growth in western & Southern India

Leading producer : Rajasthan, Madhya Pradesh, Maharashtra, Karnataka & Tamil Nadu

① Availability of solar insolation for longer hours and large part of year
eg Rajasthan.

② High demand of energy due to industries eg Maharashtra.



- ③ Govt. subsidies incentivised homes to install rooftop & grid connectivity eg Tamil Nadu
- ④ Access to port allowed keeper access of solar panel.
- ⑤ Successful govt. projects & investment by rich states eg Karnataka solar parks.
- ⑥ Availability of better facility for storage. By state & individual due to their higher purchasing capacity eg Karnataka
- ⑦ Better grid infrastructure for grid connectivity eg TN.

Regional Disparity

- ① Globally : Higher concentration

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



in tropical countries.

- ② In India lower availability in areas where other sources of power is there eg MP has hydro power.
- ③ Poor states unable to afford subsidies or capital investment
- ④ Poor awareness in relatively poor state eg Odisha, Bihar.
- ⑤ Solar insolation is not equally available eg Himachal has less insolation.

Way forward

- ① Central subsidy
- ② PLI scheme to reduce cost of solar panel
- ③ Further grid connectivity.

Thus, India need to strengthen solar energy to uphold motto of "one earth, one sun & one future".

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



13.

गर्म होते महासागर और बदलती वायुमंडलीय परिस्थितियाँ बम चक्रवातों की तीव्रता में योगदान दे रही हैं। बम चक्रवातों की आवृत्ति एवं तीव्रता को बदलने में जलवायु परिवर्तन की भूमिका का मूल्यांकन कीजिये। उनके प्रभाव को कम करने के लिये किन अंतर्राष्ट्रीय उपायों की आवश्यकता है? (250 शब्द) 15

Warming oceans and changing atmospheric conditions are contributing to the intensification of bomb cyclones. Evaluate the role of climate change in altering the frequency and intensity of bomb cyclones. What international measures are needed to mitigate their impact?

(250 words) 15

Bomb cyclones are rapid cyclones caused by low pressure system with characteristic of rapid wind, rapid rain etc.

ocean & atmosphere \Rightarrow Intensification of bomb cyclone

- ① Rising temperature lead to formation of intense low pressure system.
- ② Rise in sea surface temperature
- ③ Strengthening of wind system
- ④ weakening of AMOC circulation
- ⑤ High inflow of water

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



due to glaciers melting.

⑦ Temperature anomalies ⇒ strengthened temperature gradient.

⑧ Rise of sea surface level due to global warming.

⑨ Intense heating of land ⇒ low pressure system.

International measures needed to mitigate their impact

① Global mangrove alliance need to be strengthened for protecting mangrove.

② Afforestation in coastal area.

③ Shelter home, direction making for shelter home at coast.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



- ④ Training of people for post disaster recovery.
- ⑤ Construction of lagoon to reduce impact.
- ⑥ Develop strong early warning system.
- ⑦ Cyclone prone construction to be incorporated for building code at coasts.
- ⑧ WMO's strengthened monitoring.
- ⑨ creation of carbon sink, aim for net zero.
- ⑩ Strengthening loss & damage, adaptation fund.

⑩ Tap overall, we need to implement global program like Sendai framework in letter & spirit to counter climate change impact.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



14.

भारत में धार्मिक और सार्वजनिक समारोहों में होने वाली भगदड़ भीड़ प्रबंधन में खामियों को उजागर करती है। कारणों का आलोचनात्मक विश्लेषण कीजिये और ऐसी त्रासदियों को रोकने के उपाय सुझाइये।

(250 शब्द) 15

Stampedes at religious and public gatherings in India highlight gaps in crowd management.

Critically analyze the causes and suggest measures to prevent such tragedies. (250 words) 15

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

Stampede is unruly movement of crowd at highly crowded places, leading to chaos, deaths, accidents etc.
eg Stampede at victory celebration of RCB winning IPL.

Cause of Stampede

- ① Over crowding in small place during public event.
- ② Poor construction: Escape mechanism eg less number of exit gate.
- ③ Non adherence to Indian building code eg exit sign often goes missing.



- ④ Congested infrastructure often filled beyond carrying capacity
eg Dehki railway station
stampeded.
- ⑤ Untrained police force for crowd management.
- ⑥ Poor regulation at temples.

⑦ measures for prevention

- ① Use CCTV & surveillance system to check crowds rapid gathering.
- ② Information management system at public places to reduce crowding.
- ③ Pre-emptive planning by civil administration before public meeting or gathering.

④

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



- ⑤ Adherence to NDMA guidelines.
- ⑥ Color coding of exit path
- ⑦ Training of police for crowd management.
- ⑧ Strengthening of honeguard forces.
- ⑨ Learning from best international practices.
- ⑩ Stampede audit to check if infrastructure is ready for mass crowd.
- ⑪ Regular crowd monitoring.
- ⑫ SOP creation to deal with stampede.

overall, it is a human made disaster and can be averted by effective administration & preparedness & prudent for

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



15.

अरावली-दिल्ली वलित पटी के विशेष संदर्भ में, दिल्ली में भूकंपीय गतिविधि में योगदान करने वाले भूवैज्ञानिक कारकों की जाँच कीजिये।

(250 शब्द) 15

Examine the geological factors contributing to the seismic activity in Delhi, with particular reference to the Aravalli-Delhi Fold Belt.

(250 words) 15

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

Seismic activities are related to movement of earth crust generally due to endogenic forces.. (eg)

Earthquake.

Geological factor responsible

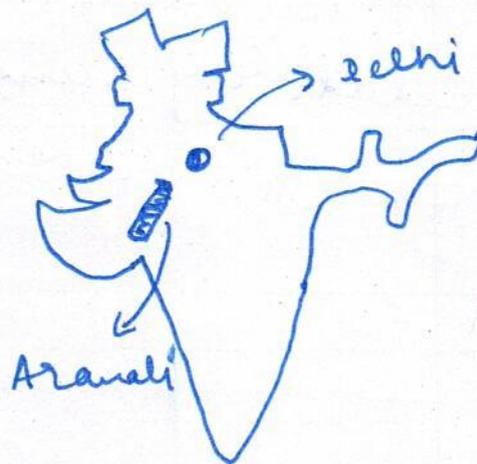
① Fall in the subduction region of

Indo - Australian

plate pushing against

Eurasian plate.

② Part of Earthquake Zone - V vulnerability.





- ② Movement around Aravali Delhi fold \Rightarrow ~~the~~ earthquakes in ~~Delhi~~ Delhi
- ③ Landslide due to deforestation in region
- ④ Proximity of rivers (Yamuna)
- ⑤ Aravali fold belt is relatively unstable due to its movement.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



16. ग्रीनवॉशिंग की घटना और जलवायु परिवर्तन से निपटने के वैश्विक प्रयासों पर इसके प्रभाव की व्याख्या कीजिये। (250 शब्द) 15
- Explain the phenomenon of greenwashing and its impact on the global efforts to combat climate change. (250 words) 15

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)

Greenwashing is process of hiding true information and showcasing something as climate friendly even if it causes harm to climate.

eg Apple showing use of recycled aluminium as green change but also using titanium with higher carbon footprint

Impact on Global Effort to combat climate change

- ① misuse of carbon credit as per article 6 of paris agreement.
- ② overall increase in emission.



- ③ Greenwashing is reducing trust on carbon trading mechanism.
- ④ Deter joint development mechanism.
- ⑤ Disincentives companies toward adoption of clean technology.
- ⑥ Reduce investment on green technology.
- ⑦ Deterrence to technology transfer to developing nations
- ⑧ Misutilisation of adaptation fund, loss & damage fund
- ⑨ Reduce trust in paris agreement. \Rightarrow deter collaborative action against climate change.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



Cause of green washing

- ① Poor oversight mechanism
- ② Unable to check actual reduction.
- ③ weak regulation
- ④ Poor technology to check.

Way forward

- ① Green audits to check actual reduction
- ② Penalise companies & ban them from carbon trading.
- ③ Strengthening of IPCC oversight mechanism.
- ④ Use NO_2 , to ensure actual reduction of emission overall, integrity in green credit trading scheme is required for its sustainability for sustainability of planet.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



17.

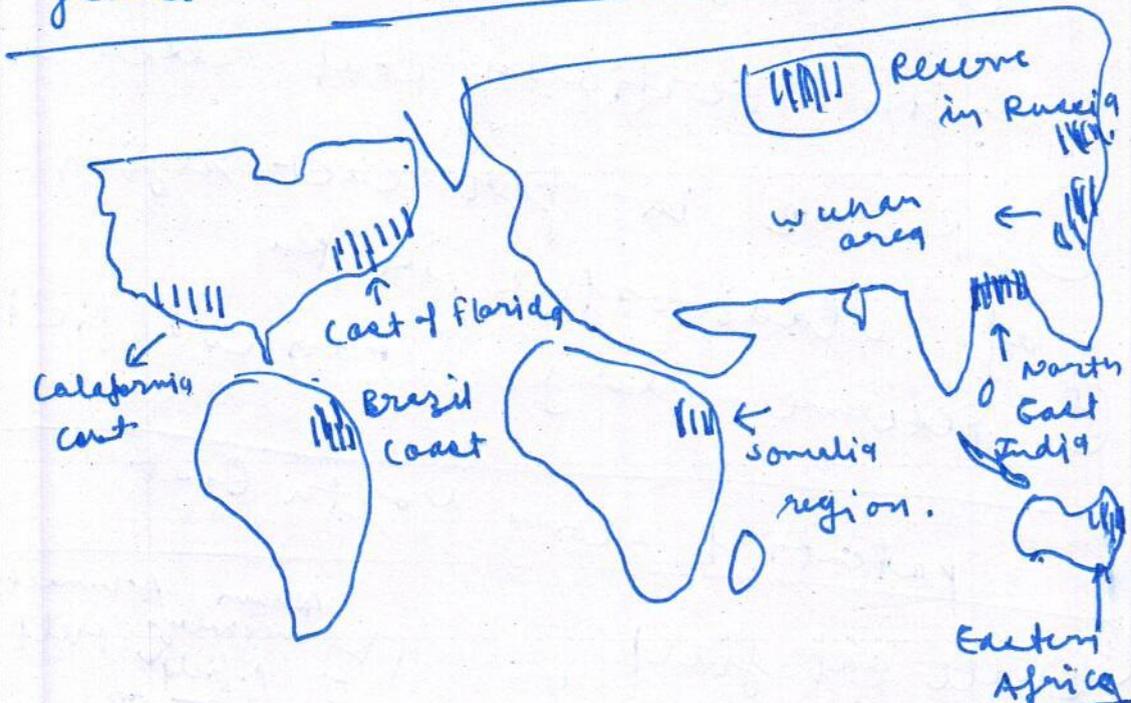
ऑयल शेल संसाधनों के वैश्विक वितरण और पूर्वोत्तर भारत में इसकी क्षमता पर चर्चा कीजिये।
(250 शब्द) 15

Discuss the global distribution of oil shale resources and its potential in North-East India.
(250 words) 15

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)

oil shale is a type
of fossil reservoir which
has oil is trapped in
shale rocks. shale rocks are
porous & can store oil for
years beneath earth crust.



Global distribution.

① It largely coincides with

presence of coal reserve

- ② widely present in USA around Eastern coast. with USA as largest producer.
- ③ High reserve in Australia along Eastern shore along with tertiary coal reserve.
- ④ Reserve in far east region of Vladivostok. ~~in Ru~~
- ⑤ Reserve along with coal field

potential along North East

- ① Shale oil field is widespread along assam oil fields



- ② extending to complete

North East.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



③ Extracting of oil shale using existing technology used in ~~the~~ crude oil extraction in Assam.

④ Energy surveillance to check more presence.

Challenges ① mining will lead to deforestation.

② Threat to local ecosystem eg landslides. ④ poor technology

③ land alienation of tribals lead to insurgent conflict.

overall, oil shale can play critical role in reducing crude oil imports to achieve SDG 7 that is affordable access to energy.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



18.

जलवायु परिवर्तन और विश्व स्तर वनाग्नि संबंधी घटनाओं में वृद्धि के बीच संबंध का परीक्षण कीजिये। देश व्यापक जलवायु अनुकूलन एवं आपदा जोखिम में कमी की रणनीतियों में वनाग्नि प्रबंधन को कैसे एकीकृत कर सकते हैं? उदाहरण सहित स्पष्ट कीजिये।

(250 शब्द) 15

Examine the link between climate change and increasing forest fire incidents globally. How can countries integrate wildfire management into broader climate adaptation and disaster risk reduction strategies? Illustrate with examples.

(250 words) 15

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

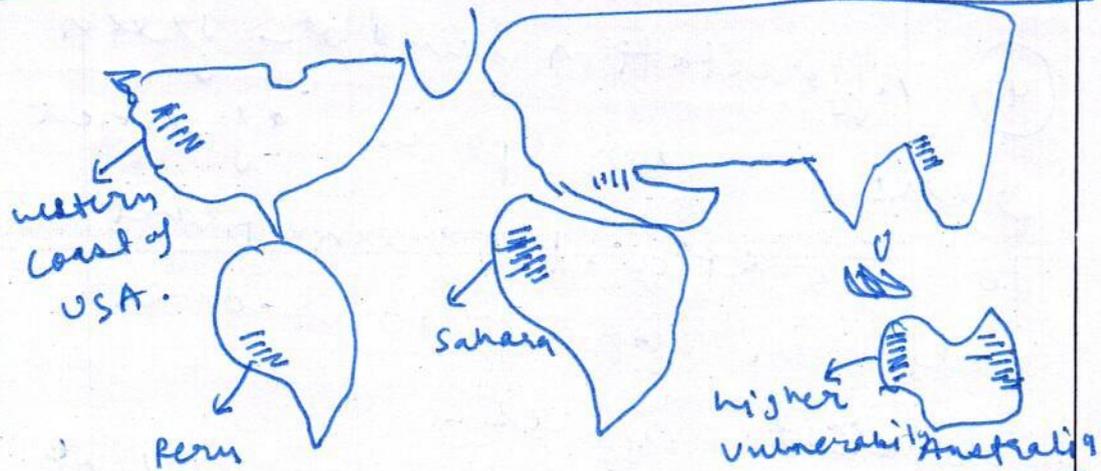
Climate change is characterised by increasing global warming, erratic weather patterns etc. It leads to further increase in intensity of disasters. For example rise in forest fires.

Link between climate change & forest fires

- ① Prolonged heat wave → high temperature to cause fire.
- ② overall global warming.
- ③ Increased rapid wind → easy spread of forest fires.



- (4) overall desertification \Rightarrow
dried forest \Rightarrow forest fires.
eg Australia forest fires.



Step to integrate
climate change in ~~wildfire~~
climate adaptation & disaster
reduction strategies

 Forest fire.

- (1) Global adaption fund under
paris agreement to include
protection from wildfire as
a mechanism of funding.
- (2) IPCC can conduct studies
R&D to reduce forest fires.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



③ Incorporate forest fire mitigation & risk reduction mechanism of Sendai framework.

④ Afforestation fund or green credit under Paris agreement to construct green plant wall in forest to reduce forest fires.

⑤ Global collaboration via Joint development mechanism

⑥ Australia can act as leader in making other countries to learn to mitigate forest fire.

In India too we need strong NDMA framework and guidelines to reduce impact of forest fires.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



19.

भारत में नदियों को आपस में जोड़ने को प्रायः क्षेत्रीय जल असंतुलन के समाधान के रूप में देखा जाता है, लेकिन इससे महत्वपूर्ण पारिस्थितिकीय और सामाजिक-आर्थिक चुनौतियाँ उत्पन्न होती हैं। केन-बेतवा लिंक परियोजना के विशेष संदर्भ में, भारत में नदी-जोड़ो परियोजनाओं से जुड़े लाभों और चिंताओं का विश्लेषण कीजिये।

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

(250 शब्द) 15

River interlinking in India is often seen as a solution to regional water imbalances, but it poses significant ecological and socio-economic challenges. Analyse the benefits and concerns associated with river-linking projects in India, with special reference to the Ken-Betwa Link Project.

(250 words) 15

Recent Ken-Betwa Link project is argued to reduce development deficit of water deficit area of Bundelkhand, providing agriculture to 4 million hectare area.

Benefit of Interlinking

- ① Reduce flood in surplus area
- ② Reduce drought in deficit area
- ③ Electricity generation.
- ④ Canal construction & large scale irrigation project.
- ⑤ Control degradation of land.
- ⑥ Increased agriculture productivity



eg more than 50 lakh farmers will be benefitted under Ken-Betwa project.

Ecological concerns

- ① Threat to marine life
- ② Deforestation \Rightarrow loss of fauna.
- ③ Interlinking \Rightarrow submergence of forest reserve
eg Panna tiger reserve in Ken-Betwa project.
- ④ Rapid soil erosion.
- ⑤ Drought in area of supply.

Socio-Economic concerns

- ① Expensive project,
- ② Facing delay.
- ③ Border water sharing dispute.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



- eg UP - MP dispute in Jan Betwa project
- ④ displacement of tribals & locals.
 - ⑤ poor rehabilitation
 - ⑥ inadequate compensation.
 - ⑦ loss of community life of displaced people.

way forward

- ① Jobs to local stakeholders
- ② Environment impact assessment with goal of minimizing impact.

overall, interlinking project has more utility than challenges - Thus efforts need to be placed to reduce challenge & move forward.

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



20.

हाइपरलोकल मौसम पूर्वानुमान से आप क्या समझते हैं? भारत में आपदा तैयारी के संदर्भ में इसकी प्रभावशीलता पर चर्चा कीजिये। (250 शब्द) 15

What do you understand by hyperlocal weather forecasting? Discuss its effectiveness in the context of disaster preparedness in India. (250 words) 15

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)

Hyper local forecasting is weather prediction of a very local area with limited region.

This requires better equipments and technology.

It ensures more detailed forecasting & explains micro phenomena eg cloud burst, heat dome, urban flooding, heat island etc.

Effectiveness in disaster preparedness

① Planned urbanisation:
hyperlocal weather prediction



will allow. agile policy making eg study of urban heat island.

- ② Tailor made local planning for dealing with disaster.
- ③ Manage human resource effectively. as hyperlocal forecasting guide needs of resources required
- ④ It can act as a benchmark for NDMA to take action.
- ⑤ Hyper local forecasting can make disaster preparedness local. with first action by district disaster management authority.
- ⑥ It can be added in our National disaster policy 2016

उम्मीदवार को इस
हाशिये में नहीं लिखना
चाहिये।

(Candidate must not
write on this margin)



⑦ Leads to evidence based policy making.

⑧ Limitations of Hyperlocal

① Problem of accuracy as it requires sophisticated technology

② Prediction of smaller area may be incorrect as weather is a relatively large area phenomena.

③ Local authorities may not be equipped to use information provided by this.

Overall, hyperlocal weathering will provide agility to our disaster preparedness programs.

उम्मीदवार को इस हाशिये में नहीं लिखना चाहिये।

(Candidate must not write on this margin)



Space for Rough Work
(रफ कार्य के लिये स्थान)



Space for Rough Work
(रफ कार्य के लिये स्थान)



Space for Rough Work
(रफ कार्य के लिये स्थान)



Space for Rough Work
(रफ कार्य के लिये स्थान)