Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

NEXT IAS

NEXT IAS (Head Office) : 27-B, Pusa Road, Metro Pillar no. 118, Near Karol Bagh Metro, New Delhi-110060
Bhopal Centre: Plot No. 46, ZONE-2, M.P. Nagar, Bhopal-462011
Ph: 8081300200, 8827664612 | E-mail : mts@nextias.com | **Web:** www.nextias.com

(To be filled by candidate)

Name of Candidate : RAVI MEENA

NEXT IAS Roll No.: NIAS23100018260 Date of Examination : 31.08.2023

Exam Centre : Old Rajinder Nagar ☐ Bhopal ☐ Online ☑

Test Code : TC037 Program : FLT ☐ FLT+ ☑

MAIN TEST SERIES 2023
(FULL LENGTH TEST-3)

GENERAL INSTRUCTIONS

This Question-cum Answer (QCA) Booklet contains 56 pages. Immediately on receipt of the booklet, please check that this QCA booklet does not have any misprint or torn or missing pages or items, etc. If so, get it replaced by a fresh QCA booklet.

Candidates must read the instructions on this page and the following pages carefully before attempting the paper.

Candidates should attempt the questions strictly in accordance with the instructions specified in the question paper and in the space prescribed under each question in the booklet. Any answer written outside the space allotted may not be given credit.

Question paper will be provided separately and can be taken by the candidates after conclusion of the exam.

.....

SUBJECT/PAPER
GENERAL STUDIES

Invigilator's Sign. : .....

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

(For filling by Examiners only)

Evaluator Code :

Q.No	Pg No.	Maximum Marks	Marks	Total
1	1			
2	3			
3	5			
4	7			
5	9			
6	11			
7	13			
8	15			
9	17			
10	19			
11	21			
12	24			
13	27			
14	30			
15	33			
16	36			
17	39			
18	42			
19	45			
20	48			
Grand Total				

Signature

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

MACRO COMMENTS

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

IMPORTANT INSTRUCTIONS

CANDIDATES SHOULD READ THE UNDERMENTIONED INSTRUCTIONS CAREFULLY. VIOLATION OF ANY OF THE INSTRUCTIONS MAY LEAD TO PENALTY.

DONT'S

1. Do not write your name or registration no. anywhere inside this Question-cum-Answer Booklet.
2. Do not write anything other than the actual answers to the questions anywhere inside your QCA Booklet.
3. Do not tear off any leaves from your QCA Booklet, if you find any page missing do not fail to notify the supervisor/invigilator.
4. Do not leave behind your QCA Booklet on your table unattended, it should be handed over to the invigilator after conclusion of the exam.

DO'S

1. Read the Instructions on the cover page and strictly follow them.
2. Write your registration number and other particulars, in the space provided on the cover of QCA Booklet.
3. Write legibly and neatly. Do not write in bad/illegible handwritings.
4. For rough notes or calculation, the last two blank pages of this booklet should be used. The rough notes should be crossed through afterwards.
5. If you wish to cancel any work, draw your pen through it or write "Cancelled" across it, otherwise it may be evaluated.
6. Handover your QCA Booklet personally to the invigilator before leaving the examination hall.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.1 अप्रत्याशित कर (विंडफॉल टैक्स) से आप क्या समझते हैं? क्या आपको लगता है कि अप्रत्याशित करों से संपदा का प्रभावी ढंग से पुनर्वितरण हो सकता है और अधिक आर्थिक समानता को बढ़ावा मिल सकता है?

(150 शब्दों में उत्तर दीजिए) 10 अंक

What do you understand by Windfall tax? Do you think that windfall taxes can effectively redistribute wealth and promote greater economic equality? (Answer in 150 words) 10 Marks

Windfall tax is indirect tax levied on abnormal profits from business operation due to factors which were not in control of Business.

E.g. Windfall Tax on Petroleum companies due to decrease in cost price [Import from Russia.

Windfall taxes effectiveness in Redistribution of wealth and promotion of Greater Economic Equality

1. Increase Revenue Base of Government which can used for social welfare measures.
2. Ensures Resources Redistribution.
3. Puts check on Income Inequality
4. As profits are not due to any specific Efforts by Business organisation, so they

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

should be rightfully taxed at higher rate to ensure equitable distribution among all.

Not a Panacea for Greater Economic Equality

1. As still income left over after windfall tax is in hands of owners.
2. No direct benefits for Labours or Employees from Profit.
3. This is one time measure and other aspect of Resource Redistribution should be implemented.
4. Focus on capability approach - Amartya Sen to achieve substantive equality.

As Mahatma Gandhi gave Servodaya Model of Economic Production, where capitalist owners are just Trustee of All Profits should be followed to achieve SDG 10 [reducing Inequality]

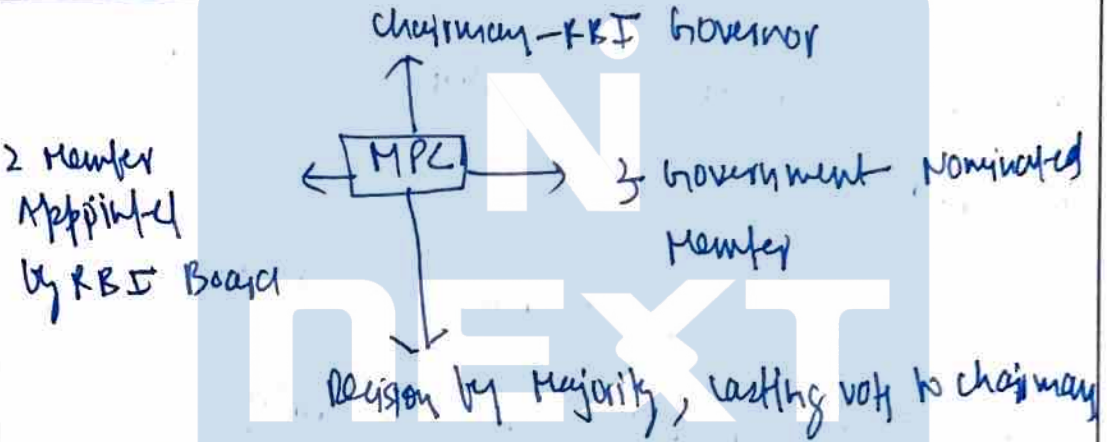
Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.2 नई मौद्रिक नीति समिति (एमपीसी) व्यवस्था के अंतर्गत मुद्रास्फीति लक्ष्यीकरण को क्रियान्वित करने की कथित सफलताओं और चुनौतियों पर चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

Discuss the perceived successes and challenges of implementing inflation targeting under the new Monetary Policy Committee (MPC) regime. (Answer in 150 words) 10 Marks

Monetary Policy committee [MPC] was constituted under section 45ZB through amendment in RBI Act.



Inflation targeting after consultation between RBI & Central Government. Presently it is 4±2%. [CPI included].

MPC is tasked with

Perceived success of MPC Regime

1. Greatly controlled below targeted Range between 2015 – 2020

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

2. Effectively and calibrated enhanced rate after COVID 19 led Inflation & supply-chain disruption of Russia-Ukraine war.

3. Not decreased rates extremely low like other countries which saved from recession crisis.

Challenges of Implementation

1. Lack of control over inflation caused by supply side disruption [Russia-Ukraine war]
2. Inability to control food inflation.
3. Lack of data to ensure timely rate cuts / rise and proper stand
4. Time lag between decision taken & its transmission at ground
5. Informal nature of Economy weakens its transmission

Better coordination with Finance Ministry ← **Way Forward** → Formalisation
→ Proper data collection

As RBI is watchdog of Financial & Monetary stability, MPC need to be strengthened to enhance Citizens & Investor confidence

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.3 भारत में सतत् कृषि को बढ़ावा देने और खाद्य सुरक्षा में सुधार के लिए मोटे अनाज उत्पादन की क्षमता का आकलन कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

Assess the potential of millet production in promoting sustainable agriculture and improving food security in India. (Answer in 150 words) 10 Marks

Millet also called 'Shree Anna' are climate resilient crop which can help in sustainable production and consumption [SDG 12]

Kuthu, ← various millets → Jowar, Bajra, Ragi

Potential of Millet Production in promoting sustainable Agriculture

1. Less water intensive ~~test~~ < 350 MM rainfall required
   - Drought resistant
2. Less input intensive like Fertiliser ⇒ 1/3rd of cost of other Traditional Cereal
3. Increase Soil Fertility.
4. Super crops - grows in 60-70 days to fight against uncertainty of climate.
5. ~~Proso~~

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Improving Food security

1. climate resilient crop ensuring food in changing climate pattern
2. Nutritional security – prevents from diseases like Diabetes, cancer, Gastronomical problems
3. can be stored for longer period

Government steps

① National year of millet – 2018
② International year of millet – 2023 & promoting at G20 by India
③ Centre of Excellence at Hyderabad.

Hence Best case study like Andhra's model of millet Production of M.P. need to be followed to ensure RAINBOW Revolution – crop diversification.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

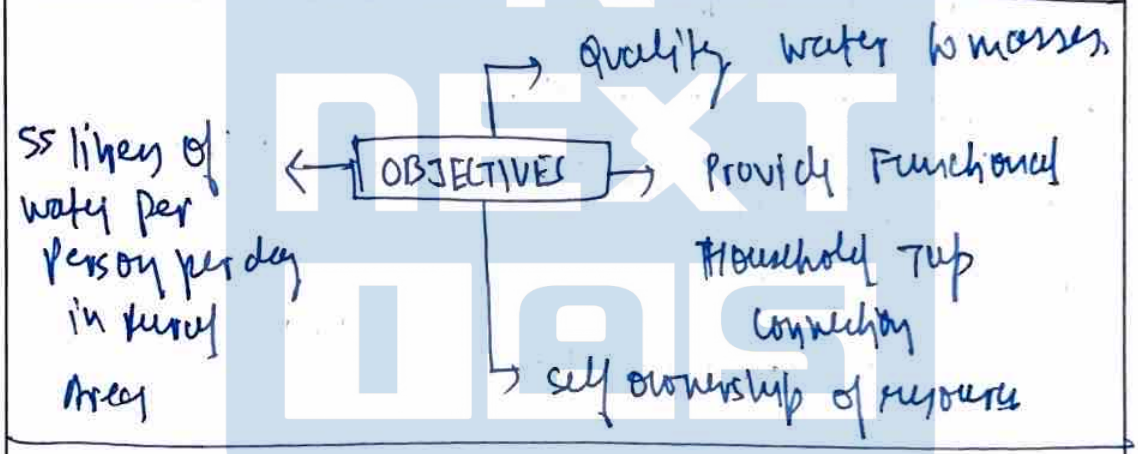
Q.4 जल जीवन मिशन में पेयजल की उपलब्धता और पेयजल तक पहुँच में क्षेत्रीय विषमता को समाप्त करने का सामर्थ्य है। मिशन के महत्त्व पर प्रकाश डालते हुए, वांछित उद्देश्यों की प्राप्ति में अंतर्निहित बाधाओं पर चर्चा कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Jal Jeevan Mission has the potential to end the regional disparity in the availability and accessibility of drinking water. Highlighting the significance of the mission, discuss the underlying impediments in achieving the desired objectives.

(Answer in 150 words) 10 Marks

Jal shakti ministry launched Jal Jeevan mission in both rural & urban Areas to ensure Drinking water security along with ministry of urban Affairs.



SIGNIFICANCE OF MISSION

1. Providing Quality Drinking water at Affordable Prices. [SDG]
2. ownership of Asset at Panchayat level for participative implementation.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

3. Quality water to all – Preventing from water borne disease

4. Reducing Drudgery of women – [average women spent around 120 minutes for fetching water]

Underlying Impediments

① Lack of effective source of water from which it can be supplied.
② Lack of coordination by state [West Bengal]
③ Lack of Finance ④ Slow level of implementation.
⑤ Lack of Autonomy to Local Bodies

Measures Needed

① Institutionalisation of mechanism between state centre & Local Bodies.
② User pay charges basis for financing.
③ Promote water conservation & Rejuvenation of Traditional mechanism.

Jal Jeevan Mission is right step for achieving inclusive growth and social justice ensuring holistic development in New India.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.5 बैटरी ऊर्जा भंडारण प्रणाली (बीईएसएस) से आप क्या समझते हैं? इसके अनुप्रयोगों पर चर्चा कीजिए और यह भारत के ऊर्जा कार्यक्रम में किस प्रकार क्रांतिकारी बदलाव ला सकता है। (150 शब्दों में उत्तर दीजिए) 10 अंक

What do you understand by Battery Energy Storage Systems (BESS)? Discuss its applications and how it can revolutionize the energy program of India. (Answer in 150 words) 10 Marks

Battery Energy Storage system [BESS] refers to creation large infrastructure of Battery storage for storing Energy during creation and releasing it when ~~is de~~ it is Demanded

Types:

- Lithium Battery
- Nickel-cadmium Battery
- Hydrogen fuel Battery

Application of BESS

1. Storing Energy generated by intermittent resources like wind and solar during their production.
2. Releasing it during peak demand
3. Using it for Environmental Protection by reducing GHG emissions.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

4. Energy security & Energy for All.

Revolutionize Energy Programme of India

1. Achieving 500 GW renewable energy production.
2. Increasing per capita Energy consumption.
3. Reaching Last Mile – Transmission to rural & remote Areas.
4. Decentralized Energy Production.

Effective implementation of BESS will help in achieving SDG 7 [Affordable & clean Energy].

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.6 इसरो के गगनयान मिशन में हुए विकास और उपस्थित चुनौतियों पर संक्षिप्त चर्चा कीजिए। समाज के लिए मिशन के संभावित लाभ क्या हैं? (150 शब्दों में उत्तर दीजिए) 10 अंक

Discuss in brief developments and challenges in the Gaganyaan mission of ISRO. What are the possible benefits of the mission for the society? (Answer in 150 words) 10 Marks

Indian Human spaceflight Programme, popularly known as Gaganyaan Mission will ultimately take 3 person to space for 3 days in LOW Earth orbit

Developments in Gaganyaan Mission

1. 2 Module — Crew Module & Servic Module being developed
2. GSLV MK-III will launch it
3. Vyomitra — Artificial robot will go in Phase 2 Testing before Human Arrival in 3rd Phase.
4. Training to Astronaut with help of Russia.

challenges in Gaganyaan Mission

1. Ensuring Safe Crew Module Recovery
2. Creating Earth like conditions in Crew Module

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

③ Financial challenges - Low cost - Budget

④ Technological challenges - No Prior Experience in ISRO.

Possible Benefits for society

① Inspiring youth to take ~~to~~ science as career [Harnessing youth Power - Sabka Saath]

② Application of technology Developed ~~in Space~~ for space for wider, niche & novel applications

③ Initiative for Further Mission for further Exploration for Future settlement & Resources Exploitation.

④ Space Tourism - Boosting Economy.

⑤ Coordination & sharing of technology with other countries.

Gaganyaan Mission success will leapfrog India as space superpower with VISHWAMITRA, ~~adding~~ adding to phenomenal success of Chandrayaan 3.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.7 "जलवायु परिवर्तन और प्रदूषण से निपटने की हमारी खोज में हरित हाइड्रोजन एक सरल और जादुई समाधान हो सकता है"। भारत के राष्ट्रीय हरित हाइड्रोजन मिशन के आलोक में कथन का आलोचनात्मक विश्लेषण कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

"Green hydrogen can be the silver bullet in our quest to tackle climate change and pollution". Critically analyze the statement in light of India's National Green Hydrogen mission.

(Answer in 150 words) 10 Marks

National Green Hydrogen Mission was launched in Budget with Objective of achieving 5 Million Metric Tonns of Green Hydrogen production.

Green Hydrogen Hydrogen is Hydrogen produced using electrolysis of water by Renewable Energy.

Silver Bullet in Quest to tackle climate change & Pollution

1. Solving the intermittency Problem of renewables like solar & wind.
2. Higher Energy Density and Better Efficiency of Fuel
3. No Byproducts except water to ensure Pollution free Environment.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

4. widely distributed can be produced anywhere
5. Help in Achieving panchamitra commitment of India at Glasgow

Challenges Associated

1. Technical – Lack of know how to produce cost effective Electrolyser
2. Hydrogen is highly Inflammable – requires high Pressure & Low Temperature to store in liquid form.
3. Application to limited sector
4. Lack of Private Investment

Steps Needed

① State providing incentive – eg Rajasthan Government's policy

② Importing Technology from Japan [Transportation from Australia] & Norway [for Better storage.

Effective Implementation of Mission will lead to achieve India's climate Pledge & Net zero Emission by 2070.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.8 हाल ही में जोशीमठ, उत्तराखंड में आई आपदा के आलोक में, हिमालय क्षेत्र में आपदा प्रबंधन और पर्यावरण संरक्षण के लिए मुख्य सबक क्या हैं? (150 शब्दों में उत्तर दीजिए) 10 अंक

What are the key lessons for disaster management and environmental conservation in the Himalayan region, in light of the recent disaster in Joshimath, Uttarakhand? (Answer in 150 words) 10 Marks

Recently., Land subsidence in few centimetres by noticed by satellite of ISRO Joshimath leading to cracks and fissures in land and infrastructure

Land subsidence in Joshimath

1. Highly vulnerable Area – Earthquake Prone, Tectonic Movement
2. Loose soil.
3. Heavy construction by Human.

Key Lessons for disaster management

1. Implementing the recommendation of Experts.
   - e.g. MC Mishra committee recommendation like limited construction & conservation Aquifer were not complied with.
2. considering Local Topography & Terrain while implementing Development Activities.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

3. Punishing those corruptive elements expertly in neglect of techno-legal regime.

4. Strict Implementation Building code.

Key Lesson for Environmental Conservation

1. Regulated used of Groundwater & proper use of Aquifers & their maintenance
2. Not allowing Heavy Infrastructural Projects for Taporary Project
3. Regulate Tourism & population Pressure
4. Proper Environment impact Assessment before any Approval
5. Use of High material for Construction which is locally suited.

Living in Harmony with Nature, Natural Based solutions and Environmental Accounting are need of hour to achieve Sustainable Development.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Q.9 "पंजाब में हालिया कट्टरपंथी रुझानों से पता चलता है कि खालिस्तान का मुद्दा अभी भी उबल रहा है।" हालिया घटनाक्रम के संबंध में कथन पर चर्चा कीजिए और इससे निपटने के उपाय सुझाएँ।

(150 शब्दों में उत्तर दीजिए) 10 अंक

"The recent radical trends in Punjab show that the Khalistan issue is still simmering." Discuss the statement with respect to recent developments and suggest measures to handle it.

(Answer in 150 words) 10 Marks

Candidates must not write on this margin

During Farmer Protest against 3 Repealed Farm Laws, the Flag of India was removed from Red Fort which secessionist Act showing tendency of Khalistan Issue still prevails.

Recent development in Punjab showing simmering Khalistan Issue

1. Issue of Tool Kit for action Strategy and arrest of Deep sidhu.
2. Increased Funding from Foreign countries like Australia and Canada where Punjabis are heavily populated.
3. Inhumane Act of culling of Heading some incidences.
4. Sabotaging lawfully established Police station in January 2023.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Measures Needed to handle it

1. Discussion and Elikration with various communities
2. Engagement should be the way.
3. cutting channels through which funding is done (eg) strict Implementation of FCRA.
4. Expose politics injected Khalistan issue and take steps to stop it
5. Proper Intelligence Gathering through Intelligence Bureau and transmitting it to Police and CAPF to pre-empt any untoward incident

Steps taken

① FCRA Amendment, Banning of various NGOs

② Extended Jurisdiction to BSF [50 KM]

③

cutting simmering discontent is must for preserving unity and integrity of India will fulfil dream of iron man of India – S.V. Patel.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.10 ड्रोन संचालन में आसानी और साथ ही इसके संचालक की अनामिता, भारत की सीमा सुरक्षा की चुनौतियों में वृद्धि करती है। विस्तारपूर्वक वर्णन कीजिए और सीमावर्ती क्षेत्रों में ड्रोन समस्या से निपटने के लिए सुझाव दीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

The anonymity and ease of drone operation contribute to the challenges of India's border security. Elaborate and give suggestions to tackle the drone problem in border areas.

(Answer in 150 words) 10 Marks

A drone attack was noticed in Jammu Base of Airforce., highlighting the challenges of Drones to Border security.

Anonymity and Ease of Drone operation contribute challenges of India's Border security

1. It is unmanned - even if caught no reveal of its operator.
2. Very Easy to learn for Operation Anonymously.
3. Used for intelligence collection and surveillance along border without being caught.
4. Used in Smuggling Activities. Ex- BSF Happed many drones carrying Drugs.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

5. can inflict direct damage to human and infrastructure eg drones like kamikaze

Suggestions for tackling Problem

1. Drone Jammer system need to be implemented at large scale.
2. Installing of CCTV cameras, smart fencing etc
3. Human Intelligence and skill of Border personnel.
4. Strict implementation Drone rules in Border Area.
5. use of Drone itself for monitoring incoming drones.

Hence drone challenges need to overcome in holistic manner for effective border security.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.11 विद्युत संशोधन विधेयक, 2022 उपभोक्ताओं, डिस्कॉम के साथ-साथ पर्यावरण के लिए कई लाभ प्रस्तुत करता है। सविस्तार वर्णन कीजिए। साथ ही इसकी कमियों को भी सूचीबद्ध कीजिए और उन्हें दूर करने के लिए कुछ उपायों का भी सुझाव दीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Electricity Amendment Bill, 2022 brings several advantages for consumers, DISCOMs as well as the environment. Elaborate. Also, list out its shortcomings and suggest some measures to overcome them. (Answer in 250 words) 15 Marks

Electricity Amendment Bill [EAB], 2022 was brought to bring transformative changes in Electricity distribution and consumption.

Advantages for consumers

① Access to "open Access" to Electricity to various type of consumers

② choice for choosing cheapest rate

Advantages for DISCOMS

① multiple Discoms in same area allowed

② Increased competition

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Advantages for Environment

① Re-negotiation of Power Purchase Agreement under renewable purchase obligation and their better compliance.

② Low Aggregate & Technical Losses leading Energy conservation.

Shortcomings

① centralisation of Electricity and dilution of Powers of state

Way Forward

① Better coordination between centre & states

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

measures to overcome them

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.12 भारतीय प्रतिभूति एवं विनिमय बोर्ड (सेबी) शेयर बाजार के नियमन और निवेशकों के हितों की सुरक्षा में महत्त्वपूर्ण भूमिका निभाता है। दिये गए कथन के आलोक में, सेबी के समक्ष आने वाली चुनौतियों पर प्रकाश डालिए और इस संबंध में सुधारों का सुझाव दीजिये। (250 शब्दों में उत्तर दीजिए) 15 अंक

Securities and Exchange Board of India (SEBI) plays an important role in the regulation of the share market and safeguarding the interests of investors. In the light of given statement, highlight the challenges faced by the SEBI and suggest reforms in this regard. (Answer in 250 words) 15 Marks

SEBI is statutory body setup und SEBI Act, act as apex regulator for securities market in India.

Important role in regulation of share market & safeguarding interest of investors

1. to ensure transparent functioning of Equity market
2. To prevent Insider Trading.
3. to ensure Accountability of various stock ex changes.
4. to Creat Investor, Equity Awareness among general Public
5. to provide regulatory sandbox for new products.
6. To act quasi-judicial body for dispute resolution.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Challenges faced by SEBI

1. Lack of customer Awareness
2. Insider Trading which distorts level playing field.
3. Vacant position at important decision making role
4. Jurisdiction conflict with other regulator like IRDAI, PFRDA [e.g. SAHARA case]
5. Lack of Information regarding bond release, track etc e.g. Hindenberg Res Research case
6. Lack of Bond Market development in India
7. Greenwashing of Funds raised through Bond

Reforms needed in this regard

1. Capacity development, recruitment of specialist and Training at adequate level.
2. Interconnectedness with regulator of other countries to learn best practices.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

③ Releasing timely standard operating Procedure

④ Punishing or Imposing Fines on those stock Exchange who do not file timely returns.

⑤ Coordination with regulator and formation of common cell.

As Equity market is important to boost Infrastructuring Financing in India to reach $5 Trillion Economy, SEBI need to be watchdog of security market functioning in excellency.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

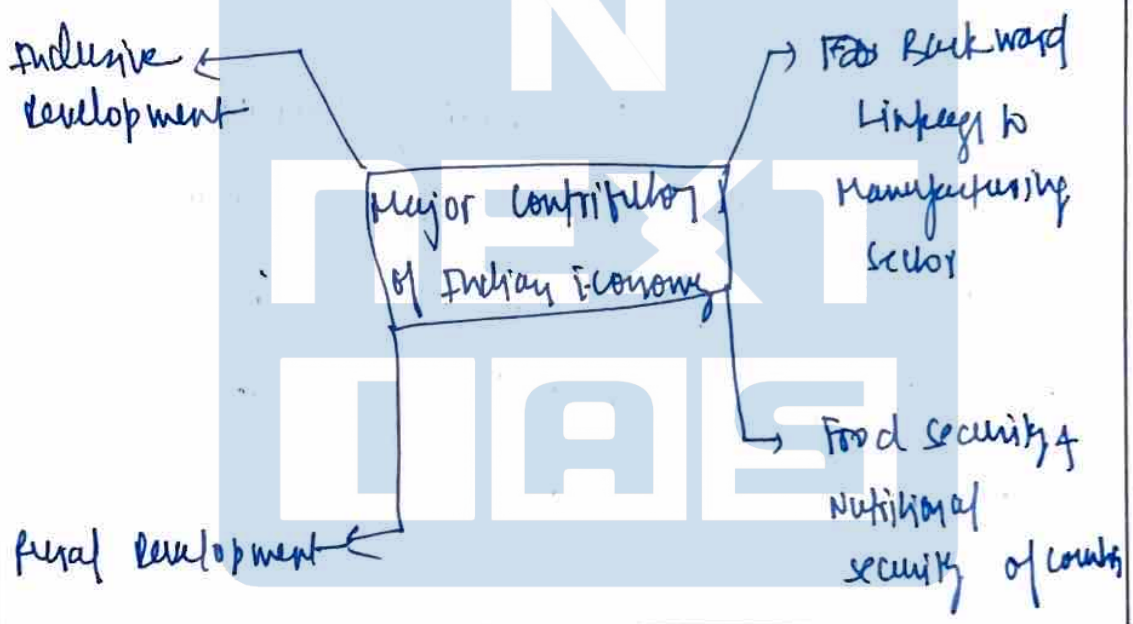
Q.13 भारतीय अर्थव्यवस्था में एक प्रमुख योगदानकर्ता होने के बावजूद, कृषि क्षेत्र कई बाधाओं से ग्रस्त है जो इसकी वृद्धि और विकास में बाधा डालते हैं। इन बाधाओं पर काबू पाने में प्रौद्योगिकी की भूमिका पर चर्चा कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

Despite being a major contributor to the Indian economy, the agriculture sector is plagued by several constraints that impede its growth and development. Discuss the role of technology in overcoming these constraints.

(Answer in 250 words) 15 Marks

Agriculture is the Backbone of Indian Economy which contributes 18% to GDP of India and around 45% of Employment Generation.



Plagued by several constraints that impede its growth and development

1. Low Quality of Input - Traditional Low yielding seeds, only 50% Area is Irrigated, Low Availability of Fertilisers to small Farmers.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

② Lack of Farm mechanization

③ Land Fragmentation obstructing reaping Economic of scale [86% Farmers < 2 Hectare Land]

④ Inefficient working APMC in state - not able to realise effective price → Centralization

⑤ Cereal centric which is low in productivity
↳ 54% Area

⑥ Lack of storage, Processing Facilities
↳ only 10% NABARD

⑦ Excessive use of Chemical Fertilizers, reducing long term productivity ↳ N:P:K - 6.9:2.4:1

⑧ Suffers from cyclic nature of price ups & downs leading to distress sale
[Price of TOP crops]

⑨ Low level of formal credit

Role of Technology in overcoming the constraint

1. Soil Health Card use Mobile Lab to asses which crop & amount of Fertilisers are suitable
2. Kisan call centres to seek help on information about Farming.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

(3) use of Drones to spray Fertiliser in required quantity.

(4) E-NAM Portal to get better Price discovery & Logistics.

(5) use of Modern Temperature controlled vehicle and cold storage to increase shelf life

(6) Weather Forecasting by IMD to get timely sowing & harvesting of crops.

(7) use of social media [Green Portal] to share best practices.

The scheme Digital India and NeGP-Agriculture should be effectively utilised to enhance role of technology for doubling Farmer's Income and also bringing Developed India.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.14 पर्यावरण एवं प्राकृतिक संसाधनों पर सिंचाई के प्रभाव का मूल्यांकन कीजिए, और कृषि में सिंचाई पद्धतियों की संधारणीयता और समता सुनिश्चित करने के लिए उपाय सुझाएँ। (250 शब्दों में उत्तर दीजिए) 15 अंक

Evaluate the impact of irrigation on the environment and natural resources, and suggest measures to ensure the sustainability and equity of irrigation practices in agriculture.

(Answer in 250 words) 15 Marks

Irrigation is artificial supply of water to crops in Ffly to enhance their productivity.

In India 50% of Arg is Irrigated by various means like Tank, Tub-well, Canal and Micro-Irrigation.

Impact of Irrigation on Environment and Natural Resources

1. Ground water depletion ⇒ 16% of Assessed Area were in Critical Category [CGWB]
2. Alkanisation & salinisation of soil reducing their productivity due to capillary Action of Excessive Irrigation
3. Ground water contamination with pollutant like Uranium, Arsenic as per various reports.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

4. Change of River Ecology due creation of Dam and lack of sedimentation in lower reaches

5. Introduction of Invasive alien species threatning Biodiversity through canal Irrigation.

6. Salt water Intrusion in Coastal Areas due to Excessive Exploitation.

7. Repeated Droughts causing Biodiversity loss.

8.

Measures to ensure sustainability and Equity of Irrigation Practices in Agriculture

1. use of Micro-Irrigation Techniques like Rainguns, Porous Pipes, Drip & sprinkler

2. Adopt Best Practices - Sanchore, Narmada Canal, Rajasthan - Ideal use of Micro Irrigation.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

3. Growing less water intensive crop in dry land regions like millet, pulses & oil seeds.

4. Participatory Irrigation Management should be adopted for Equity ~~in~~ e.g. Nashik Panchayat in Maharashtra.

5. Moving from Area Productivity to water Productivity [NABARD]

6. Change in Laws, like delinking Land Right with Aquifer right [e.g. Maharashtra]

Government step

① Micro-Irrigation Fund - 5000 crore - NABARD

② PM Krishi Sinchai Yojana - Per Drop More crop

Judicious use of Irrigation Technique is need of hour to achieve SDG-12 [Responsible Production] and make agriculture Ever green.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.15 परमाणु ऊर्जा और अंतरिक्ष प्रौद्योगिकी के क्षेत्र में क्रमशः डॉ. होमी जहाँगीर भाभा और डॉ. विक्रम अंबालाल साराभाई के योगदान से भारत को रणनीतिक रूप से किस प्रकार लाभ हुआ? (250 शब्दों में उत्तर दीजिए) 15 अंक

How India benefitted strategically from the contributions of Dr. Homi Jehangir Bhabha and Dr. Vikram Ambalal Sarabhai in the fields of atomic energy and space technology respectively?
(Answer in 250 words) 15 Marks

Science has played unmatched role in success Journey of India after Independence.

CONTRIBUTIONS of Dr. Homi Jehangir Bhabha

1. Conceptualised the Nuclear Programme of India.
2. Gave a 3-Stage Nuclear Programme
   (a) Pressurized Heavy water Reactor
   (b) Plutonium 2nd stage - Fission
   (c) Advanced Heavy water Reactor
3. Energy security to Millions.
4. Making India Nuclear capable country as operation Pokhran & smiling Buddha were based on Planning of Bhabha in 1960s -

Enhanced security & Strategic Autonomy

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

5. India as one of leader today in Atomic Energy.

Contribution of Dr. Vikram Sarabhai

1. Heralded by ISRO during its initial years.
2. Led ISRO for initial mission like Aryabhatta.
3. Setting up of Basic space centre at various place.
4. Today India successful Launching of Chandrayaan 1 & Mom are due to hardwork of Vikram Sarabai

As our PM said Jai Vigyan, Jai Anusandhan these two scientist contributed immensely to today's Atmanirbharta of India.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin



Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.16 जेनरेटिव एआई निकट भविष्य में नवाचार की सीमाओं को आगे बढ़ाने का सामर्थ्य रखता है, फिर भी इसका सामाजिक प्रभाव पर्याप्त चुनौतियाँ खड़ी करता है। सविस्तार उत्तर दीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Genreative AI holds the potential to push the boundaries of innovation in the near future, yet its societal impact raises substantial challenges. Elaborate. (Answer in 250 words) 15 Marks

Artificial Intelligence is creation of Human like Machine can think, act and proceed on their own.

Generative AI is emerging concept where A.I generate new content by itself like Essay, music, Painting through machine learning from already existing data. e.g. chat-GPT

Holds Potential to Push Boundaries of Innovation in Near Future

1. Doing repetitive & Routine work for Human and freeing them for innovative work. e.g. Typing of document.

2. Generating new contents by itself for Human Consumption.
e.g. Writing Essays.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

3. Ready made solutions for queries asked

4. Prescribing medicine, diagnosis in future based on available data.

5. Suggesting best input for Agriculture management. ⇒ Proportion of fertilizer to be used.

6. Analysing Business data to find out error areas & improvise on them.

Societal impact arising challenges

1. Loss of Job specially traditional like content creation like writing article

2. Threat to IPR rights of Artist over their creation as it copies them.

3. Percolation of deep rooted stereotypes & Prejudices in its process & further processing them.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

4. Ethical Responsibility of whom for giving wrong information and suggesting

5. Digital divide will further deepen, those who will have access will gain from this.

Measures needed

(1) Bringing regulation by framing proper Law & Policy

(2) Enhancing indigenous research & development

(3) check on king of data being fed and filtering adversial data

(4) Association with Private sector

13 bringing Transformative changes which needed to leapfrogged by India with aim to care to make India hub of AI and become visvaguru in technological superpower.

Generative AI

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.17 नवंबर 2022 में मिस्र में COP27 संयुक्त राष्ट्र जलवायु परिवर्तन सम्मेलन में लॉन्च किये गए "जलवायु के लिए मैंग्रोव गठबंधन" के उद्देश्य को स्पष्ट कीजिए। उष्णकटिबंधीय देशों की तटीय पारिस्थितिकी को बनाए रखने में मैंग्रोव के महत्त्व पर विस्तार से प्रकाश डालिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Explain the purpose of the "Mangrove Alliance for Climate" launched at the COP27 UN Climate Change Conference in Egypt in November 2022. Elaborate on the importance of mangroves in maintaining the coastal ecology of tropical nations. (Answer in 250 words) 15 Marks

COP 27 of UNFCC launched "Mangrove alliance for climate" for their preservation and promotion.

Purpose of mangrove alliance for climate

1. Enhancing protection to mangrove and preserving them from deforestation.
2. Alliance of like minded country to share best practice.
3. Enhanced Financing for Mangrove Preservation
4. Bringing Private sector, CSO, local communities in mangrove conservation
5. Stopping coastal Erosion due to climate change.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

6. Enhanced Role of Mangrove in fighting climate change.

Importance of Mangroves in Maintaining in Coastal Ecology

1. Act breaks to Tropical cyclones, reducing their impact & preserving important species.
2. various Economical Benefits to Coastal community.
3. Biodiversity Conservation ⇒ Fishing cat
4. Making site for various species like olive Ridley Turtle.
5. Reduce Coastal Erosion and prevents ~~soil~~ salt water intrusion.
6. stabilisation of Land in coastal Area.
7. Important Bird Fly zones for migratory Birds.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Measures taken

1. Sundarban alliance between India & Bangladesh

2. MISHTI programme in Budget 2023

Protecting Mangrove is singular-non for achieving SDG 13 [climate Action], SDG 14 [Life on water] and SDG 15 [Life on Land] and ensuring sustainable Development.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.18 आपदा प्रतिरोधी बुनियादी ढाँचे के लिए गठबंधन का गठन भारत में आपदा प्रबंधन दृष्टिकोण को और अधिक मजबूती प्रदान करता है। टिप्पणी कीजिए। भारत में आपदाओं से निपटने के लिए एक नई रणनीति की आवश्यकता के औचित्य सिद्ध कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

The Formation of the Coalition for Disaster Resilient Infrastructure brings more robustness to the Disaster Management approach in India. Comment and justify the need for a new strategy to tackle Disasters in India. (Answer in 250 words) 15 Marks

Coalition for Disaster Resilient Infrastructure [CDRI] is international cooperation mechanism to promote resilient infrastructure for robust Disaster Management.

CDRI- Robustness in Disaster Management Approach

① Focus on structural measures like Earthquake Resilient Building, Flood Embankments, planting trees along coastline

② Focus on Non-structural measures like Early warning system, Hazard & vulnerability mapping, capacity development of community.

③ Sharing Best Practices Internationally.

④ Financing Mechanism for CDRI

⑤ Promoting Infra for vulnerables like Physically Handicapped etc.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Need for New strategy to tackle Disasters in India

1. Presently it is centralised and bureaucratised (e.g. NDMA)
2. outdated Laws like Epidemic Disease Act
3. Adhoc, ~~reactive~~ reactive action ~~after~~ after Hazard has taken place.
4. Need for climate Proof strategy due to changing nature & uncertainty of natural event. (e.g.) Increasing Tropical cyclone in Bay of Bengal
5. to engage community participation as First responder to disaster
6. Ageing Population which is highly vulnerable to Disasters
7. updation and retrofitting of old ASI infrastructure (e.g.) Dams exceeding their ASL Limit.
8. Problem of climate Refugees

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

What is Needed

1. Proactive Approach as envisaged in Sendai Framework
2. use of Technology like Drones, Robotics etc for Disaster Management
3. International and Inter-State cooperation
4. Establishing Early warning system, zonewise mapping.

Steps taken

1. National Disaster Management Policy & Programme
2. setting National and State Disaster Mitigation Fund — 15th Finance Commission
3. use of Technology — like super computers by IMD for better forecasting.

Holistic Approach is needed for effective disaster management to achieve 7 goals of Sendai Framework like reducing Mortality etc.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Q.19 महत्त्वपूर्ण बुनियादी ढाँचे (क्रिटिकल इंफ्रास्ट्रक्चर) और प्रमुख निगमों को लक्षित करने वाले रैंसमवेयर हमलों में हुई हालिया वृद्धि ने मजबूत साइबर सुरक्षा उपायों और नीतियों की तत्काल आवश्यकता पर प्रकाश डाला है। इस प्रवृत्ति में योगदान देने वाले प्रमुख कारकों पर चर्चा करते हुए, विभिन्न क्षेत्रों पर इन हमलों के प्रभाव का विश्लेषण कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

The recent rise in ransomware attacks targeting critical infrastructure and major corporations has highlighted the urgent need for stronger cybersecurity measures and policies. Discussing the key factors contributing to this trend, analyze the impact of these attacks on various sectors.

(Answer in 250 words) 15 Marks

Recently, Technical Access to system of AIIMS ~~was~~ was blocked leading to disruption in Healthcare system.

Ransomware is type of cyber attack where hackers gets the control of computer system and block the access and demand money or other pleasure for unlocking

eg: Cyber Ransomware

Urgent Need for Stronger Measures

1. Protection of Critical Infrastructure is must for continuous growth of Economy.
   eg: Maharashtra Grid Failure

2. Energy security - Kudankulam cyberattack

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

3. Financial Security – 32 Lakh debit compromised in 2016

4. Privacy of citizen and their Rights.

Key factors contributing to the Trend

1. State sponsored Attack by countries like china – Advanced persistent Threat.

2. Non-state Attack like Terrorist organisation to enhance their credibility and delegitimise stability of state

3. Financial motive of Hackers to encircle in vicious cycle of payment by individual

4. Adventurous motive of some hacker.

5. Lack of effective security mechanism in system e.g. use of imported material in Civilian ships

6. Lack effective law and their strategic implementation.

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Impact on various sector

1. Disruption of Financial security
2. Leak of sensitive personal information
   e.g. Dominos Data Leak
3. Decreases credibility of Government and its programmes.
   e.g. Report of Aadhar Data Leak
4. Disruption of whole system e.g. Case of Estonia

Steps Taken
- → cybersecurity policy
- → I.T. Act, 2000
- → cyberswachhta kendra
- → NCIIPC, Cyber coordination Agency

Way Forward
- Creating Awareness
- Better coordination with like minded country
- Encouragement development of Equipment [Electronics Policy]
- Recruitment of skilled personnel

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

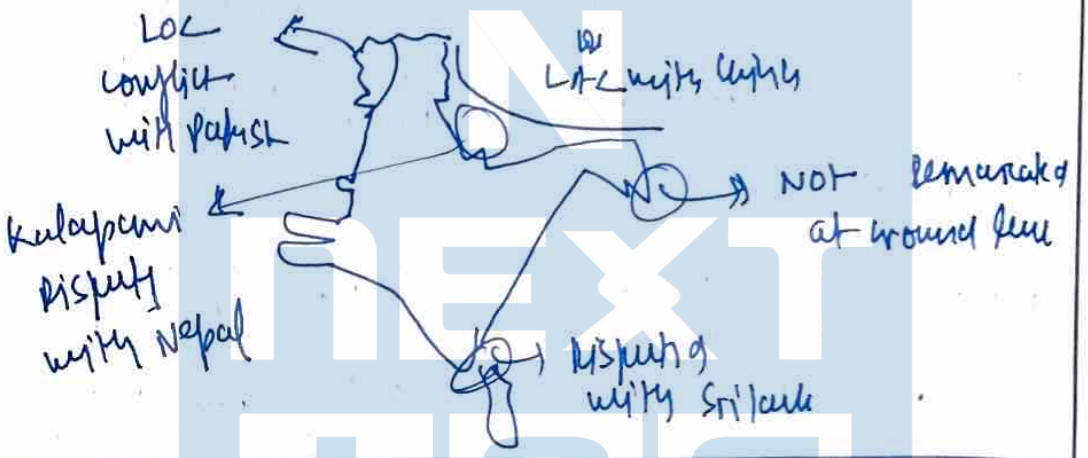
Q.20 सीमा सुरक्षा के संदर्भ में, तटीय और स्थलीय सीमाओं के प्रभावी और कुशल प्रबंधन को सुनिश्चित करने के लिए विभिन्न सुरक्षा एजेंसियों के बीच सहयोग और समन्वय को कैसे बेहतर बनाया जा सकता है?

(250 शब्दों में उत्तर दीजिए) 15 अंक

In the context of border security, how can cooperation and coordination between different security agencies be improved to ensure effective and efficient management of coastal and terrestrial borders?

(Answer in 250 words) 15 Marks

India faces challenges of inconclusive and non-demarcated Borders with various countries leading to persistent conflict & threat



Different security agencies at Border

1. Indian Army – Terrestrial Border
2. Indian Navy – Maritime security
3. BSF – Pakistan & Bangladesh Border
4. SSB – Nepal & Bhutan Border
5. Assam Rifles – Myanmar Border
6. ITBP – China Border.
7. Indian Coast Guard – Territorial Border
8. Marine Police

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

cooperation and coordination to ensure effective and efficient management

(I) Coastal Borders

(a) Joint Patrol of Indian Coast guard (ICG) & Marine Police.

(b) Navy should be relieved of territorial water & and focus on developing Blue water capability.

(c) Training of state Marine Police by ICG

(d) Engagement with coastal community specially Fishermen

(e) Proper checking of vessels with cooperation of Indian Customs to check smuggling

(II) Terrestrial Borders

(i) Implement one Border one Force [Madhukar Gupta Committee]

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

(2) BSF should be given duty exclusively in Peace Area & Army deployed in conflicted Area

(3) common cell between CAPFs & State Police.

(4) Engaging Local villages [First villages of India] for Intelligence gathering

(5) Sharing of resources.

(6) Inter-Force | Force reputation.

Vibrant Villages Programme recently launched by India for effective Border management can succeed with cooperation between Forces

Next IAS ID: MT23MACEN002, TC037, 31-08-2023 11:37 PM

Candidates must not write on this margin

Space for Rough Work