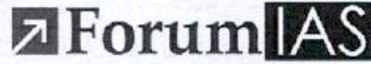


Time Allowed : Three Hours

समय : तीन घंटे



Maximum Marks : 250

अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	Animesh Verma		
Roll No./अनुक्रमांक	1910115442	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र	1900	Date/दिनांक	30/7/23

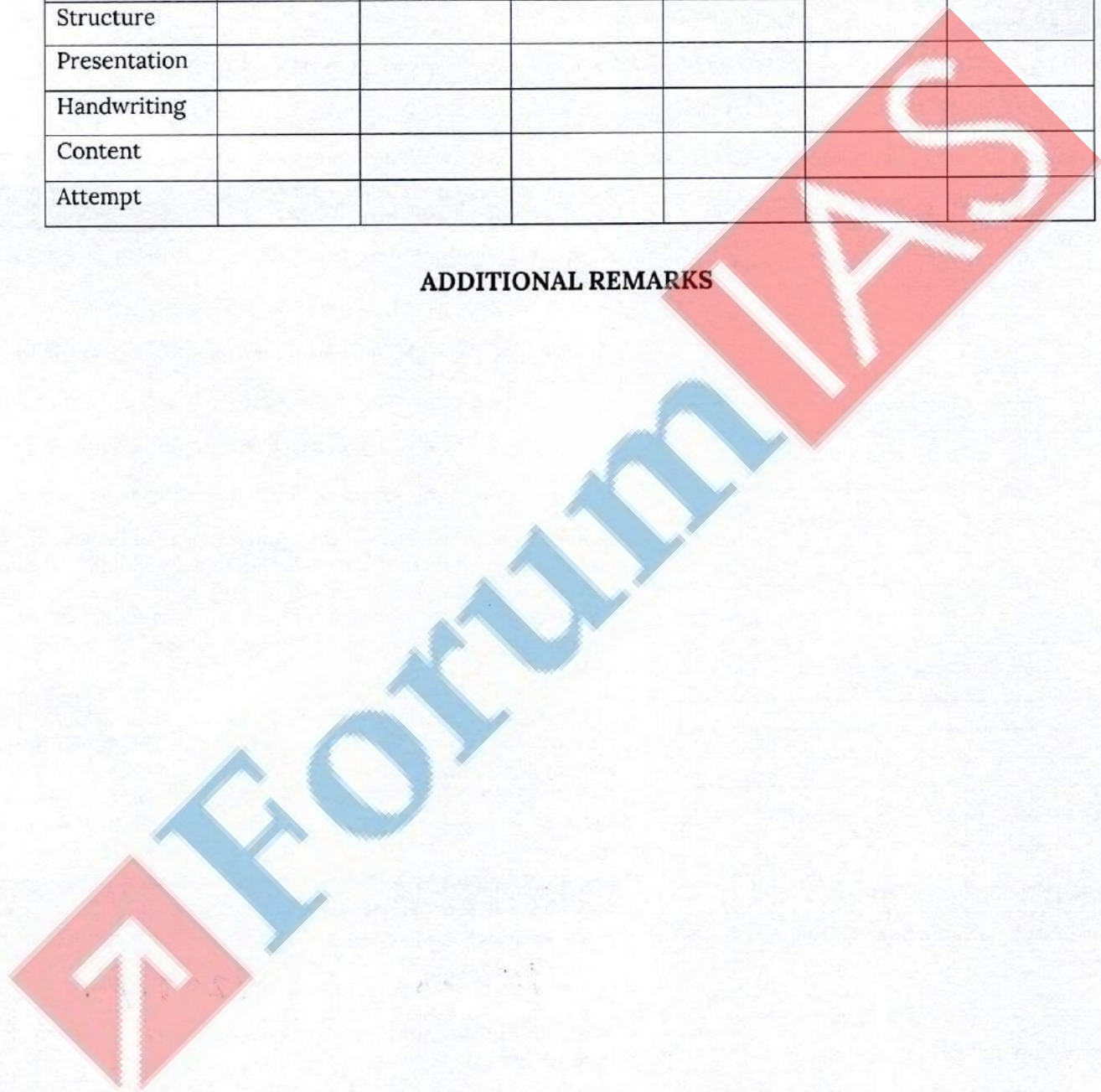
*Center Code : For Online - 1900 / Delhi : Karol bagh - 1901, ORN - 1902, Mukharji Nagar - 1903 / Patna : Boring Rd. - 2001 / Hyderabad : Jawahar Nagar - 2101

INDEX TABLE / अनुक्रमणिका			INSTRUCTION / अनुदेश	
Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक	1. Please do furnish Name, Email, Roll No and Mobile in the answer sheet. कृपया उत्तर-पुस्तिका में नाम, ईमेल, रोल नंबर और मोबाइल नंबर भरें।	
1			2. There are TWENTY questions printed in ENGLISH & HINDI, all questions are compulsory. उत्तर पुस्तिका में अंग्रेजी/हिंदी में बीस प्रश्न दिए गए हैं, सभी प्रश्न अनिवार्य हैं।	
2			3. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के लिए निर्धारित अंक उसके सामने अंकित किए गए हैं।	
3			4. 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. उत्तर प्रवेश पत्र में अधिकृत माध्यम में लिखे जाने चाहिए, जो कि दिए गए स्थान में इस प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के कवर पर स्पष्ट रूप से लिखा जाना चाहिए।	
4			5. Word limit in questions, if 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. प्रश्नों में शब्द सीमा, यदि निर्दिष्ट हो, का पालन किया जाए। प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़े गये किसी भी पृष्ठ या पृष्ठ के भाग को स्पष्ट रूप से काट दें।	
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			9:00 am	12:47 pm
Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन <input checked="" type="checkbox"/> Offline/ऑफलाइन <input type="checkbox"/>
*Evaluator's Discretion is the marks awarded at the discretion of the evaluator based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, facts and figures or absolutely anything that he/she liked in your copy. मूल्यांकन कर्ता का विवेक अंक, आपकी लिखावट, प्रस्तुति, आरेखों के उपयोग, फ्लोचार्ट, तथ्यों और आंकड़ों या समग्र रूप किसी अन्य विषय वस्तु, जो मूल्यांकन कर्ता को आपकी कॉपी में पसंद आयी के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।			For Office Use Only / केवल कार्यालय प्रयोग हेतु	
			ECN CODE/ ईसीएन कोड :	EG/ईजी :
				Evaluation Date/ मूल्यांकन तिथि :

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Parameters	Excellent	Very Good	Good	Average	Poor	Very Poor
Language						
Structure						
Presentation						
Handwriting						
Content						
Attempt						

ADDITIONAL REMARKS





Q.1) Among the several factors for India's potential growth, domestic demand is the most effective one. Do you agree? What are other factors that influence the growth trajectory of the country?

(10 marks, 150 words)

भारत की संभावित संवृद्धि के लिए कई कारकों में से, घरेलू मांग सबसे प्रभावी है। क्या आप सहमत हैं? देश के विकास पथ को प्रभावित करने वाले अन्य कारक क्या हैं? (10 अंक, 150 शब्द)

Recently, India's GDP growth rate for FY23 was revised upwards to about 7.5% due to high domestic demand in the country.

Domestic demand - most effective for India's growth

1. Stability: Domestic demand is relatively more than stable than ~~invest~~ investments (FPIs, etc)
2. Produce local benefits: as the increased demand creates more job opportunities for the locals.
3. Increased investment: from both public & private sectors. (Increased demand \Rightarrow more profits
 \Downarrow
investment \Leftarrow more surplus)

However, domestic demand cannot be the most effective if that demand is not be

increased imports. Also, the profits must be utilized in the form of investments for the best long term growth.

Other factors that influence growth:

1. Investments: from the public & private sector
2. Trade balance: eg. too negative trade balance creates vulnerability to external shocks.
3. Government expenditure: including capital expenditure.
4. Price stability: eg. depreciation favours exports while appreciation favours imports
5. Healthy bank balance sheets: eg. recent Silicon Valley Bank collapse in US → reduced growth
6. Inequality among the citizens: a more uniform purchasing power creates better market.

Here, the government must increase capital investment & also encourage private sector participation.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.2) What are the shortcomings associated with the functioning of Special Economic Zones? In what ways the Domestic Enterprise and Services Hub (DESH) bill, 2022, can make the working of SEZs more effective? (10 marks, 150 words)

विशेष आर्थिक क्षेत्र के कार्यकरण से जुड़ी कमियाँ क्या हैं? डोमेस्टिक एंटरप्राइज एंड सर्विसेज हब (DESH) बिल, 2022 किन तरीकों से SEZ की कार्यप्रणाली को और अधिक प्रभावी बना सकता है? (10 अंक, 150 शब्द)

Special Economic Zones (SEZs) are the special jurisdictions in a country where the ordinary laws (like tax laws) do not hold. SEZs have special privileges to promote exports & foreign trade eg: in GIFT city.

Shortcomings of SEZs

1. Lack of holistic focus: focus on exports only
2. Stringent laws: like payment in foreign exchange to the govt.
3. Low cooperation of the states: in designing, setting up of SEZs.
4. Red tapism: clearances like environmental clearance, CRZ, etc

DESH bill, 2022 - more effective SEZs:

1. Holistic approach to SEZs: focus on increased manufacturing, exports, financial services etc.

2. Ease of doing business: waived off requirement of payment in foreign exchange.
3. Promote cooperation with the states: in setting up SEZs.
4. Reduced delay in granting of clearances like forest clearance, etc.
5. International financial services: to attract FDI, promote ease of doing business, etc.

Hence, the DESH bill, 2022 has immense potential to increase innovation and growth, help India become \$5 trillion economy by 2028.

Feedback
(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.3) Examine the utility of e-technology in tackling the problems plaguing the farm sector.

(10 marks, 150 words)

कृषि क्षेत्र की समस्याओं से निपटने में ई-प्रौद्योगिकी की उपयोगिता का परीक्षण कीजिए।

(10 अंक, 150 शब्द)

e-technology refers to the new era of digital technologies (IR 3.0 & IR 4.0) which have advanced features like automation, data collection, aerial surveys, etc.

Problems plaguing the farm sector

1. Reduced yields → lower growth (about 4.6% in last 3 years - Economic Survey 2022-23)
2. Pest attacks like snakes, rats, etc.
3. Disease outbreaks: eg. lumpy skin disease
↳ death of thousands of cattle.
4. Climate change vagaries: unpredictable climate:
↳ like unseasonal heavy rainfall in Oct '22 led to crop losses.
5. Poor soil health due to over fertilizer use
↳ reduced fertility.
6. Low mechanization: except tractors;

Utility of e-technology:

1. Use of drones for precision spraying of insecticides, fertilizers, etc.
2. Monitoring disease outbreaks using aerial surveys via pidan drones
3. Weather info: eg. MAUSAM app → help plan farm activities
4. Soil health management: ^{through} like SHC (soil health cards) → proper nutrient use.
5. Advanced fertilizers: like nano-urea developed using e-technology.
6. Using AI/ML to produce drugs/vaccines for lumpy skin disease.
- 2 Use of online apps → NeGP-A to sell directly to end consumers.

These ~~mass~~ benefits can be achieved with e-technology. Also align with Article 48 → modern agriculture, animal husbandry.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.4) How far can natural farming effectively balance eco-friendly practices with food security for a populous and under nourished nation like India?
(10 marks, 150 words)

भारत जैसे अधिक आबादी वाले और अल्पपोषित राष्ट्र के लिए प्राकृतिक खेती किस हद तक प्रभावी रूप से खाद्य सुरक्षा के साथ पर्यावरण के अनुकूल प्रथाओं को संतुलित कर सकती है? (10 अंक, 150 शब्द)

Natural farming means a farming technique where no chemical inputs are used.

Farmers rely purely on natural resources like mulch, cow dung, compost, etc. to enrich the soil.

Natural farming balance eco-friendly practices with food security:

1. Use of Scientific approach: like using soil health cards to analyse soil nutrients, requirements.
2. Some use of chemical fertilizers only at the initial stages of crop growth.
3. Advanced irrigation: like drop, sprinkler irrigation to increase water-use efficiency.
4. Promote best practices: eg: from farmers in Sikkim, etc. who have experience in

organic, natural farming

5. Promote R&D in ZBNF (Zero Budget natural farming).
6. Adopt natural farming in rainfed areas only (Niti Aayog recommendation).
7. Use of integrated farming system to recycle farm waste & increase efficiency.
8. Promote investment in mechanization of agriculture from increased ϵ savings due to natural farming.
9. Use of latest technologies like piran drones etc. to increase farm productivity & reduce crop losses.

These steps can promote both food security & eco-friendly practices & help achieve SDG-2 (Zero hunger).

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.5) Anti-microbial resistance may take the form of a pandemic in near future if corrective steps are not taken. What are the reasons for rising anti-microbial resistance? Recommend some corrective steps to reverse the insidious spread of anti-microbial resistance in the country.

(10 marks, 150 words)

यदि सुधारात्मक कदम नहीं उठाए गए तो निकट भविष्य में एंटी-माइक्रोबियल प्रतिरोध एक महामारी का रूप ले सकता है। बढ़ते एंटी-माइक्रोबियल प्रतिरोध के कारण क्या हैं? देश में एंटी-माइक्रोबियल प्रतिरोध के घातक प्रसार को उलटने के लिए कुछ सुधारात्मक कदमों की सिफारिश करें।

(10 अंक, 150 शब्द)

Anti-microbial resistance (AMR) means

when a pathogen like bacteria, virus etc. develops immunity/ resistance from anti-microbial drugs. Such pathogens are called superbugs. eg. common in TB bacteria;

'Disease X' is used to denote a potential future pandemic from unexpected causes like AMR.

Reasons for rising AMR:

1. Poor Trjudicious use of drugs by patients
eg: consuming courses, leaving treatment mid way, etc.
2. Poor hospital conduct: adequate safety cleanliness is not maintained.
3. Animal husbandry: use of drugs to increase milk yield, etc.

4. Industrial effluents: eg. pharma industries do not abide by contaminants standards in effluents.
5. Low R&D: eg. very few anti-biotics developed in the past 3-4 decades.

Corrective steps:

1. Ban on sale of Schedule H drugs w/o prescription; Red Line Campaign
2. Ban on tetracycline & streptomycin in agriculture sector.
3. Chennai Declaration, 2012: where judicious use of anti-microbials was promoted.
4. Judicious prescriptions by doctors to prevent misuse of drugs.

5. Global initiatives

- i) GLASS by WHO
- ii) Aware tool by WHO (Accus. watch, Resum)
- iii) OHGtH OHGtH AMR (One Health Global Leaders Group on AMR)

These steps can reduce AMR & promote good health and well-being.
(SDG-3)

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.6) The application of technology before, during, and after a disaster can help enhance preparedness, mitigate impact and expedite rehabilitation. Analyse. (10 marks, 150 words)

किसी आपदा से पहले, उसके दौरान और बाद में प्रौद्योगिकी का उपयोग तैयारी को बढ़ाने, प्रभाव का उपशमन करने और पुनर्वास में तेजी लाने में मदद कर सकता है। विश्लेषण करें। (10 अंक, 150 शब्द)

Technology has immense potential in disaster preparedness, management and post disaster recovery as recognized by the Sandar Framework for Disaster Risk Reduction (DRR), 2015-30.

Application of technology:

a) before a disaster

1. Surveying of hazard zones using satellites. etc. eg: recently ISRO released Earthquake atlas of India.
2. Early Warning Systems (EWS): Sandar recommends multi-hazard-EWS in every country → alert beforehand
3. Measuring vulnerability & using AI to develop suitable insurance products for the local people.

b) during a disaster

1. Communication: eg: recently Delhi police

- used Twitter, etc. to inform about road closures during Yamuna floods.
2. Helpline: for the stranded, people in distress → toll-free no.
 3. Faster procurement of essential goods & services: eg: online order of required food supplies, etc.
- c) After a disaster
1. Increase disaster resilience through earthquake resistant buildings, etc
 2. Red in earthquake predictions
 3. Integrating DRR in development planning eg: bati Shakti portal
- Also, govt. must follow the recommendations of Sendai Framework and adopt technology for disaster resilience.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.7) Though an important element of climate equity, loss and damage is but a brick in the larger edifice of climate justice. Elaborate. (10 marks, 150 words)

हानि और क्षति यद्यपि जलवायु समानता का एक महत्वपूर्ण तत्व है, फिर भी जलवायु न्याय के बड़े भवन में एक ईंट हैं। विस्तृत विवेचना करें। (10 अंक, 150 शब्द)

Loss and damage (L&D) refers to the losses of life & damage to property suffered due to climate change (CC) extremities.

Climate equity: is the principle that all nations & people must share the burden of climate change in a fair way & the benefits of climate projects must be shared fairly.

L&D: an important element of climate equity:

1. Vulnerable populations like poor people in coastal areas are the most ~~vulnerable~~ vulnerable to CC. (IPCC's AR6 report)
2. LDs, developing countries like in Africa, South Asia suffer the highest L&D due to CC.

LD: a brick in the larger edifice of climate justice

1. Principle of CBDR-RC: recognized by the UN; (Common but differentiated responsibility)

* \hookrightarrow Still many developed countries oppose this & want net zero by 2050 for all countries.

2. Climate finance: pledge of \$100 billion/year by developed countries broken

3. High burden of vulnerable population in the Global South.

Way forward

1. Promote private sector participation in climate finance

2. Encourage technology transfer regarding climate resilience

Recently, LD fund was set up by CoP27 in 2022.

Feedback

(For OFFICE use only)

Structure/ Presentation	
Question Interpretation	
Content	
Value Addition	
Total	



Q.8) Describe the causes and impacts of avalanches. With special emphasis on NDMA guidelines, suggest various mitigation strategies for coping with the incidents of avalanches.

(10 marks, 150 words)

हिमस्खलन के कारणों और प्रभावों का वर्णन कीजिए। NDMA के दिशा-निर्देशों पर विशेष जोर देते हुए हिमस्खलन की घटनाओं से निपटने के लिए विभिन्न शमन रणनीतियों का सुझाव दें।

(10 अंक, 150 शब्द)

Recently, in January-February 2023, many tourists died after getting caught in an avalanche in Kashmir. Avalanches are the huge concentrations of snow which grow in size as the snowball rolls down a white mountain.

Causes:

1. Heavy snowfall: In hilly areas like Kashmir, HP, etc.
2. La Nina effect: produces unusually cold winters in India, etc.
3. Strong high pressure zone in Siberia, Central Asia during winters:
 - ↳ brings chilly winds.
4. Karakoram anomaly: opp immune to global warming

Impacts:

- ↳ Loss of life: some tourists might get

Stranded.

2. Damage to property: eg: in the recent Kashmir incident, many houses down slope were damaged.
3. Produce colder weather: due to spreading of ice
4. Increase albedo

Mitigation Strategies:

1. Zoning of hazard areas.
2. Early warning system (NMA guidelines)
3. Adequate safety measures before skiing (eg: emergency button - signal to help track location of stranded people)
4. Promote sustainable development
5. Afforestation of hills

These measures can reduce and mitigate damage due to avalanches.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.9) As the organized crimes have undergone several mutations and acquired new forms and dimensions, there is a need to revaluate the measures taken to combat these threats. Comment.

(10 marks, 150 words)

चूंकि संगठित अपराधों में कई परिवर्तन हुए हैं और नए रूप और आयाम प्राप्त किए हैं, इसलिए इन खतरों से निपटने के लिए किए गए उपायों का पुनर्मूल्यांकन करने की आवश्यकता है। टिप्पणी कीजिए।

(10 अंक, 150 शब्द)

Organized Crimes (OCs) refer to crimes committed by a group of criminals for personal financial benefit.
eg: drug smuggling, etc.

Organized crimes: several mutations

a) Earlier forms

1. Kidnapping
2. drug smuggling
3. counterfeiting, etc.

b) new forms & dimensions

1. Use of technology like social media to radicalize, recruit conduct crimes.
2. Use of drones for arms, drugs smuggling. (eg: Kashmir border)
3. Terrorist financing - narco terrorism
4. Use of cryptocurrencies - for money laundering (ML)

5. Increased Anonymisation provided by social media.

Measures needed:

1. Intelligence: eg. NCC (National Cyber Crime Coordination Centre) - for all cyber intelligence, NATGRID.
2. Strengthen AML: am recent amendments in PMLA, 2002 provide for expanded definition of ML.
3. Increase R&D: to tackle drone threats.
4. Civic Action Program: to carry out development, show human face of the armed forces.
5. Coordination b/w enforcement agencies like FI, CBI, NCB, etc.
6. Increase awareness among people about cyber crimes, best practices etc.

Hence, govt. must adopt these measures. Also acts like Maharashtra Control of Organized Crimes Act (MCOCA) are needed.

Feedback

(For OFFICE use only)

Structure/ Presentation	
Question Interpretation	
Content	
Value Addition	
Total	



Q.10) The developments since the abrogation of article 370 may have silenced the guns to a large extent, but lasting peace in the Kashmir valley remains elusive. Critically examine.

(10 marks, 150 words)

अनुच्छेद 370 के निरस्त होने के बाद के घटनाक्रमों ने बंदूकों को काफी हद तक शांत कर दिया है, लेकिन कश्मीर घाटी में स्थायी शांति अभी भी दूर की कौड़ी है। समालोचनात्मक परीक्षण कीजिए।

(10 अंक, 150 शब्द)

In August 2019, the Presidential Order included J[&]Kashmir w.r.t. application of the Indian Constitution. Also, it abrogated Article 370, which gave a special status to J[&]K. It created 2 UTS - i) J[&]K ii) Ladakh

Silenced the guns to a large extent:

1. Better control of central govt. over the security management in J[&]K.
2. Reduced cases of cross-border terrorism.
3. Reduced Islamist fundamentalism propaganda in the valley.
4. Better job opportunities for the locals - disillusioned extremist propaganda.
5. Better education: Schools & colleges in J[&]K

are now free of extremism.

6. Village defence committees (VDCs) for
self-defence of people.

Lasting peace remains elusive:

1. Still, cases of cross border terrorism are being reported.
2. Terror attacks: eg. recent Rajouri killings
3. Kashmiri pandit harassment: minorities
& non-locals are still targeted.
4. Still high unemployment persists.
5. Lack of coordination by Pakistan:
uses ISI to fuel proxy war.

Hence, government must strengthen
monitoring & increase development in
the Kashmir Valley

Feedback

(For OFFICE use only)

Structure/ Presentation	
Question Interpretation	
Content	
Value Addition	
Total	



Q.11) Describe the various concerns related to private cryptocurrencies. Comparing the CBDC proposed by the RBI with these private cryptocurrencies, analyse the significance of CBDC.

(15 marks, 250 words)

निजी क्रिप्टोकॉरेंसी से संबंधित विभिन्न चिंताओं का वर्णन करें। इन निजी क्रिप्टोकॉरेंसी के साथ आरबीआई द्वारा प्रस्तावित सीबीडीसी की तुलना करते हुए सीबीडीसी के महत्व का विश्लेषण करें। (15 अंक, 250 शब्द)

Cryptocurrencies are the virtual currencies which are decentralized in nature and use blockchain technology to make & track payments. eg. bitcoin, ~~stable~~ USD, ~~token~~ USD, ethereum, etc.

Concerns related to cryptocurrencies:

1. Anonymous nature: very difficult to trace the originator; ~~used~~
2. Security issues: eg. cryptos are used by terrorists to launder money (FATF report)
3. Crypto mining: requires huge power resources → contribute to global warming & resource depletion.
4. Reduced ability of central banks to regulate cryptos as they are not limited to national boundaries.

5. Cybersecurity issues: eg. Ransomware attacks like Lockbit demand payment in cryptos.

6. Huge Instability/ fluctuating price: eg. price of terraUSD fell by 97% within 24 hrs.

Comparison

CBDC	Cryptocurrencies
1. Issued by central bank or a regulated bank.	1. Mined using complex algorithms.
2. Centralized in nature.	2. Decentralized.
3. Can track payments	3. Difficult to track payments
4. Legal tender	4. Not legal tender in most countries.
5. Stable price level.	5. Fluctuating price levels.
6. Carry no interest rate.	6. Carry variable interest rate based on demand, including -ve interest.
7. eg. e-₹ (digital rupee)	2 eg. Bitcoin

Significance of CBDC:

1. Eco-friendly: by reducing paper requirements.
2. Curbing illegal activities: like money laundering; wa tracking.
3. A Ease of payments: by increasing choice of of the user related to payment mode (CBDC, UPI, cash, etc.)
4. Quick settlement of govt. securities trade
↳ used in pilot scheme in Nov 22.
5. Promote greater control of central bank over the monetary system.
6. Curb the growth of cryptocurrencies.

Hence, use of CBDC must be expanded in a graded manner by the RBI.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.12) Robust logistics sector is a pre-requisite to achieve the target of \$5 trillion economy. In this context, examine the potential of National Logistics Policy 2022 in enhancing the efficiency of logistics ecosystem. (15 marks, 250 words)

5 ट्रिलियन डॉलर की अर्थव्यवस्था के लक्ष्य को हासिल करने के लिए मजबूत लॉजिस्टिक्स क्षेत्र एक पूर्व-आवश्यकता है। इस संदर्भ में, लॉजिस्टिक्स पारिस्थितिकी तंत्र की दक्षता बढ़ाने में राष्ट्रीय लॉजिस्टिक्स नीति 2022 की क्षमता का परीक्षण करें। (15 अंक, 250 शब्द)

India currently incurs a high logistics cost of 13-14% of GDP (Economic Survey) as opposed to around 8% in US, UK, etc.

To be able to achieve \$5 trillion economy by 2028, the logistics sector must be eased to reduce logistics cost & increase production investments.

Potential of National Logistics Policy (NLP), 2022
in enhancing logistics:

1. Promote use of latest e-technology in the logistics sector.
2. Online single window portal eg: NLP-Marine was recently launched.
3. Better planning and coordination:

- betw various ministries & departments.
4. PM Gati Shakti-portal: for integrated & development of multi-modal networks to reduce logistics cost.
 5. Use of AI/ML in predicting traffic on a route; re-route to the best possible alternative.
 6. Promote private sector participation in logistics sector development.
 7. Increase ease of doing business by reducing logistics cost to 8% by 2030.
 8. Promote FDI in the logistics sector development.
 9. Use of modern PPP models: like EPC, hybrid annuity model, etc.
 10. Sharing of best practices: eg: reduced logistics cost in Gujarat, Maharashtra;

Way Forward:

1. Adequate funding for the logistics sector.
2. Use of online portals like PRAGATI, SAMIKSHA etc. for monitoring logistics projects.
3. Promote private sector participation through PPP models.
4. Include logistics sector in REI's PSL upto 2030.

These measures can promote faster development of India's logistics & help India become a Vibrant Bharat by 2047.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.13) Reforms in the fertiliser sector remains a vital and yet unfinished agenda towards heralding sustainable agricultural practices. Evaluate the reformative steps taken by the government to make the usage of fertilisers more effective. What additional measures can be taken to make the fertiliser sector self-sufficient (atmanirbhar) economically in the long run? (15 marks, 250 words)

सतत कृषि पद्धतियों को आगे बढ़ाने के लिए उर्वरक क्षेत्र में सुधार एक महत्वपूर्ण और अभी तक अधूरा एजेंडा बना हुआ है। उर्वरकों के उपयोग को अधिक प्रभावी बनाने के लिए सरकार द्वारा उठाए गए सुधारात्मक कदमों का मूल्यांकन कीजिए। लंबे समय में उर्वरक क्षेत्र को आर्थिक रूप से आत्मनिर्भर बनाने के लिए क्या अतिरिक्त उपाय किए जा सकते हैं?

(15 अंक, 250 शब्द)

Fertiliser sector is one of the highest burdens on the government ^{exchequer}.
In FY22, fertiliser subsidy was around ₹ 1.45 lakh crore (Economic Survey).

Reforms in fertiliser sector - vital yet unfinished agenda

1. Over dependence on govt for fertilizer subsidies.
2. Overuse of fertilizers like N, P, K, etc.
↳ Inability to comprehend soil health cards.
3. Leakage of urea to non-farm uses (Rakesh Shanta Kumar Committee)
4. Low use of natural fertilizers like
↳ compost, cow dung, etc.

Reformative Steps by Government:

1. Use of advanced fertilizers : like nano-urea (by IFFCO)
 - ↳ recently, a ~~nan~~ nano urea plant was inaugurated by PM in Kadi, Gujarat.
2. Reducing subsidies on fertilizers in FY23
3. Use of online portals to check sales of subsidized urea. (subsidy given only after sale is registered on e-Urvara platform).
4. Promoting organic fertilizers : eg. GOBARDHAN scheme, use of cow dung, ZBNP, etc.
5. Educating farmers through KSKs (Kisan Samridhi Kendras) - eg: proper use of Soil Health Cards, etc.
6. Investing in R&D : by ICAR, IARI
 - ↳ eg: development of ~~nan~~ nano phosphates fertilizers → to increase efficiency

Additional measures needed:

1. Direct cash transfer of ₹7000/ha to farmers; fertilizer sector can then be de-regulated (Shanta Kumar Committee).
2. Promote natural farming, organic farming like in Sikkim where chemical fertilizers use is less.
3. Training of farmers: to apply adequate amount of fertilizer only.
4. Promote crop diversification through MSP policy → like pulses can naturally increase fertility of soil → reduce demand of fertilizers.
5. Food processing and
6. Use of NEFTA, e-NAM to directly sell produce to consumers. (increase farmer's income).

These steps can help double farmer's income and deregulate the fertilizer sector.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.14) Food Processing Industries can provide a sustainable linkage between farm and industry resulting in rich dividends for farmers, consumers, and industrialists alike. Discuss.

(15 marks, 250 words)

खाद्य प्रसंस्करण उद्योग कृषि और उद्योग के बीच एक स्थायी संबंध प्रदान कर सकता है जिसके परिणामस्वरूप किसानों, उपभोक्ताओं और उद्योगपतियों के लिए समान रूप से समृद्ध लाभार्श प्राप्त हो सकते हैं। चर्चा करें। (15 अंक, 250 शब्द)

Food processing refers to the process of value addition in raw materials farm produce to make longer shelf life, quality food products.

Food Processing Industries (FPIs) - sustainable linkage b/w farm & industry:

1. Backward & forward linkages: related to the food processing sector.
2. Contract farming: eg: onions → potato farmers.
3. Transport development b/w farm & factory.
4. Better availability of raw materials for industries like snacks, biscuits, etc
5. Promote R&D in FPI

FPIs → result in rich dividends for:

a) farmers

1. Increase farmers income : due to greater demands better price availability.
2. Insulate from price fluctuations: eg. through contract farming.
3. Investments in farm sector: like increased mechanization due to increased profits of farmers.
4. Help pay off all farm debts & become financially secure, independent.

b) Consumers

1. Help increase choice basket : due to various types of processed foods like Maggi.
2. Better quality food products: eg. some salts, ^{food products} are fortified with iron, Vit A, etc.
3. Reduce market price: due to increased competition among various industries.

4) Industrialists:

1. Higher profits: due to increasing demand of processed food products.
2. Secure availability of raw materials
eg: through contract farming
3. Tap potential market: eg: FPI sector has witnessed 8-10% growth avg every year since 2015

Hence, the government must promote private sector participation in FPI sector. Also, adequate monitoring by FSSAI is needed as sometimes food products contain harmful contaminants (Pb), etc.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.15) Despite the ability of the gene modification technology to develop diverse and high-yielding crop hybrids, its acceptance has been mired by apprehensions. Analyse the facts and fears associat-
ed with Genetically Modified crops. (15 marks, 250 words)

विविध और उच्च उपज वाली फसल संकरों को विकसित करने के लिए आनुवंशिक रूप से जीन संशोधित प्रौद्योगिकी की क्षमता के बावजूद, इसकी स्वीकृति आशंकाओं से घिरी हुई है। आनुवंशिक रूप से संशोधित फसलों से जुड़े तथ्यों और आशंकाओं का विश्लेषण करें। (15 अंक, 250 शब्द)

Recently, the GEAC gave approval to DMH-11 (Dhara Mustard Hybrid), a genetically modified mustard crop.

Ability of gene modification tech to develop diverse, high yielding hybrids:

1. A Cotton hybrids like Bt-cotton - resistant to bollworms.
2. GE rubber: can withstand cold temperatures of Meghalaya.
3. DMH-11: i) higher crop yields
ii) reduced ~~wulness~~ vulnerability to diseases

Facts However, various environmentalists, farmers, etc. fear that GE mustard, rubber, etc. can cause irreversible damage to natural population of crops.

GM Crops

a) Facts

1. GM crops have their original genes modified to retain their good characteristics, but mitigate their bad luck characteristics.
2. GM crops have higher yields than natural variants.
3. They have resistance to disease, pests, etc.
4. However, they are not ideal. Trade-offs are present. Like a higher yield GM crop may require increased irrigation, etc.

b) Fears associated:

1. Irreversible damage to natural crops: as bees, etc. can cause cross-pollination ^{blw} among natural & hybrid variants.

2. Fear of invasion: Some GM crops have very high yield & are invasive in nature.
3. Reduced biodiversity: natural plants, crops might face extinction due to dominant GM crops.
4. Create inequalities: as GM crops cost higher → cannot be afforded by small farmers.
5. Low evidence regarding benefits over natural, climate resistant variants.
6. Not much needed: eg. recently Supreme Court questioned the introduction of hybrid mustard when natural mustards are giving good yields.
Hence, proper on-field assessment must be done for 1 year at least before introducing GM crops in a graded manner.

Feedback

(For OFFICE use only)

Structure/ Presentation	
Question Interpretation	
Content	
Value Addition	
Total	



Q.16) While the applications of 5G technology are multifarious, its effective roll-out is not without challenges. Elaborate. Also, compare and contrast the 5G technology from its predecessor.

(15 marks, 250 words)

हालांकि 5G तकनीक के अनुप्रयोग विविध हैं, लेकिन इसका प्रभावी रोल-आउट चुनौतियों से रहित नहीं है। विस्तृत विवेचना करें। इसके अलावा, 5G तकनीक की उसके पूर्ववर्ती से तुलना और अंतर करें। (15 अंक, 250 शब्द)

5G technology refers to the next generation of communication technologies which higher speed & bandwidth, along with lower latency for faster communications. 5G was rolled out in India on 1st October, 2022.

Multifarious applications of 5G:

1. Health : i) online data registries-ABPM
ii) use of AI in healthcare → diagnostics
2. Education : i) online education
ii) no buffering time loss
3. Latest technology development : 5G will help in development of IoT, AI, LLMs, etc.
4. Banking/ Fintech : enable faster payments via UPI, CBDC, etc.

5. Economy: i) promote reduced logistics cost ii) faster trade settlements (T+1)
6. Increase investment opportunities in India
7. Administrative: i) e-governance apps like NeGP, ODH platform, etc.
ii) faster complaint registration.
8. Justice: eg: ICJS, CCTNS network will be strengthened.

Challenges in 5G rollout:

1. RoW (right of way) approvals: for setting up OFC, towers, etc.
2. Duopoly in telecom sector: Only 2-3 significant sp telecom providers.
3. Poor financial health of telecom sector: high debt to government, etc.
4. High cost of 5G technology: including telecom equipments which are mostly imported (from China).
5. Low fibrisation: about 33% in India as compared to 80% in US.

6. Interference with frequency of altimeters in airports

Comparison

4G	5G
1. Lower speed (upto 50 Mbps)	1. Higher speed upto 1 Gbps in India.
2. High latency upto 1-2ms.	2. Low latency <u>0.5ms</u>
3. Lower bandwidth 500MHz, 1GHz range	3. Higher frequency sub-1GHz, 5GHz, 28GHz
4. Higher coverage	4. Relatively lower area coverage
5. Lower cost of Capital.	5. Higher cost of equipments
6. Little support for MIMO	6. Supports MIMO

Hence, online portals like Crati Shakti Sanchar portal must be used for faster RoW approvals & faster roll-out of 5G.

Feedback
(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.17) The May 2022 amendment to the National Bio-fuel Policy, 2018 has advanced the target of 20% ethanol blending from 2030 to 2025-26. Highlighting the important features of the National Biofuel policy, discuss the significance of biofuels and the major impediments in achieving the targets of the policy. (15 marks, 250 words)

मई 2022 में राष्ट्रीय जैव-ईंधन नीति, 2018 में संशोधन ने 2030 के 20 प्रतिशत इथेनॉल मिश्रण के लक्ष्य को 2025-26 तक आगे कर दिया है। राष्ट्रीय जैव ईंधन नीति की महत्वपूर्ण विशेषताओं पर प्रकाश डालते हुए जैव ईंधन के महत्व और नीति के लक्ष्यों को प्राप्त करने में प्रमुख बाधाओं पर चर्चा करें। (15 अंक, 250 शब्द)

Recently, the government amended the National Bio-Fuel Policy (NBP), 2018 to advance the target based on the positive response received from the bio-fuel sector. India ~~is~~ already achieved 10% ethanol blending in May 2022.

Features of NBP

1. Focus on increasing production of biofuels like bioethanol, biodiesel & bioCNG
2. Promote indigenous manufacturing of biofuels to meet the growing energy needs
3. Promote use of non-food based biofuels like 2G, 3G, 4G of biofuels.
4. Accelerate energy transition from the

fossil to non-fossil based fuels.

5. Increase savings from imports of petroleum, etc.
6. Financial concessions to indigenous bio-fuel manufacturing plants.

Significance of biofuels

1. Economic growth: by increasing manufacturing capacity.
2. Foreign exchange savings due to reduced dependence on imports.
3. Increase farmer's income: due to higher demand of sugarcane, crop residues etc.
4. Promote clean energy transition: reduce GHG emissions.
5. Achieve global commitments like the Paris Agreement - goal of net zero by 2050.
6. Meet increasing energy demands
7. Increased R&D: on 3rd, 4th fuels, etc.

Major impediments:

1. Reduced private sector participation:
low less no. of biofuel units set up
2. Water scarcity: might exacerbate due to increased sugarcane production.
3. Low R&D in non-food based biofuels.
4. Affect food security: due to diversion of food crops for biofuels.
5. Lower fuel efficiency of blended fuel than pure petrol.
6. Higher cost of E-20 compatible engines
↳ increase consumer costs.
7. Full participation of people needed for use of biofuels & create demand.

Hence schemes like PM-JIVAN, GOBARDHAN, etc. must be used to accelerate biofuels development.

Feedback

(For OFFICE use only)

Structure/ Presentation	
Question Interpretation	
Content	
Value Addition	
Total	

Q.18) The initiatives for sustainable development must go beyond government policies, extending to joint efforts by people as trustees of the environment. In light of the statement, discuss how LiFE (Lifestyle for Environment) mission can aid in realising 'lifestyle of the planet, for the planet and by the planet'. (15 marks, 250 words)

पर्यावरण के न्यासी के रूप में लोगों द्वारा संयुक्त प्रयासों तक विस्तार करते हुए, सतत विकास के लिए पहल सरकारी नीतियों से परे होनी चाहिए। कथन के आलोक में, चर्चा करें कि कैसे LiFE (लाइफस्टाइल फॉर एनवायरनमेंट) मिशन 'ग्रह की, ग्रह के लिए और ग्रह द्वारा की जीवन शैली' को साकार करने में सहायता कर सकता है। (15 अंक, 250 शब्द)

PM Modi announced the LiFE mission for the 1st time at the Glasgow UNFCCC Summit COP26

LiFE mission - goes beyond govt. policies

1. Encourage people to adopt ethical consumerism and use eco-friendly products.
2. Promote people to become Pro-Planet People (PPP) - who follow LiFE mission.
3. Encourage individual initiatives to make small-small changes to benefit the environment.
4. Promote lower per capita carbon footprint.

LIFE mission can aid in realizing lifestyle:

a) of the planet

1. LIFE mission promotes sustainable development practices at the individual level.
2. Promote sensitivity towards Mother Nature.
3. Encourage India's philosophy of 'Vasudhaiva Kutumbakam' (whole world is one family).
4. Promote global / planet level initiative by every individual.

b) for the planet

1. LIFE mission encourages sharing of best practices by the people.
2. Reducing use of fossil fuels, adopt e-vehicles, etc.
3. Reduce craze of materialism: promote people to increase resource efficiency.
4. 4Rs (refuse, reduce, reuse & recycle).

5. Promote use of eco-friendly products:
eg. organic manures instead of chemical fertilizers.

c) by the planet

1. LIFE mission is a global mission - not limited to any ^{one} country
2. Favours small individual changes which can produce big results through collective efforts.
3. 3P (Pro plant people): people are encouraged to become 3P

Recently, India launched the Green Credit Programme draft scheme to give financial incentives for adopting LIFE mission / pro-plant lifestyle.

Feedback
(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total



Q.19) Data security has assumed significant importance in a digitised world due to its relevance for both the privacy of an individual and data sovereignty of the nation. What, in your view, are the strengths and weaknesses of the draft Digital Personal Data Protection (DPDP) Bill, 2022 in attaining these twin objectives? (15 marks, 250 words)

किसी व्यक्ति की निजता और देश की डेटा संप्रभुता दोनों के लिए इसकी प्रासंगिकता के कारण डिजिटल विश्व में डेटा सुरक्षा ने उल्लेखनीय महत्व प्राप्त कर लिया है। आपके विचार में, इन दोहरे उद्देश्यों को प्राप्त करने में डिजिटल व्यक्तिगत डेटा संरक्षण विधेयक 2022, के मसौदे की ताकत और कमजोरियां क्या हैं? (15 अंक, 250 शब्द)

Recently, government released the draft DPDP Bill, 2022 to promote data privacy and data sovereignty of India. It is based on Supreme Court's judgement in The Justice K.S. Puttaswami case, 2017 (right to privacy)

Data security relevance for:

a) individual privacy

1. Various cases have emerged where personal data of citizens has been misused. eg: Facebook data of US citizens in 2016 elections.
2. Increased use & storage of personal data online. eg: social media networks.

b) data sovereignty

1. Most of user data are stored in select countries like US.
eg: Google, Meta data bases in US
2. National security: eg: Russian influence in 2016 US elections due to data breach.

DPDP Bill

a) Strengths:

1. Recognizes right to privacy of citizens.
2. Consent of users needed before collection, processing of personal data.
3. It sets up a Data Protection Board (DPB) to recommend to the govt. about data security steps.
4. Recognizes post-death data rights of the individuals.
5. Eases cross border flow of data
6. Removes data localization requirement.
7. Promotes consent of parent before processing of children's data

b) weaknesses

1. Much weaker bill than the 2019 version → diluted many provisions.
2. DPB instead of a Data Protection Authority; no independence in DPB, govt. interference
3. No legal right to compensation. in case of illegal processing of data.
4. Subjectivity: many terms like 'sufficient public cause', etc. are not defined
5. Over delegation: More than half the provisions are left for the executive to decide
6. Exception to government agencies: Can process individual data w/o their consent.
7. No proper grievance redressal mechanism.

Hence DDP Bill must be rolled out soon and its defects must be corrected in further amendments.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total

Q.20) Jointness in operation and synergy of resources are vital for the armed forces in carrying out swift, effective, and decisive actions. Discuss the importance of the post of Chief of Defence Staff (CDS). Also, highlight the impediments in seamless theaterisation of armed forces.

(15 marks, 250 words)

संचालन में संयुक्तता और संसाधनों का तालमेल सशस्त्र बलों के लिए तेज, प्रभावी और निर्णायक कार्रवाई करने के लिए महत्वपूर्ण हैं। चीफ ऑफ डिफेंस स्टाफ (CDS) के पद के महत्व पर चर्चा कीजिए। साथ ही, सशस्त्र बलों के निर्बाध थिएटर कमान बनाने में आने वाली बाधाओं पर प्रकाश डालिए।

(15 अंक, 250 शब्द)

The post of CDS refers to the integrated head of all the 3 armed forces - Army, Navy & Air Force - which aims to bring jointness in operation & synergy of resources.

Reasons for vitality of:

a) Jointness in operation :

- i) promote holistic planning and deployment of resources
- ii) ~~to~~ increase combat ability: Done via joint attack by the 3 armed forces.

b) Synergy of resources :

- i) promote economy of resources.
- ii) proper sharing of crucial resources
- iii) increase utilization of under-used resources.

Importance of post of CDS

1. Better planning for defence, attack purposes.
2. Better procurement of defence equipments like MQ-9B drones,
3. Promote coordination among the 3 Armed forces.
4. Reduce costs by increasing resource use efficiency.
5. Better preparedness for a 2 front war - China & Pakistan.
6. Best practices: Countries like US, Russia, etc. also have post of CDS.

Impediments in theaterisation of armed forces:

1. Reluctance ^{among} by smaller services: Eg: some officials in Air Force think theaterisation can reduce their importance.
2. Requirement of a long geographic frontier: like in US, China, etc.

- 3. Death of Gen. Rawat in helicopter crash (1st CDS) → planned theaterisation.
- 4. Resource crunch: already very low resources. eg: Air Force has only 60% of squadrons active.
- 5. Increase initial cost: due to integration of the 3 armed forces.
- 6. Uneasy transition: Increased vulnerability of India during transition period.
Hence, theaterisation of armed forces like in ANC (Andaman and Nicobar Command) must be implemented quickly with back-up plans in case of a war during transition period.

Feedback

(For OFFICE use only)

Structure/ Presentation
Question Interpretation
Content
Value Addition
Total

Mentor Feedback Questions

- 1
- 2
- 3
- 4
- 5

Test Goal

- 1
- 2
- 3

Outcomes

-
-
-
-

Marking Scheme

Mark	Good	Average	Below average
10 Marker	3.75 – 5.0	3.0 – 3.5	< 3.0
15 Marker	5.75 – 7.0	4.0 – 5.5	< 4.0
✓	Key / Relevant Point		
✗	Vague / Irrelevant		

* Subject to change without prior notice.

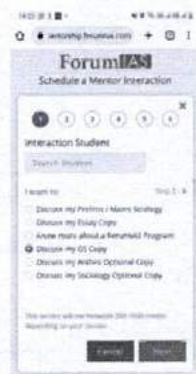
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