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GENERAL STUDIES (TEST CODE : 2369)

Name of Candidate	G. SRUJANA		
Medium Eng./Hindi	ENGLISH	Registration Number	346699
Center	HYD	Date	13/9/2024

INDEX TABLE		
Q. No.	Maximum Marks	Marks Obtained
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17	15	
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20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are **TWENTY** questions printed in **HINDI & ENGLISH**.
इसमें बीस प्रश्न हैं हिन्दी और अंग्रेजी में छपे हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- 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 medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

Is student recommended for One-to-One mentoring?

Recommended

Strongly Recommended

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp. Punjab & Sind Bank), Dr. Mukherjee Nagar, Delhi- 110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Q1.

भारत के परिवहन क्षेत्रक का ऊर्जा संक्रमण, जो 2070 तक नेट-जीरो उत्सर्जन हेतु भारत की प्रतिबद्धता को पूरा करने के लिए महत्वपूर्ण है, कई बाधाओं का सामना कर रहा है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

The energy transition of India's transport sector, significant to fulfil India's commitment to net-zero emissions by 2070, faces several hurdles. Discuss. (Answer in 150 words) 10

Energy transition refers to the shift from the fossil fuels to renewable energy.

Ex → from petrol engines to electric vehicles.

Significance in energy transition in

achieving net zero emissions

→ ① Reduce the pollution especially GHG emissions.

Ex → SO₂, NO_x, O₃, etc.

→ ② Energy intensity reduction.

Ex → Reduce the energy intensity of fossil fuels by 45% by 2030.

⇒ ③ specific targets on net zero emissions.

↳ Ex Railways target of becoming net zero by 2040.

⇒ ④ International credibility by reducing the carbon footprint.

↳ Ex CBAM non-tariff barriers.

Hurdles present

⇒ ① Over-reliance on fossil fuels.

↳ Ex Coal.

⇒ ② Technological hurdles.

↳ Ex Cost of Li-ion batteries.

⇒ ③ Less explored energy sources.

↳ Ex Geothermal energy.

⇒ ④ Non-binding treaties.



The energy transition should be just and equitable to achieve sustainable development.

समस्या मसिदा पर WTO के समझौते में कुछ रोकथामक मसिदियों को प्रतिबंधित करने हेतु नियम निर्धारित किए गए हैं। विवेचना कीजिए। भारत के समझौते के लिए इस समझौते के क्या निहितार्थ हैं? (उत्तर 150 शब्दों में दीजिए)

WTO's Agreement on Fisheries Subsidies lays out rules for prohibiting certain forms of harmful subsidies. Discuss. What are the implications of the agreement on India's fisheries sector? (Answer in 150 words)

10

Recently India raised its voice in WTO in continuance of fisheries subsidies. Because they are crucial for food security in country.

WTO's fisheries subsidies rules

and their harmful implications

① The limits on subsidies.

② De-minimis rule on 10% and 5% of export

countries.

③ To avoid discrimination among countries.

④ National treatment principle on exports.

→ ③ India's fisheries, being 13% of total exports are badly hit if subsidies are cut down.

→ ④ Pressure from the developed countries.

↳ USA insisting on the removal of subsidies.

→ ⑤ The livelihood gets affected due to the vulnerability present.

↳ long east coastline - prone to cyclones.

→ ⑥ The employment gets hit.

↳ fisheries sector, a major source in coastal states.

The subsidies in India are key for its developing country nature. It provides support to the Blue economy

Q3.

यद्यपि पीएम-किसान (PM-KISAN) योजना ने अनेक किसानों को लाभ प्रदान किया है, फिर भी इसे कई महत्वपूर्ण चुनौतियों का सामना करना पड़ रहा है। (उत्तर 150 शब्दों में दीजिए)

Although the PM-KISAN Scheme has provided benefits to numerous farmers, it continues to face several significant challenges. Discuss. (Answer in 150 words) 10

PM-KISAN was launched in 2015, a DBT scheme to double the farmer's income in India.

Benefits of PM-KISAN scheme

- ① Farm credit is provided regularly.
Ex → 6000 rupees annually.
- ② Security against adverse situations.
Ex → failure of crops.
- ③ Non-farm income to improve livelihoods.
- ④ Purchasing power also gets increased.

- ⇒ ⑤ Removal of middlemen with directly money into banks.
- ⇒ ⑥ Inclusive growth with protection to small and marginal farmers.

Challenges present in PM-KISAN

- ⇒ ① Financial inclusion - many of the bank accounts are not used.
Ex) Nearly 38%.
- ⇒ ② No limits on the land holding of beneficiaries.
Ex) Discourages small farmers.
- ⇒ ③ Delay in the fund disbursement - not during the farming season.
- ⇒ ④ Meagre amount provided not sufficient due to inflation.

The PM-KISAN, largest OBT scheme in world should be revamped with focus on robustness.

Q4.

भारत में पशुपालन को रूपांतरित करने में डिजिटल प्रौद्योगिकी क्या भूमिका निभा सकती है?
(उत्तर 150 शब्दों में दीजिए)

What role can digital technology play in transforming animal husbandry in India?
(Answer in 150 words) 10

India is having the largest population of livestock in the world. Also it is the largest producer of milk in the world.

Role of digital technology in transforming animal husbandry

- ① Increased income can be realised.
 ↳ Automation present in dairy farms in Newzealand.
- ② Food processing thus reducing the wastage of products.
 ↳ Milk into milk powder
- ③ Market linkages can be created.

- Ex Leather manufacturing.
- ④ Reducing adulteration
- Ex Thorough quality checks.
- ⑤ Prolonged shelflife
- Ex Irradiation techniques.
- ⑥ Increased exports can be achieved.
- Ex Through export hubs.
- ⑦ Regional disparity can be addressed - as skewed in Western and Northern India.
- Ex Milk revolution.
- ⑧ Better productivity through variety of breeds.
- Ex Gene editing techniques.

The animal husbandry sector also is growing with number of diseases, proper vaccination is the need of the hour.

Q5.

भारत का पारंपरिक ज्ञान पर्यावरण संरक्षण हेतु कृषि को संधारणीय बनाने के लिए समाधान प्रस्तुत करता है। उदाहरण सहित स्पष्ट कीजिए। (उत्तर 150 शब्दों में दीजिए)

India's traditional knowledge offers solutions for making agriculture sustainable for environmental conservation. Illustrate with examples. (Answer in 150 words) 10

Recently, WHO has approved the Gujarat Declaration on Traditional Knowledge.

Traditional knowledge offering

solutions for sustainable agriculture

- ① Through better land utilization, thus reducing the deforestation.
 - ↳ Use of natural farming.
- ② Reducing the methane emissions.
 - ↳ Agriculture - 2nd largest emitter after transport sector.
- ③ Mulching promotes soil biota - healthy
 - ↳ Reduction in use of fertilizers.

- ⇒ ④ Use of traditional pesticides and fertilizers.
- ↳ Cowdung - reduces the chemical leaching.
- ⇒ ⑤ Less usage of water and energy.
- ↳ System of Rice intensification
- ⇒ ⑥ Increased cropping intensity.
- ↳ Through crop rotation.
- ⇒ ⑦ Allowing the land to regain its strength during off season.
- ↳ Through short season crops like millets, pulses, etc.

The traditional knowledge in agriculture is very useful for the growing concern on food security - India ranked 111 in Global Hunger Index.

Q6.

भारत में आपदा प्रबंधन में मीडिया की भूमिका पर टिप्पणी कीजिए। (उत्तर 150 शब्दों में दीजिए)

Comment on the role of media in disaster management in India. (Answer in 150 words) 10

Media acts as a key instrument in tackling the disasters by providing communication and information.

↳ Crowded funding during recent Wayanad landslides.

Role of media in disaster management

Positive role/

→ ① It creates disaster preparedness among the stakeholders.

↳ Through weather data.

→ ② It gives warning.

↳ During any stampedes, security in theatres.

→ ③ It also helps in information dissemination quickly.

↳ landslides in silkyara tunnel

→ ④ It also emerges as a mechanism to create solidarity.

↳ Crowd funding, medical relief, etc.

Negative role

→ ① Spread of misinformation can create panic.

→ ② Creation of communal violence due to fakenews.

→ ③ Remote areas cannot be covered.

→ ④ The media provides unnecessary hype. ↳ media trials.

The media plays a vital role in disaster management but it need to be transparent.

Q7.

औषधि विकास और विनिर्माण के संदर्भ में, प्रौद्योगिकी किस प्रकार भारत के फार्मास्युटिकल उद्योग को रूपांतरित कर रही है? (उत्तर 150 शब्दों में दीजिए)

How is technology transforming India's pharmaceutical industry in terms of drug development and manufacturing? (Answer in 150 words) 10

India ranks third in the volume of pharmaceutical exports in the world and ranks thirteenth in value of exports.

Technology transformation in pharmaceutical industry

⇒ ① Creation of websites for a single window clearances for industries.

Ex: Ease of Doing business.

⇒ ② PLI scheme is providing the technological incentive for production.

Ex: Manufacture of drugs.

⇒ ③ Genetic engineering techniques.

Ex: Precise medicine.

- ⇒ ④ Use of stem cell technology to create new drugs.
- ⇒ ⑤ Drug Parks are set up for a robust manufacturing.
Ex) Sultampur Drug Park.
- ⇒ ⑥ Storage mechanisms and related infrastructure
Ex) Cold storage for vaccines during COVID-19 pandemic.
- ⇒ ⑦ APIs supply for the drug manufacturing.
- ⇒ ⑧ R&D support
Ex) Through labs collaboration under global network of WHO.

The pharmaceutical industry has huge potential in boosting the economy thus achieving developed country status by 2047.

Q8.

कृषि के साथ सौर ऊर्जा को संयोजित करने वाली एग्रीवोल्टाइक प्रणाली किस प्रकार भारतीय कृषि के लिए एक गेम चेंजर सिद्ध हो सकती है? (उत्तर 150 शब्दों में दीजिए)

How can agrivoltaics, which combines solar energy with farming, be a game changer for Indian agriculture? (Answer in 150 words) 10

PM-KUSUM is an important scheme which provides support to farmers to shift to solar energy in farming.

[Agrivoltaics as a gamechanger for Indian agriculture]

→ ① [Non-farm income] to the agri households.

[Ex] Through PM-KUSUM.

→ ② [Energy efficiency] with less reliance on fossil fuel based energy.

→ ③ [Independence] to the farmers.

[Ex] farmer as producer of electricity.

→ ④ Subsidies in power sector can be reduced.

↳ DISCOM's AT & T losses are nearly 38%.

→ ⑤ Continuous power supply to the agriculture sector.

↳ Through solar energy, abundant in country.

Challenges present

→ ① Increased cost in adopting solar energy.

↳ solar panels.

→ ② Over reliance on thermal energy.

↳ 54% energy from coal.

→ ③ Regional disparities in climate.

↳ In Himalayan and hilly regions.

The agrivoltaics is a step in right direction towards a clean transformation.

Q9.

क्या केंद्रीय सशस्त्र पुलिस बलों (CAPFs) की संयुक्तता भारत के विभिन्न भागों में सामना की जा रही प्रमुख सुरक्षा चुनौतियों से निपटने में सहायक हो सकती है? (उत्तर 150 शब्दों में दीजिए)

Can jointness of the Central Armed Police forces (CAPFs) help in tackling the major security challenges being faced in various parts of India? (Answer in 150 words) 10

CAPF consists of a number of forces usually seven provide various security operations across country.

Ex) BSF in border security.

Jointness of CAPF in tackling

security challenges in various parts

of India

⇒ ① To combat LWE (left wing extremism).

Ex) CRPF forces in Bastar

⇒ ② To protect the chinese intrusions.

Ex) ITBP forces in the Indo-Tibetan border.

→ ③ To protect from the refugee challenges in North East.

Ex → Assam Rifles.

→ ④ From the non-traditional threats like human and drug trafficking.

Ex → BSF forces.

→ ⑤ Terrorism related activities is a major challenge

Ex → from Pakistan.

→ ⑥ protecting the critical infrastructure.

Ex → CIBF operations.

At present, the recruitment to CAPF is done in a joint manner. But they work in silos. They unitedly will help in protecting country from emerging challenges with shared intelligence.

Q10.

ड्रग्स, इंटरनेट और आतंकवाद के बीच संबंध किस प्रकार भारत के लिए एक गंभीर खतरे के रूप में उभरा है? (उत्तर 150 शब्दों में दीजिए)

How has the linkage between drugs, internet, and terrorism emerged as a significant threat for India? (Answer in 150 words) 10

Drugs, internet and terrorism are linked to each other in an organized crime.

Linkage between drugs, internet and terrorism - threat for India



Fig: Golden Crescent and Triangle

① Majority of the terrorism threats are from these regions - Golden Crescent and Golden Triangle.

↳ Ex → Terrorism from Pakistan.

② It creates a social impact on the country's human development.

↳ Drugs through drones in Punjab.

③ Use of internet for the crowd funding of terrorist activities.

↳ social engineering.

④ Affecting the growth of the border areas through security threats.

↳ Through arms smuggling with drugs.

⑤ Using encrypted technology to communicate.

↳ whatsapp encryption.

These threats need to be ironhanded with a focus on shared intelligence and strict vigil.

Q11.

भारत के अवसंरचना विकास के लिए एक निवेश मॉडल के रूप में सार्वजनिक-निजी भागीदारी (PPP) की भूमिका पर चर्चा कीजिए। PPP अवसंरचना की सभी निष्पादन संबंधी समस्याओं के लिए कारगर क्यों नहीं हैं? (उत्तर 250 शब्दों में दीजिए)

Discuss the role of Public-Private Partnerships (PPP) as an investment model for India's infrastructure development. Why are PPPs not a panacea for all infrastructure-related performance problems? (Answer in 250 words) 15

In public-private partnership (PPP) investment model, the Government entity and private entity share the resources, risks and responsibilities.

Role of PPP in India's infrastructure

development

⇒ ① Technology innovations with the presence of private sector.
Ex: Beautification of railway stations in Bengaluru.

⇒ ② Governance becomes better with transparency.
Ex: Shared responsibilities, best practices of private sector are brought.

→ ③ Utilization of resources becomes efficient.

Ex → In the construction of Mumbai's sea bridge.

→ ④ Design and aesthetic appearance improves.

Ex → Airport of Hyderabad.

→ ⑤ Funds availability is a major advantage.

Ex → In the construction of sea ports.

→ ⑥ FDI attraction into the infrastructure projects.

Ex → Japanese DFI.

Problems in PPP model

→ ① Delay in the completion of the projects.

Ex → The construction of

Based on the recommendations of the Kelkar committee, PPF model should be employed with transparency and accountability.

- ⇒ (5) Logging in the incentive to private companies due to losses.
 - ↳ LFT losses in meter in hydrothermal.
- ⇒ (4) Focus more on profits.
 - ↳ increased costs of the changed fees from citizens.
 - ↳ NHAI scam.
- ⇒ (3) Corruption activities in the apparatus.
 - ↳ IIFCL
- ⇒ (2) Rising NPAs is a major problem of companies.
 - ↳ roads in Northeast

Q12.

भारत में सुभेद्य वर्गों के लिए खाद्य सुरक्षा सुनिश्चित करने में 'एक राष्ट्र-एक राशन कार्ड' योजना की भूमिका पर प्रकाश डालिए। इस योजना को सफल बनाने के लिए किन बाधाओं को दूर किया जाना अनिवार्य है? (उत्तर 250 शब्दों में दीजिए)

Bring out the role of the 'One Nation-One Ration Card' scheme in ensuring food security for vulnerable sections in India. What obstacles must be overcome to make the scheme a success? (Answer in 250 words) 15

One Nation - One Ration Card (ONORC) scheme was launched with the focus on Amanisbhar Bhasat post COVID-19 pandemic.

Role of ONORC for food security

- ⇒ ① It provides a great relief to the migrant labour.
Ex → During COVID-19.
- ⇒ ② Integration of the PDS system with technology.
Ex → Weighing machines.
- ⇒ ③ Also better accountability and transparency.

→ (4) Decentralised system with better governance.

↳ Removes hurdles in registration.

→ (5) The bureaucratic redtapism gets checked.

↳ Through constant tracking.

→ (6) Better identification of the beneficiaries.

Obstacles present

⇒ (1) Digital divide in the country.

↳ TRAI report on tele-density - 125% in rural and 52% in urban areas respectively.

⇒ (2) Hoarding and Diversion are the issues present.

- ③ Skilled personnel are very less in numbers
 - ④ Digital infrastructure usage and its presence is very low in country.
 - ⑤ Awareness among the public on ONORC is a challenge
 - ⑥ Error of inclusion and exclusion.
 - ⑦ Financial inclusion challenge in rural areas.
- Ex → Around 38% bank accounts are dormant in India.

The ONORC should be rolled out with better governance and training. They achieving SDG 1 - zero hunger.

Q13.

उत्पादन से जुड़ी प्रोत्साहन (PLI) योजना की केंद्रीय भूमिका को देखते हुए आकलन कीजिए कि क्या एक नई औद्योगिक नीति की आवश्यकता है। (उत्तर 250 शब्दों में दीजिए)

Assess whether a new industrial policy is required given the central role of the Production Linked Incentive (PLI) scheme. (Answer in 250 words) 15

The Production linked Incentive (PLI) scheme is introduced to provide support to the Indian manufacturing in 2020.

Need for New Industrial Policy

due to central role of PLI scheme

→ ① PLI scheme is revolutionary in boosting industry sector.

↳ Rise in GVA of manufacturing sector by 13% annual growth in FY23.

→ ② It is also a key change from the earlier policies.

↳ focus on outcome based incentive.

- ③ PLI scheme also improves the technology adoption in the country.
- ↳ Ex components and parts of automobile industry is also one of the sector.
- ④ The earlier industrial policies have sidelined.
- ↳ Ex PLI covers nearly 15 sectors in manufacturing.
- ⑤ Improves governance mechanisms.
- ↳ Ex EoDB and plug n play models.
- ⑥ for a better regulation and realization of Make in India.
- ↳ Ex PLI can be expanded to other areas too.
- ⑦ To boost the export receipts.

Challenges present

- ① PLI is not having any legal backing.
 - ↳ No specific Act
- ② It is also temporary in nature.
 - ↳ Extended for a year till 2025.
- ③ Also PLI can compromise the quality of products.
 - ↳ More focus on numbers of production.
- ④ It can lead to rise in inventory stock due to lack of demand.
 - ↳ Slowdown of economy.

PLI scheme is an initiative which should be promoted by careful analysis of the present economy situation through wider consultation.

Q14.

भारत में परिवहन के वैकल्पिक साधन के रूप में अंतर्देशीय जलमार्ग से जुड़ी संभावनाओं और चुनौतियों पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए)

Discuss the prospects and challenges associated with inland waterways as an alternative mode of transportation in India. (Answer in 250 words) 15

Recently, the inland waterways naming system has been revamped. At present there are 111 Inland waterways in country.

Prospects of inland waterways
as alternative mode of transportation

- ⇒ ① The transportation of goods and services become cheaper.
- ↳ Mostly 50% of the freight is through roadways.
- ⇒ ② Presence of wide number of rivers in country.
- ↳ River Ganga most of the Northern states.

⇒ ③ The favourable climate is also present.

↳ Ex Monsoon - river Godavari gets fed regularly.

⇒ ④ Inter-country transport also becomes easier.

↳ Ex Friendship bridge between India and Bangladesh.

⇒ ⑤ To connect the Northeastern states.

↳ Ex Through river Brahmaputra

⇒ ⑥ Pollution can also be checked

↳ Ex Less emissions than road and railways.

challenges associated

⇒ ① Irregular monsoon.

↳ Ex Dry peninsular rivers.

- ② Connectivity to other areas is not feasible.
- ↳ Most of the rivers are fragmented in nature.
- ③ Floods in the rivers.
- ↳ Yamuna floods.
- ④ The problem of siltage.
- ↳ In river Teesta.
- ⑤ Adaptability for freight.
- ↳ Not linked extensively.

The Inter linking of rivers is one of the solution to address above challenges. It should be adopted with a focus on environment conservation.

Q15.

भारत में किसानों की आय बढ़ाने, कृषि निर्यात को बढ़ावा देने तथा ग्रामीण अर्थव्यवस्था को मजबूत करने में कृषि सहकारी समितियों की भूमिका पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए)

Discuss the role played by agricultural cooperatives in enhancing farmers' income, promoting agricultural exports, and strengthening the rural economy in India. (Answer in 250 words) 15

Agricultural cooperatives help in disbursal of the credit for the proper functioning of other agriculture mechanisms.
 Ex for farm machinery, seeds, etc.

Role of cooperatives in enhancing farmer's exports

⇒ ① In providing the credit for the market.

Ex fees required for registration of exports.

⇒ ② Also linkage with other schemes.

Ex Global Capability Centres.

③ ⇒ It promotes exports through a single window system.

↳ DESH scheme

④ ⇒ Providing the forward linkages with access to technology.

↳ Cold chain infrastructure.

Role of cooperatives in enhancing

farmer's income

⇒ ① By providing impetus to food processing.

↳ PMFME scheme

⇒ ② Increased credit disbursement with collateral free loans.

⇒ ③ Through DBT schemes.

↳ PM-KISAN.

- ⇒ ④ providing the seeds required.
 Ex → Authentic and quality seeds.

Agricultural cooperatives in

strengthening the rural economy

- ⇒ ① With the increase in employment with better returns.
- ⇒ ② Shift in agriculture with the use of technology.
 Ex → Soil Health Card
- ⇒ ③ Increased productivity leading to better livelihoods.
- ⇒ ④ Providing the lean season opportunities

The agriculture cooperatives recently launched an initiative of largest grain storage. This promotes better economy.

Q16.

देश के राष्ट्रीय पशु के संरक्षण में 'प्रोजेक्ट टाइगर' की सफलता पर टिप्पणी कीजिए। परियोजना के तहत बाघों के समग्र संरक्षण के लिए और क्या कदम उठाए जाने की आवश्यकता है? (उत्तर 250 शब्दों में दीजिए)

Comment on the success of 'Project Tiger' in protecting the national animal of the country. What further steps are needed for holistic conservation of tigers under the project? (Answer in 250 words) 15

The latest tiger census showed an increase in tiger population by 36% in country.

Success of Project Tiger

① launched in 1972 provides a holistic protection of tigers in country.

② Under it, the regulation became easy.

↳ The chief of wildlife warden's powers.

③ It promoted a core - buffer strategy for the protection of tigers.

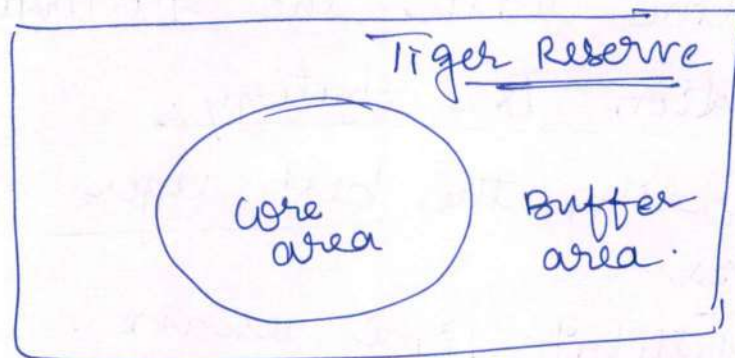


Fig: Core-buffer strategy.

④ Construction of the tiger corridors.

Ex → Kuno - Panna tiger corridor

⑤ Increasing the number of tiger protection areas.

Ex → Currently, 55 in India.

⑥ Creating a decentralised system of regulation with independence.

Ex → At state level and at local level.

⑦ Coordination with the other agencies to handle poaching.

- ⑧ In line with the St-Petersburg Declaration - Tx2 strategy.
- ⑨ Rewarding the best tiger reserves.
 ↳ Philibit Tiger reserve.
- ⑩ Use of technology.
 ↳ M-STRIPES.

Further steps required

- ① Better use of technology.
 ↳ In collecting data.
- ② Also increase the number of migration corridors.
- ③ Afforestation activities.
- ④ A target based goal mechanism with focus on improving the conditions of tiger reserves.

The tigers are successfully increased in number but more should be undertaken with better funds ↳ In Telangana.

Q17.

यद्यपि बंगाल की खाड़ी से मटे तटवर्ती राज्यों ने आपदा तैयारी के संबंध में महत्वपूर्ण प्रगति की है, फिर भी उनकी प्रभावशीलता सीमित रही है। विवेचना कीजिए। (उत्तर 250 शब्दों में दीजिए)

While the littoral states of the Bay of Bengal have made significant strides in their disaster preparedness, their efficacy has been limited. Discuss. (Answer in 250 words)

15

Bay of Bengal littoral states are very vulnerable to wide range of disasters.

Ex) Cyclones are more frequent in Bay of Bengal (80%) than in Arabian sea.

Significant strides made by littoral states of Bay of Bengal

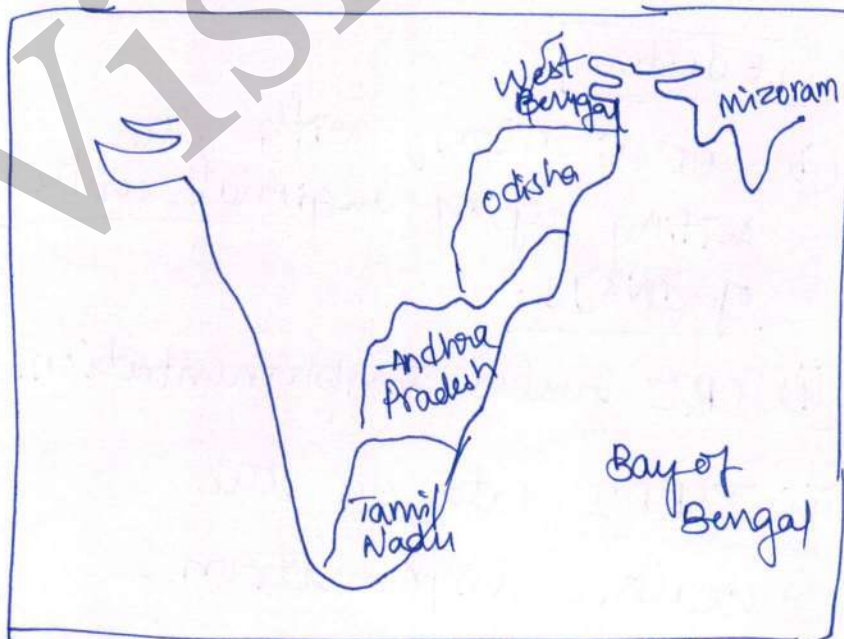


Fig: Bay of Bengal littoral states

⇒ ① The West Bengal's efforts include —

- (i) Growing of sunderbans and protecting them.
- (ii) setting up of early warning system for cyclones.

⇒ ② Andhra Pradesh

- (i) The setting up of INCOIS.
- (ii) Also the implementation of CRZ rules.
- (iii) focus on setting up of the green ports.

⇒ ③ Odisha

- (i) Coordination, with the setting up of regional centre of INOIS.
- (ii) CRZ rules implementation.
- (iii) ISRO's data on the weather information.

⇒ ④ Tamil Nadu

- (i) NIOT (National Institute of Ocean Technology) is present.
- (ii) Through apps, warning the fishermen.
- (iii) Regional centre of INCOIS at Chennai
- (iv) IMDA's centre.

limited efficacy

- Adoption of technology.
Ex → Dornier aircrafts.
- Early warning system.
- Cyclones are unpredictable owing to growing complexity
- The sudden earthquakes causing havoc.
Ex → 2004 Tsunamis.

The coastal states should promote coastal resilient infrastructure for a better safety.

Q18.

संयुक्त राष्ट्र ने वर्ष 2025 को क्वांटम विज्ञान और प्रौद्योगिकी का अंतर्राष्ट्रीय वर्ष घोषित किया है। वर्तमान में, सामान्य तौर पर उपयोग की जाने वाली कौन-सी प्रौद्योगिकियां क्वांटम मैकेनिक्स की समझ पर आधारित हैं? क्वांटम विज्ञान और प्रौद्योगिकी के क्षेत्र में भारत द्वारा क्या कदम उठाए जा रहे हैं? (उत्तर 250 शब्दों में दीजिए)

The United Nations proclaimed 2025 as the International Year of Quantum Science and Technology. Which technologies in common use today are based on the understanding of quantum mechanics? What are the steps being taken by India in the field of quantum science and technology? (Answer in 250 words) 15

Quantum mechanics refers to the application of Quantum physics to study the behaviours at atomic and sub-atomic levels of particles.

Technologies present in common today that are based on quantum mechanics

→ ① The Quantum entanglement is used in sending messages.

↳ in communication.

→ ② In providing security to

the exchange of data,
quantum laws are used.

↳ Ex Superposition of qubits.

→ ③ In understanding the Universe.

↳ Ex In satellites, to understand the cosmos - Aditya L1

→ ④ In the electrical field.

↳ Ex Resistance by the quantum materials.

→ ⑤ In the medical field.

↳ Ex The use of photon beams in therapy.

Steps taken by India

① Quantum computing Mission was launched.

② Also under it, focus is

more on creating super computers

↳ Param Shivaay.

③ Along with it, the Government has launched Design Linked Incentive scheme.

↳ for the manufacture of raw materials.

④ The exchange of technology and knowledge between the countries.

↳ India-USA's ICET agreement.

The Quantum science and technology is opening up wide opportunities.

It need to be tapped for fostering a vishit Bharat by 2047.

यह प्रमाण और नीति परिवर्तन से भारत में रक्षा के स्वदेशीकरण, पर्यटन प्रोत्साहन (Domestic Capital Procurement) और रक्षा संबंधी निर्यात को बढ़ावा दिया है। इस संबंध में सरकार द्वारा अपनाए गए प्रणाली और अभी भी विद्यमान मुद्दों पर चर्चा की जाएगी। (उत्तर 250 शब्दों में दी जाए)

Key institutional and policy changes have spurred defence indigenisation, domestic capital procurement and defence exports in India. Discuss the measures adopted by the Government in this respect and the issues that still persist. (Answer in 250 words)

India earlier a largest importer of defence products in new one of the top 25 exporters in country.

Measures adopted by the Government for defence indigenisation

④ Launching of defence procurement and export promotion policy.

② Also for indigenous development, IDEX has been started.

③ Allowed FDI upto 10% under automatic route.

- ⇒ ④ Also a robust Defence Export Policy to promote exports.
- ⇒ ⑤ PLI Scheme.
- ⇒ ⑥ Make in India scheme was launched to boost the innovations.
- ⇒ ⑦ India is exporting its equipment using its soft power.
- ↳ Ex) Dornier aircrafts given to Sri Lanka, Maldives, etc.
- ⇒ ⑧ India's Brahmos exports to Philippines.

Issues present

- ⇒ ① The defence spending is low in India compared

to major countries.

Ex) According to SIPRI, only 83 billion dollars.

⇒ ② Also the induction of technology is costly.

⇒ ③ Global conflicts and supply chain disruptions hampering raw materials.

Ex) semi conductors after Russia-Ukraine war

⇒ ④ Centralised control leaving less independence in R+D

The challenges present in defence indigenisation should be addressed with focus on technological advancements.

Q20.

गैरकानूनी गतिविधियों के प्रति भारत के तटों की सुभेद्यता राष्ट्रीय सुरक्षा के लिए गंभीर खतरा उत्पन्न करती है। तटीय सुरक्षा के लिए मौजूदा सुरक्षा प्रणाली पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए)

The vulnerability of India's coasts to unlawful activities poses significant threats to national security. Discuss the current security system in place for coastal security. (Answer in 250 words) 15

The 26/11 attacks in India happened through the infiltration of terrorists through seas.

vulnerability of India's coasts to unlawful activities

① Terrorism is the major threat posed to India through coasts.

Ex → Let, ISIS, etc. in Kerala coast.

② Drug trafficking sandwiched between golden crescent and Golden Triangle.

Ex → Opium imports.

③ Money laundering is also one of the significant challenge.

- ④ Organized crime and Hawala activities are performed extensively through the seas.
- ⑤ Infiltration and Refugee crisis is also growing.
 ↳ Rohingya from Myanmar.

Current security system for coastal security

- ① A three layered security system is present comprising of Marine Police, Indian Coast Guard and Indian Navy

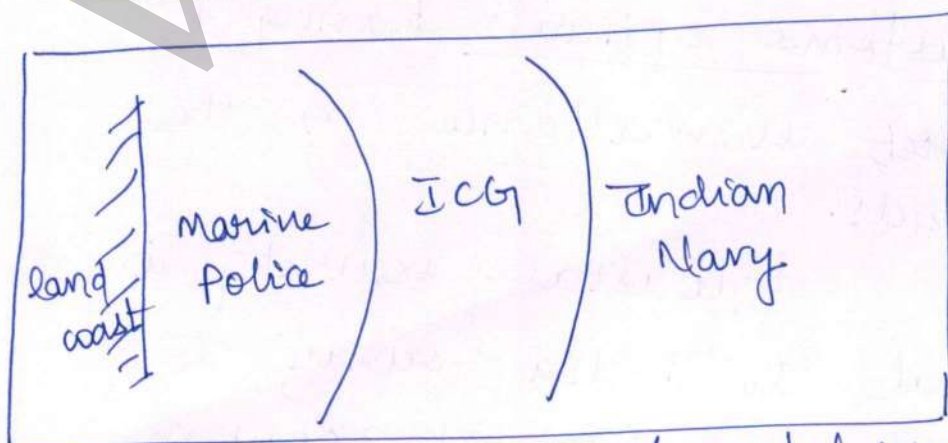


Fig: three layered coastal security

coastal security is crucial to India owing to its long coastline of 7500 km.

that surveillance on the goods.

⑥ Customs officials having a

bringing awareness among public.

⑤ Community policing by

Ex) Through COMCASA, BETA, etc.

intelligence among countries.

④ Better sharing of

Ex) Through ISRO's GAGAN

vigilance.

③ Also the technological

Ex) QWAD exercise.

in various exercises.

② The engagement of India