

Content: Lacking. Need to work on it

Presentation: Handwriting & spacing is well.

Structure: Poor. Work on structure — Intro
— write point wise — Body
— Use subheading — Conclusion

— Intro & Conclusion = poor (can start with data, content, ~~less~~ related news, defn)

Interpretation of question: Lacking. Answer what is asked.
Stick to demand of question.

Value Addition: Need to write more in 15 markers.
— Not done — use data, statistics, maps, etc.

— Read toppers copy for better understanding

MAINS TEST SERIES

TEST NO.

Name of Candidate	S. Suman Kumar.
Date	4.12.2021
Medium Eng./Hindi	English.

total = 13.5

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— Attempt all questions

→ Do not give up. You will

definitely improve. Everyone goes through this phase.

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Q 1. (i) Per capita water availability is falling and unless it is checked, parts of India may face tomorrow what Cape Town faces today. Discuss.)

(ii) Also highlight recent "Equator Initiative" in the context of water conservation?

प्रश्न 1. (i) प्रति व्यक्ति पानी की उपलब्धता गिर रही है और जब तक इसे रोका नहीं गया, भारत के कुछ हिस्सों को भविष्य में सामना करना पड़ सकता है जो आज केप टाउन सामना कर रहा है। चर्चा करें।

(ii) इसके अलावा जल संरक्षण के संदर्भ में हाल ही में "भूमध्य रेखा पहल" पर प्रकाश डालिए?

Water availability is water, mainly useable water to the people, and its sources are ground water, lakes, river, ponds.

In India, Per capita water availability is falling due to

(FAO) Per capita = 1100 m^3 (2014) $>$ 800 m^3 (South Africa)

South Africa \rightarrow Day Zero (run out of water) (2017)

India - highly stressed (WB)

Reasons:

- ① Exploitation of GW \rightarrow depletion
- ② Agri policies skewed in favour of rice & wheat \rightarrow water guzzling
ex: MSP (Punjab \rightarrow rice)
- ③ Inter-state water disputes

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(4) Wastage by farmers (overuse)
(due to free water)

(5) Pollution, Contamination

Equator Initiative

- UN, govt, academia, civil society
(NGOs, local & indigenous ppl)

- build capacity, efforts - Nature Based Solutions

- Sustainable dev

eg: RWH harvesting, traditional water management systems,

watershed management, native vegetation & etc.

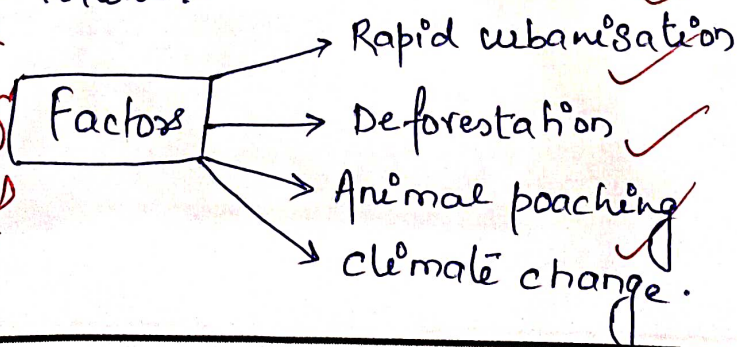
Q 2. The incidences of human-wildlife conflict has become more frequent in recent times. What are the various causes for it. Also highlight various steps which can be undertaken to reduce/mitigate the conflict.

प्रश्न 2. हाल के दिनों में मानव-वन्यजीव संघर्ष की घटनाएं अधिक हो गई हैं। इसके विभिन्न कारण क्या हैं? संघर्ष को कम/कम करने के लिए उठाए जा सकने वाले विभिन्न कदमों पर भी प्रकाश डालिए।

→ Human-wildlife conflict is a conflict in which Human and wildlife animals come to their ^{subsequent} habitat, by this conflict happen.

There are many factors which increases the Human-wildlife conflict and they are as follows :-

→ ↑ disturbance
→ ↓ prey base
→ Competition for food resources



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→ Various steps has been taken by the Govt. and the local people, they are as follows:-

① → Making of national park and wildlife sanctuaries

② → Awareness campaign

③ →

→ Human Being should take care of the wildlife animals in order to make environment function properly. Development is necessary but not on the death bed of wildlife animals.

So, we must protect and preserve the our wildlife and.

Physical + social + cultural +

Emotional aspect need to

be addressed

— forest corridors

— Swift compensation

Better land use planning

1/2

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Q 3. National Green Tribunal has played a major role in the matters of environmental protection. Critically analyse with the help of various examples?

प्रश्न 3. राष्ट्रीय हरित अधिकरण ने पर्यावरण संरक्षण के मामलों में एक प्रमुख भूमिका निभाई है। विभिन्न उदाहरणों की सहायता से समालोचनात्मक विश्लेषण कीजिए।

Role:

① Sustainable Dev - ^{polluter pays} compensation, relief

② Expertise - technical experts

eg: ① NGT suspended JSIO steel's deal with Odisha govt (2012) → saved forests & locals

② 2017: Ban on plastic bags < 50 micron

③ 2015 - ART of living foundⁿ even on Yamuna floodplains. NGT imposed fine

Issues (criticism): -

① WPA, FRA - outside ambit

② Appeals in HC against NGT → delays

③ Absence of formula based mechanism

④ Lack of enforcement

⑤ High pendency, delay

⑥ Political influence

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Q 4. Rainfed agriculture atlas to map the agro-biodiversity & socio-economic conditions prevailing in rainfed areas highlighted the clear cut bias towards irrigated areas.

Elaborate.

प्रश्न 4. कृषि-जैव विविधता का मानचित्रण करने के लिए वर्षा आधारित कृषि एटलस और वर्षा सिंचित क्षेत्रों में प्रचलित सामाजिक-आर्थिक स्थितियों ने सिंचित क्षेत्रों के प्रति स्पष्ट कट-पूर्वाग्रह पर प्रकाश डाला। विस्तार से समझाएं

→ Rainfed agriculture is a type of a farming practised in the areas where rain fall is more than 80cm. It is further characterized into two types :-

- ① Dryland
- ② Wetland.

Agro-biodiversity of rainfed agriculture is very high. since, water is available, so it leads to agro-biodiversity.

Not Needed

Minimal
It is low since rainfed

areas are at mercy of rain

No irrigation

∴ More vulnerable

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① Crops mostly common in these areas are

Rice, Wheat, Maize, Sugarcane etc.

Economic condition in these areas are not much developed, because of Less intervention by Govt. and Green revolution also did not happen here.

These areas have high potential yet due to lack of help by Govt. became backward.

Irrigated Agriculture is a type of farming in which water is drawn from canals, Tubewells etc. to the farm land.

It is further characterized into two types :- ① Protective

② Productive.

Agro-biodiversity :- Irrigated areas

have less Agro-biodiversity since water quantity is less here.

Here are Maize, Jowar etc. crops mostly common.

NOT needed

In correct
Rice, wheat,
sugarcane
(water
intensive
crops)

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→ Economic Condition :- Irrigated areas are more developed areas in terms of sain fed. areas. Due to Intervention by Govt. and Green Revolution.

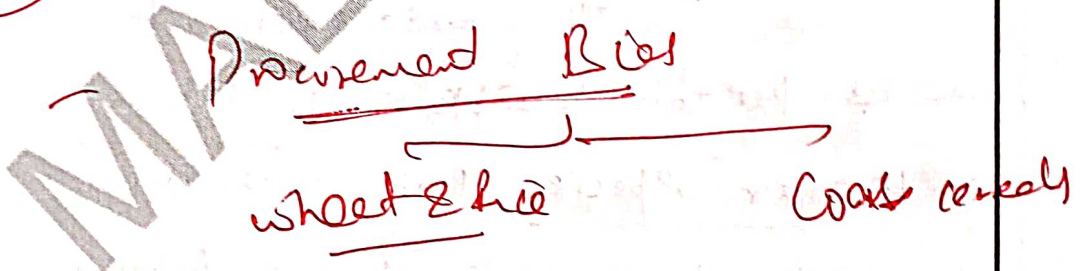
Govt., NGO. should focus on both areas with their merits and demerits. By this both areas will develop and both will become prosperous.

— Due Negligence on Rainfed formon

— 40% less income

— ↓ water shed maint. spend

0.5



— Schemes are unprofit —

Partship schemes are for irrigated areas

— Commercial fertilizers will burn out the soil without sufficient natural

You have not met demand of the question facts are incorrect

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Q 5. Give a detailed analysis on the statement that People importing "exotic live species" must make voluntary disclosure citing the rules and regulation under CITES.
प्रश्न 5. इस कथन पर विस्तृत विश्लेषण दें कि "विदेशी जीवित प्रजातियों" का आयात करने वाले लोगों को CITES के तहत नियमों और विनियमों का हवाला देते हुए स्वैच्छिक प्रकटीकरण करना चाहिए।

Exotic =
Non
Native.

→ Exotic live species are those species which are found in certain areas and they are valuable in nature.

^{origin} CITES is an NGO which regulates the trading of these exotic species. So that harm cause to these animals should be restricted.

- write about the new act + way

- Add various species

There are several reasons apart from illegal Trafficking for which CITES regulates exotic species.

These exotic species hamper the habitat of other species. People must disclose

the exotic species which they are importing to CITES, because they can give

detailed analysis on the species, so

that they can be taken off off carefully.

Invasive

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→ In RIO Summit (1992) → The provision of "CBD" ^{has} emerged, which is legally binding in nature, which directs the exporting nation to give prior information to importing nation about the species, so people who are importing the species they are also legally bind to produce the information.

Mention Protocols.

These prior information not only benefit the species but environment as a whole..

0.5

Work on structure . Do not mix points.

Define Exotic species

Intro

Body:

Harmful effects / -ves of ^{importing} exotic line species / Need for Advisory

- 1) Illegal breeding
- 2) Trafficking
- 3) Invasive species (threat to native)
- 4) Zoonotic disease

Latest Admissions of MoEFCC & CITES.

Concl.

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Q 6. From a recent report it has been seen that Black carbon levels spike at Himalayan glaciers.

In the context of the above statement, explain what is black carbon and what are its hazards?

प्रश्न 6. हाल ही की एक रिपोर्ट से यह देखा गया है कि हिमालय के हिमनद में ब्लैक कार्बन का स्तर बढ़ता है। उपरोक्त कथन के संदर्भ में स्पष्ट कीजिए कि ब्लैक कार्बन क्या है और इसके खतरे क्या हैं?

→ Black carbon is a type of black sooty material aerosol, which mainly came from unburnt fossil, ~~vechiles~~ Emmission from Vechiles, brick kilns etc.

There are Various Hazards relating to Black Carbons; They are as follows:-

① → Black Carbon has low albedo effect; So, it is a precursor of Global warming.

Avoid arrow in intro

valid

Explain more sources?

diesel engines, brick kilns, heaters.

- short lived
- high absorption capacity etc.

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② → It make air polluted, which hazardous to the human beings and other species.

③ → It also exaggerate the temperature. *increase (absorbs more heat)*

④ → Marine Ecosystem also get affected due to release of Black carbon in atmosphere. *How?*

Govt. has taken various steps to prevent the black carbon ~~releases~~ release in atmosphere.

① → Industries must have to take clearance from the Environmental agency.

→ Plantation of Trees. (Green Corridor and Green cities initiative.)

Content Missing - Himalayan?

- give due importance to both parts of question (What is Black Carbon? - only 2 lines written → write more)

These are general hazards. Need to write in context of Himalayas Also!

↓
→ snow melting

→ flooding

→ glacial

→ lake outburst

→ human health.

→ Hazards

①

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Q 7. Ocean Warming is speeding up, with devastating consequences due to marine heatwaves. What are Marine heat waves and what are its impacts?

प्रश्न 7. समुद्री उष्ण तरंगों के विनाशकारी परिणामों के साथ महासागरीय तापन तेज हो रहा है। समुद्री ऊष्मा तरंगों क्या हैं और उनके प्रभाव क्या हैं?

→ Marine heat waves are waves which is generated due to extreme heating of ocean.

It can happen due to various factors :-

- ① EL-Niño.
- ② Local heat fluxes
- ③ fire in the ocean due to oil spill
- ④ warm water currents areas increase.

Climate Change → Incⁿ in GHG

→ Impacts of Heatwave marine Heat wave :-

① → cause damage to marine Ecosystem ^{→ corals, fish etc.}

② → Ice melting which leads to increase

^{surrounding} in high rise of water : ③ Economic impact on fishermen

④ → catastrophic flood in coastal areas.

⑤ Cyclones - frequency & intensity ↑

→ There are certain convention and protocols for the prevention of marine water Heating

① → Arctic Conference.

②

Conclusion?

②

1000
250 x 5
1250
750
2000
5000

① → 40%

88%

47,98

8[28]

30

40

.66

15 x .66

9.9

9.0

9.0

9.90

1.5

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Q 8. Conservationists point out that the exercise of planting exotic plants will have a huge impact on soil chemistry and wildlife in the region of Nilgiris. What are the environmental reasons for such problem. Also discuss briefly the measures of the situation.

प्रश्न 8. संरक्षणवादियों का कहना है कि नीलगिरी के क्षेत्र में विदेशी पौधे लगाने की कवायद का मिट्टी के रसायन और वन्य जीवन पर बहुत बड़ा प्रभाव पड़ेगा। ऐसी समस्या के पर्यावरणीय कारण क्या हैं। स्थिति के उपायों पर भी संक्षेप में चर्चा करें।

Intro: → Exotic plants — non native
eg: Pine, bottlebrush (non native to Nilgiris)

Environmental

Issues / Reasons: -

- ① On soil chemistry — prevent native plants (changed composition) from growing
- ② Alien species → compete → resource & with native

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- ③ ↑ water demand .
- ④ Genetic changes in wild life possible
- ⑤ Threat to survival of wild life dependent on native plants (Food chain)

Measures:

- ① Afforestation - agro climatic native species
- ② Landscape approach on lines of SECURE HIMALAYAS (SECURE NILGIRIS)
- ③ Data collection
- ④ Stakeholders - local, experts, environmentalist .
- ⑤ Declare Nilgiris - Eco sensitive zone (Gadgil committee or W.G)

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Q 9. In India Making work environments safer is a low priority, although the productivity benefits of such investments have always been clear.

In the light of the above statement, highlight the goal and the action plan of the government to improve the safety, health and environment at workplace?

प्रश्न 9. भारत में काम के माहौल को सुरक्षित बनाना एक कम प्राथमिकता है, हालांकि ऐसे निवेशों के उत्पादकता लाभ हमेशा स्पष्ट रहे हैं।

उपरोक्त कथन के आलोक में, कार्यस्थल पर सुरक्षा, स्वास्थ्य और पर्यावरण में सुधार के लिए सरकार के लक्ष्य और कार्य योजना पर प्रकाश डालें?

→ Work environments should be made

safer, healthy and environment friendly,

since it impacts on the productivity of the worker. and it also encourages the workers to come to the workplace.

Providing a safer workplace is also the duty of Govt. Govt. and several NHOs has taken certain initiative to promote safer and hygienic workplace: for ex. Gender based Toilets, Vertical farming in workplace, Pick-up and drop cars in several private institutions.

These initiative will promote a safer workplace and encourage all people to join workforce.

From intro

0.25

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OSDP - work place safety

Goal of govt ∴ Providing

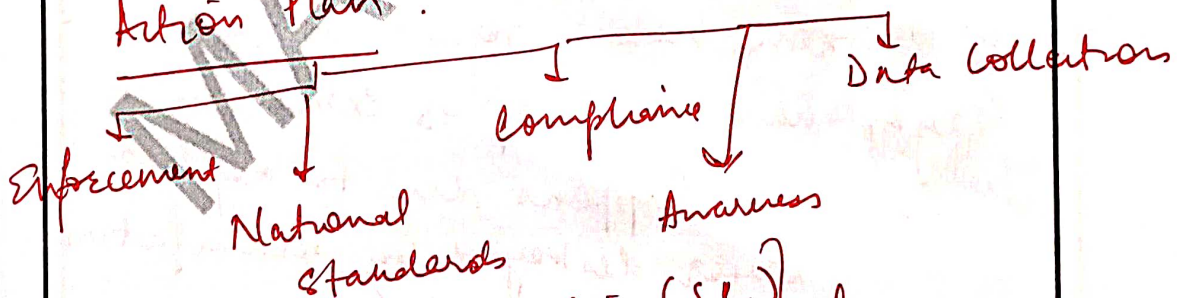
① Statutory framework on Occupational Safety & Health (Labour Code on Occupational Safety)

② Financial & Non financial incentive for health & safety of employees (ESIC).

③ Preventive strategies - Safety norms, Building norms and licences
Eg: Fires in Building - Delhi, Mumbai etc.

See Model Answer

Action Plan:



- ① Vishakha guidelines (S.C.) } for women
- ② SHF Box } Etc.

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Q 10. Recently the ozone layer hole over the Arctic got closed.
 In the context of the above statement, highlight what is Ozone Hole and the importance of Ozone Layer? Also bring out as to why the Ozone Hole was massive this year?

प्रश्न 10. हाल ही में आर्कटिक के ऊपर ओजोन परत का छिद्र बंद हो गया।
 उपरोक्त कथन के संदर्भ में, ओजोन छिद्र क्या है और ओजोन परत के महत्व पर प्रकाश डालिए। इसके अलावा, इस साल ओजोन छिद्र इतना विशाल क्यों है?

intro : Ozone hole : region in ozone layer where concⁿ of O_3 extremely low → happens due to depletion of ozone layer destroyed by manufacture of chemicals - CFCs.

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Importance

- ① Absorbing harmful UVB
- ② Skin cancers, rashes - humans
- ③ Damages plant life - mutations, death
- ④ Animal life - gene mutation, skin disease etc.
- ⑤ Damage to buildings, materials etc.
(toxicity of plastic)

Why missing :-

- ① Unusual Atmosphere condⁿ - precip temp in stratosphere
- ② Cold temp & cold waves in Northern region → CFC
- ③ Polar vortex → Arctic temp lower than usual.
↓
Polar stratospheric clouds formation
leads → cause O₃ depletⁿ.

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Q 11 Global experience shows that with the right public policies focusing on agriculture, improved sanitation, and women's education, one can have much better health and well-being for its citizens, especially children. Critically discuss in the context of India.

प्रश्न 11. वैश्विक अनुभव से पता चलता है कि कृषि, बेहतर स्वच्छता और महिला शिक्षा पर ध्यान केंद्रित करने वाली सही सार्वजनिक नीतियों के साथ, अपने नागरिकों, विशेषकर बच्चों के लिए बेहतर स्वास्थ्य और कल्याण हो सकता है। भारत के संदर्भ में आलोचनात्मक चर्चा कीजिए।

→ We have seen from the time immemorial.

that whenever any country focus on agriculture, education and health, that state progression is very high in every sphere.

poor intro

When we look towards India, we saw that the policies and their implementation has very less role to play in these sectors.

0.25

Women's Education → In India, the participation rate in Education is very low due to various factors.

Global Experience

China — focus on agri → ↓ stunting & wasting, poverty alleviation

Brazil & Ethiopia (FAO report) → targeted PDS → reduced hunger
social protection schemes.

Scandinavian countries → women eduⁿ → Norway at top of all indices.

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India :

Issues :

- ① WB - poverty report - 13.4% (2015)
(still highest no. of poor)
- ② NFHS → 38% stunted
21% wasted
- ③ GHI → 102/117
(hunger)
- ④ women literacy = 62% only.
- ⑤ Lack of sanitation - malaria, dengue
bubonic highest.

Need

- ① Nat Nutrition Mission
- ② Mother's Educⁿ → +ve effect on
child educⁿ & health.
- ③ Anceek Bheet Abhyan & Jal
Shakti Abhyan - sanitation & drinking
water
- ④ Agriculture - distress (small &
marginal farmer = 90%)

See
World
trends

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Q 12. The recent FSSAI norms prohibiting the sale and advertisement of food rich in fat, sugar and salt will help in overcoming hazardous health issues. Critically comment.

प्रश्न 12. वसा, चीनी और नमक से भरपूर भोजन की विक्री और विज्ञापन पर रोक लगाने वाले FSSAI के हालिया मानदंड खतरनाक स्वास्थ्य मुद्दों पर काबू पाने में मदद करेंगे। आलोचनात्मक टिप्पणी करें।

→ FSSAI is a food safety and security agency of India, whose role is checked-
hazardous or non-edible items in the food.

advertisement

FSSAI by prohibiting the sale and advertisement of food rich in fat, sugar and salt is not a progressive step. Since all ~~the~~ three are edible items and also plays an important role in our nutrition.

Incorrect approach

These are not good

Good fat is necessary for body to work, ~~as well~~

sugar helps in fighting Low Blood Pressure

These items is also important for Health.

India's

① Diabetes Capital

② High blood pressure

③ Obesity in children.

but banning is not the solⁿ. need to change behaviour

2nd highest

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→ Here FSSAI should take the considerable amount in which a person should consume these items, that would help to fight Hazardous Health diseases.

But a Blanket Ban is neither good for the health and not for the Economy.

FSSAI must take the amount of Health benefits also before banning it. Doctors also prescribe a limited amount of fat, sugar and salt is necessary in the body.

This is valid

1

Need: ① Simultaneous promotion of nutritious diet

Need for nudge psychology

② Challenge of enforcement

③ Onus of parents? → should ensure physical activity as well (Khelo India)

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Q 13. What is Environmental Impact Assessment? Highlight the EIA Process what is followed for various projects?

प्रश्न 13. पर्यावरणीय प्रभाव आकलन क्या है? विभिन्न परियोजनाओं के लिए अपनाई जाने वाली ईआईए प्रक्रिया पर प्रकाश डालिए।

→ Environmental Impact Assessment is a tool by which state or any organisation come to know about the impact on environment of that project.

This helps organisation to prevent environmental degradation and to take preventive measures.

Various process taken by EIA to know about in projects which are environmentally damaging.

① → Project mapping, where it has been build.

② Effect of various bodies like, water, soil etc.

③ → Effect on the life of animals.

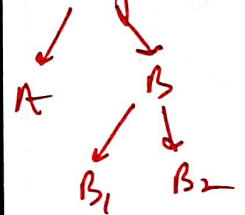
④ → Effect on people.

Screening → Scoping → data collection →
public hearing → Decision → Monitoring → Review
implementation

Expand these ↗

Explain in details

Project categories



etc.

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→ These steps taken by EIA minimizes the damaging effect on the environment.

EIA is helping the community as well as Environment by assessing the ill-effect.

But there are several loop holes which make this assessment less effective.

EIA must fill his loop holes, in order to perform his work efficiently.

Conclusion missing

??

Vague

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Q 14. Centre has recently unveiled new rules to regulate exotic animal trade but some issues still remain. Discuss.

प्रश्न 14. केंद्र ने हाल ही में विदेशी पशु व्यापार को विनियमित करने के लिए नए नियमों का अनावरण किया है लेकिन कुछ मुद्दे अभी भी बने हुए हैं। चर्चा करें।

New Rules :-

- ① Owners to register stock with CWO of state
- ② Inventory preparation (database)
- ③ Right to suspect facility of traders
- ④ 6 months to declare stocks
- ⑤ Exotic species = under App 1, 2, 3 of CITES
NOT include schedules of WPA 1972
- ⑥ Screening of all imports
etc.

Issues :

- ① Matters of invasive species, zoonotic disease NOT covered
- ② Domestic trade not covered

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③ limited scope - Only species under CITES.

(Sugar gliders, corn snakes \neq CITES but exotic and traded domestically)

Et.

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Q 15. Recently the PM Formalization of Micro Food Processing Enterprises (PM FME) Scheme has been launched. Why was there a need for such a scheme. Also discuss its features.

प्रश्न 15. हाल ही में PM फॉर्मलाइजेशन ऑफ माइक्रो फूड प्रोसेसिंग एंटरप्राइजेज योजना (PM FME) शुरू किया गया है। ऐसी योजना की आवश्यकता क्यों पड़ी? इसकी विशेषताओं की भी चर्चा कीजिए।

Need :

- ① Unorganized food processing (FP) (25 lakh units, 74% employment in sector)
- ② 66% - rural areas & family based enterprises → importance in livelihood & preventing migration
- ③ Challenges faced.
- ④ Lack of access to mod tech, training, skill, market etc.
- ⑤ Huge potential but low contribution

Features : financial, technical, business support

- ① One District One Product
- ② Cluster Approach
- ③ waste to wealth
- ④ Minor forest products } focus
- ⑤ Aspirational District
- ⑥ credit facility
- ⑦ Upgrade micro FP units
- ⑧ FPOs/SHGs promotion

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Q 16. Maharashtra State Government has recently notified Tilar forest as a Conservation Reserve. What is a Conservation Reserves? Also highlight how it is different from Community Reserve?

प्रश्न 16. महाराष्ट्र राज्य सरकार ने हाल ही में तिलारी वन को एक संरक्षण रिजर्व के रूप में नामित किया है। एक संरक्षण रिजर्व क्या है? यह भी उजागर करें कि यह सामुदायिक रिजर्व से कैसे भिन्न है।

→ The ~~reserve~~ forest which is notified by Govt. for the protection and development of the forest is known as Conservation forest. Here human intervention is very minimal. Govt. tries to improve the forest cover.

But on the other community reserve is a reserve in which every body can use regardless of anything. For ex. any people can draw water for agriculture, etc.

Differences b/w between community reserve and conservation reserve.

Community Reserve

① Every one can use it as per its needs disposal.

Conservation Reserve

② ~~the~~ less Human Intervention and.

People cannot use it as per its need disposition.

people can

Avoid
2
paragraphs.

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2)

Forest cover
state took several
initiative to increase
forest cover.

- put land → protection granted

② No such initiative by
state, is all dependent
on local people, they
grow and cut the
trees as per their
need.

Not regulated. X

- govt land → protection
- Act as Buffer zones &
Connect corridors, NP, WS etc.

③ strict regulation

→ Both are important in their sphere,
one increases the environmental quality,
and other increases standard of life
of the poor people, marginalized people.

Both state should focus

on both reserves as it play crucial
role in development of forest; which
further helps in the life of the people.

Work on structure

1.75

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Q 17. Water bodies have become even more critical in current times when cities are facing the challenge of rapid, unplanned urbanization. Highlight the various issues due to various unlawful activities.

प्रश्न 17. वर्तमान समय में जल निकाय और भी अधिक महत्वपूर्ण हो गए हैं जब शहर तेजी से, अनियोजित शहरीकरण की चुनौती का सामना कर रहे हैं। विभिन्न गैरकानूनी गतिविधियों के कारण विभिन्न मुद्दों पर प्रकाश डालिए।

→ Water bodies are those bodies by which human beings and other species draw water for their needs.

poor intro

Due to rapid and

unplanned urbanisation, it is the most affected. is the water bodies. since water bodies is for all and it also plays a significant role in farming.

Don't repeat question

Save space & time to write relevant points

There are various factors which are as follows :-

① → Industries → The Industrial waste

directly get disposed in water bodies without any Treatment. Since it is both unlawful as well as unethical, but

NOT needed

~~Industries used to do this, this affects not only marine ecosystem but nature or environment as a whole.~~

keep explanation short

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② → Sewage → sewage are directly get disposed into water bodies.

dumping of waste

③ → Waste like plastic and other hazardous waste disposed in water bodies.

④ → unrestricted way of usage of water.

Pollution

Encroachment

These are threats water bodies faces

when unplanned urbanisation happen.

Wetland Conservation Act

Govt. should interfere,

Illegal mining

and make some regulatory framework to prevent water bodies.

Unplanned tourism

valid

The role of civil society.

is also very crucial, since they can aware large number of people of the threat to the water bodies.

3

15 marks :- write more

Give way forward

Wetland Conservation Act

Court order

Planned urbanization

to remove unapproved

Sewage Treatment Plants

Strict law enforcement

Colonies

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Q 18. What are Micro-plastics? How severe is plastic pollution in the Atlantic Ocean?
 प्रश्न 18. माइक्रोप्लास्टिक क्या है? अटलांटिक महासागर में प्लास्टिक प्रदूषण कितना गंभीर है?

Microplastics : plastic debris $< 5\text{mm}$

- sources \rightarrow cosmetics, plastic waste, degradation of larger pieces into smaller by water, sunlight etc.
 - difficult to detect

- Bio accumulation in human body

Harmful effects

(1) toxic \rightarrow human

(2) water pollution

(3) env. degradation

(4) Not biodegradable (1000s of yrs)

(5) Enter food chain via zooplanktons \rightarrow fish \rightarrow human

(6) Death of marine species & birds \rightarrow choking

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Plastic pollution (Atlantic)

① Nature Communications study

Atlantic O = 11-21 mill tonnes plastic

② Sources - illegal dumping, riverine & atmospheric transport, at sea littering (fishing, shipping etc)

③ At Ocean - plastic waste x 10 times more than previously predicted

④ Stuck in Columbus Gyre
↓
keep plastic trapped in centre of ocean

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Q 19. Critically examine as to why our cities are warmer than their suburbs and rural areas with the Understanding of urban heat island effect.

प्रश्न 19. शहरी गर्मी द्वीप प्रभाव की समझ के साथ हमारे शहर अपने उपनगरों और ग्रामीण क्षेत्रों की तुलना में गर्म क्यों हैं, इसकी आलोचनात्मक जांच करें।

→ Urban heat ^{Island} is a concept in which urban areas get heated more as compare to rural areas. There are several reasons behind it they are as follows:-

① High rise Building which gives more surface areas for heat to get trapped.

② → less amount of Trees.

③ → Vehicular emission.

④ Industries, etc.

asphalt, concrete, etc.

⑤ This urban heat led to further ex heating of the urban areas due to usage of Air conditioner, Coolant, etc.

→ People as well as Govt must take measures to prevent and urban Heat.

Good.

write as point, Not paragraph

2

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Like planting more Trees, Less high rise building, Electric vehicle, Less CFC emission.

These urb. Urban Heat has a very high potential to affect our climate as a whole. It will also play an important role in global warming.

Address question: Why urban areas hotter than rural/suburbas?

(1) Use of Asphalt (tar), bricks etc higher heat capacity → rural areas (kitchen houses, no friendly local building material)

(2) Trees - affect local climate
↓
rural

Urban
←
lack
- no rain
- no temp regulation

- trees ↑
- local heat effect suppressed

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③ Urban v/s Rural
↓
low evapotranspiration ↓ high temp.
↓
high temp.

④ Transportation Urban v/s Rural
↓
vehicular emissions
high - high temp

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Q.20. One of the severe problems in eastern India is Arsenic. Highlight the various features/effects from the arsenic endemic areas of India. What steps have been taken to overcome it?

प्रश्न 20. पूर्वी भारत की गंभीर समस्याओं में से एक आर्सेनिक है। भारत के आर्सेनिक स्थानिक क्षेत्रों से विभिन्न विशेषताओं/प्रभावों पर प्रकाश डालिए। इस पर काबू पाने के लिए क्या कदम उठाए गए हैं?

→ Arsenic one of dangerous elements which causes several health diseases. Like skin disease.

Arsenic : Contamination of water

↳ Areas : G B plains - Bihar, UP, Jharkhand, Chhattisgarh, WB etc.

Effects/features of these areas:

- ① Skin cancer
- ② Heart disease.
- ③ Melanosis, Keratosis etc.
- ④ fatigue, nervous system breakdown
- ⑤ Lethargy. etc.

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Measures :-

- ① Rice variety resistant to Arsenic (Muktoshri)
- ② R W Harvesting (low Arsenic)
V/S G W → high Ar concⁿ
- ③ Better testing facilities

See Model
Answer

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Phase
Report 2014

Revisions - Guideline - (NA)

20 - RBB gi

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