

Time Allowed : Three Hours
समय : तीन घंटे

ForumIAS

Maximum Marks : 250
अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	MUDRA RAHEJA	Medium/माध्यम	English ☒ हिंदी ☐
Roll No./अनुक्रमांक	1910130409	Date/दिनांक	03/09/2023
Center Code/परीक्षा केंद्र	1901		

*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। 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। 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। 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। 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।	
Total/कुल अंक	250		For Student Only / केवल परीक्षार्थी प्रयोग हेतु	
Examiner's Discretion/मूल्यांकन कर्ता का विवेक :			Start Time/प्रारंभ करने का समय :	End Time/समाप्त करने का समय :
Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन ☐ Offline/ऑफलाइन ☐
*Examiner's Discretion is the marks awarded at the discretion of the examiner 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 :
			① ② ③ ④ ⑤	

Note: Students are expected to incorporate suggestions from the solution provided in the answers. Discussion classes for the tests are also available online in your portal to aid in your preparation. Further, students are requested to see the good copies of the tests and learn from them. You can also discuss your copy with a Mentor and discover ways and means to improve your answers, or if you have any issues with this test / copy. Asks specific questions, to get specific answers.

EXAMINER'S REMARKS

CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

1. **AWIS = Answered What is Asked.** This means whether you have addressed the core demand of the question or not. Addressing the core demand of the question gets you an objectively fair score. It is examiner's perception if you have understood the question and if you know the answer in the first place. Creative answer writing, sometimes missing the core demand, may fetch very high or very low scores, and exposes your answer to the subjectivity of the examiner.
2. **CD & VA = Content Density & Value Addition.** Examiner will evaluate the quality and quantity of your content in the answer. In the same word limit and space limit have you (a) written what is asked (b) gone beyond what is asked (c) enriched answers through combination of (but not all!) suggestions, ideas, quotes, flowcharts, diagrams, facts and figures, data etc. This affects objective components of assessment.
3. **S & F = Structure & Flow** = Whether you have structured your answer properly or not. Whether the answer has been broken into parts and sub-parts and each part has been addressed appropriately or not. Whether the flow of the answer is maintained. Affects both subjective and objective components of assessment.
4. **P & R** = How your answer performs on the criteria of **presentation, ease of read, clarity and apparent effort** in writing the answer. This affects the subjective components of assessment.

Q.1) To what extent can the Jan Vishwas (Amendment of Provisions) Act 2023 help enhance trust-based governance for ease of living and doing business? (10 marks, 150 words)

जन विश्वास (प्रावधानों का संशोधन) अधिनियम 2023 किस हद तक जीवन और व्यवसाय करने में आसानी के लिए विश्वास-आधारित शासन को बढ़ाने में मदद कर सकता है? (10 अंक, 150 शब्द)

Economic Survey 2023 talked about trust based governance as trust is a public good leading to good governance

Jan Vishwas (Amendment) Act

2023's Provisions:

- Dispute Resolution - Time bound manner
- Ease of doing Business
 - ⑨ MSME development
- Enforcing contracts and regulation
- Faster delivery of services

It can help enhance trust-based governance in following ways:-

- ① Enhanced Transparency through Information, Communication and Technology

- ② Single window clearance
(Eg) Complaints registration
- ③ Reduction in default due to deterrence
- ④ Builds faith and credibility
↳ entrepreneurship attitude of risk taking
- ⑤ Boosts employment generation and economic growth
- ⑥ Speedy justice delivery and Industrial growth

Concerns

- Trust is a continuous process
- limited sphere
- lack of political will

however, 'trust' is the basis and core of governance - it ensures that 'social contract' remains intact between government and people

Feedback

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#	G	A	P
AWIS			
CD & VA			
S & F			
P & R			

Please put tick marks in the above table.

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TOTAL MARKS

Q.2) Fluctuations in the price of TOP (tomato, onion, potato) crops impact all strata of societies. Highlighting the reasons and implications of such fluctuations, evaluate the effectiveness of Operations Greens in stabilizing the otherwise restive horticulture sector. (10 marks, 150 words)

TOP (टमाटर, प्याज, आलू) फसलों की कीमत में उतार-चढ़ाव समाज के सभी वर्गों को प्रभावित करता है। इस तरह के उतार-चढ़ाव के कारणों और निहितार्थों पर प्रकाश डालते हुए, अन्यथा अस्थिर बागवानी क्षेत्र को स्थिर करने में ऑपरेशंस ग्रीन्स की प्रभावशीलता का मूल्यांकन कीजिए। (10 अंक, 150 शब्द)

TOP (Tomato, Onion, Potato) are core ingredients of most of the dishes and cuisines impacting every individual.

Reasons behind such fluctuations

- R
E
A
S
O
N
S
- ⇒ ① Seasonality of crops
 (Eg) Tomato - 70% during Kharif season
 - ⇒ ② Diseases (Eg) Leaf Curl Virus Attack in Kharif season
 - ⇒ ③ Poor storage infrastructure
 (Eg) Essential Commodities Act Constraint
 - ⇒ ④ Economic survey highlighted
 'cobweb Phenomenon' - Price, Production web

Implications of such fluctuations

① Food inflation:

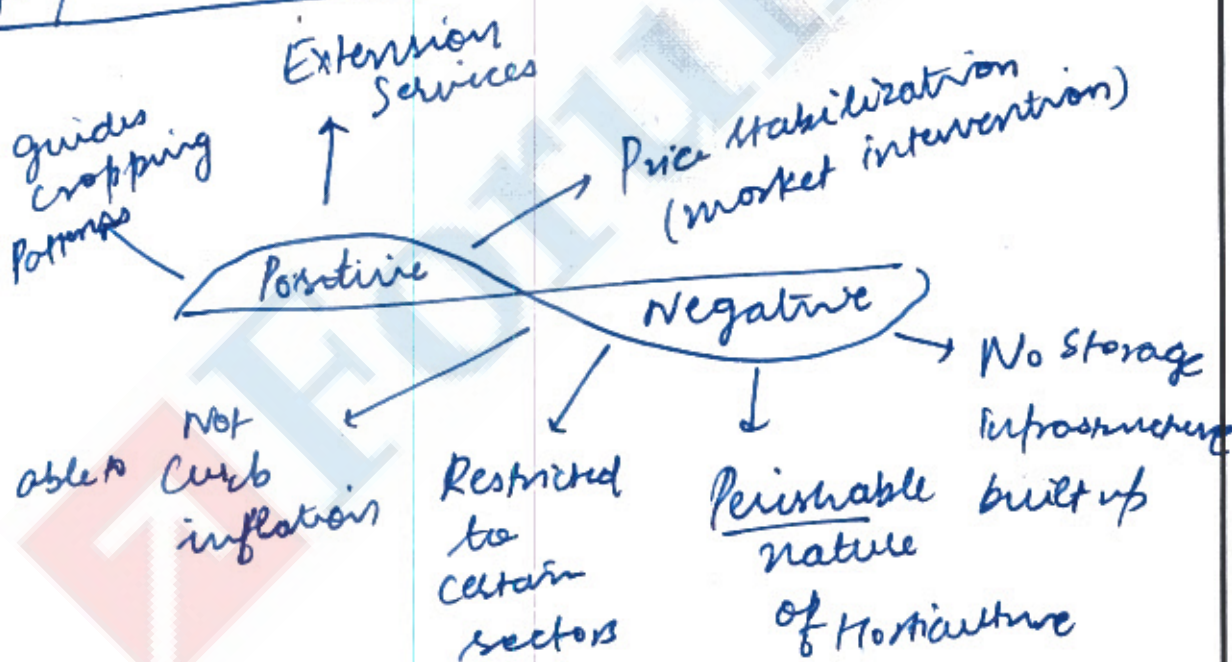
② Recent tomato price hike

③ Policy uncertainties → hampers global image: ④ export ban

⑤ Poverty - mostly poor suffers the most

⑥ Impacts dependent sectors
⑦ Hotels, street vendors

Operation Green effectiveness



Thus in this regard, Anand Dalwai Committee recommended to store such crops in dry forms (Tomato Purce)

Feedback

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TOTAL MARKS	
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Q.3) A focused and sustained promotion and pursuit of blue economy help meet the challenges of food security, national security, and climate security. Discuss. (10 marks, 150 words)

नीली अर्थव्यवस्था का एक केंद्रित और निरंतर प्रचार और अनुसरण खाद्य सुरक्षा, राष्ट्रीय सुरक्षा और जलवायु सुरक्षा की चुनौतियों से निपटने में किस प्रकार मदद कर सकता है? (10 अंक, 150 शब्द)

Blue Economy is defined as economic growth oriented towards fisheries development, coastal economy, marine transport.

Focused and sustained intervention helps meet Challenges of:

① Food security:

- ↳ Fisheries production
(Eg) India 2nd largest producer of inland fisheries
- ↳ Nutritional Security
(Food Processing)
- ↳ Alternative income to farmers
(Eg) (PM Matsya)

② National Security

- (a) ↳ coastal security (Eg) SAGAR, Net security Provider
- (b) ↳ minerals Exploration
(Eg) Deep ocean Mission
Polymetallic nodules

(C) Curbing Maritime Piracy
(Internal Security threat)

(3) Climate Security

- (a) → Curbing Coastal erosion
Eg 22% of coast eroded (India)
- (b) → Through Buffer creation like Mangroves Corals
Eg MISHTI Scheme (Budget 2023)
- (c) → Disaster management Eg cyclones

Concerns

- WTO Agreement on fisheries (against subsidies)
- External actors
Eg China's String of Pearl Policy
- Issue (Obsolete Technology)
Low fisheries productivity

Thus Blue economy ensures sustainable Development goal
SDG13 (climate change), SDG2 (hunger)
SDG14 (life below water)

Feedback

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TOTAL MARKS			

Q.4) What advantages does Green Hydrogen and a hydrogen economy offer in addressing national and global concerns? Discuss the impediments in its adoption. (10 marks, 150 words)

राष्ट्रीय और वैश्विक चिंताओं को दूर करने में ग्रीन हाइड्रोजन और हाइड्रोजन अर्थव्यवस्था क्या लाभ प्रदान करती है? इसे अपनाने में आने वाली बाधाओं पर चर्चा कीजिए। (10 अंक, 150 शब्द)

Green hydrogen means hydrogen that is produced by electrolysis of water

Recently National Green Hydrogen Mission was launched with target of generating 5 MMT of green hydrogen by 2030

Advantages of Hydrogen Economy (Green Hydrogen)

I Address National Concerns:

(a) Fulfilling INDC targets (Panchamiti)
(Eg) 500GW of Renewable Energy (2030)
(Green Hydrogen can add 125GW)

(b) Better alternative than other hydrogen
(Grey (Natural Gas) etc)

(c) Complements other renewable energy sources

(Eg) Solar energy not 24x7

II Address global concerns:

- (d) Clean Energy Transition
- (e) Countering climate change and global warming
- (f) COP27 summit agenda (UNFCCC)
 - ③ Phase down of fossil fuels economy

Impediments in adoption:

- ① Obsolete technology - lack of technical know-how
- ② Infrastructure Bottlenecks
- ③ Cost factor: Costly compared to other sources → burden on exchequer
- ④ Energy efficiency concerns.
- ⑤ Adoption costs ③ cars - full system

However, green hydrogen as also fulfils Budget 2023 Saptarishi priority of Clean mobility

Feedback

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TOTAL MARKS	
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Q.5) In what ways do plastics harm human, animal, and ocean health? Bring out the various domestic and international efforts that have been put in this regard in recent times?

(10 marks, 150 words)

प्लास्टिक किस प्रकार मानव, पशु और समुद्री स्वास्थ्य को नुकसान पहुँचाता है? हाल के दिनों में इस संबंध में किए गए विभिन्न घरेलू और अंतर्राष्ट्रीय प्रयासों को उजागर कीजिए।

(10 अंक, 150 शब्द)

Plastic Pollution refers to the overuse of plastic which is non-biodegradable in nature and damages environment.

Harm by Plastics

① Bioaccumulation

② Through food chains

② Waste heaps

③ Fumes from generation

① Health:

② cattle swallow plastic

② Biomagnification in animals.

③ Threat to life



① Marine Pollution ② Microplastics

② Threat to Biodiversity < flora fauna

③ Ocean acidification

④ Hampers ecological balance, hydrological cycle

Efforts in this regard

Domestic:

- ① Plastic Waste Management Rules 2016
- ② Recently banned use of 'single use plastic' and below 125mm
- ③ Promotion of jute bags
- ④ Mandatory for food grain storage

International

- ① MARPOL Convention against marine Pollution
- ② London Declaration
- ③ Research on alternatives to plastic
- ④ Ban on Plastic Waste imports to countries

This need of the hour is to adopt Circular economy from

Take
make
dispose



Reuse
Recycle
Reduce

approach

Feedback

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TOTAL MARKS			

Q.6) Though spatially distributed across the length and breath of the country, incidents of cloud burst disproportionately impact the mountaneous regions. Comment (10 marks, 150 words)

हालांकि सम्पूर्ण देश में बादल फटने की घटना आम है, लेकिन बादल फटने से पर्वतीय क्षेत्रों पर प्रतिकूल प्रभाव पड़ता है।
टिप्पणी कीजिए। (10 अंक, 150 शब्द)

Recently Himachal Pradesh faced cloud burst incident leading to wide scale damages.

Cloud burst is defined as localised version of flooding like situation where cloud is exploded due to heavy water accumulation.

Spatially distributed across country

① Formation of low pressure zones

② Cyclogenesis process (e.g. coastal rainfall)

③ Frontogenesis (front formations)

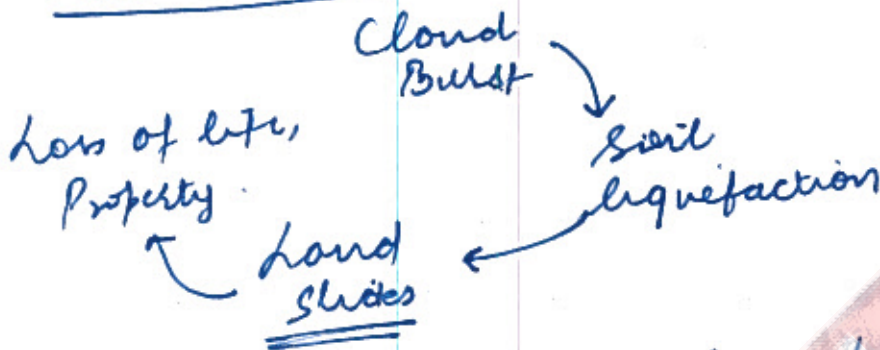
④ Convictional cloud formation

⑤ Incidents of cloud burst

- Mumbai
- Chennai
- North East
- Plains

Disproportionate impact on Mountains

① Domino effect



② Seismically active region (Zone V) Thus, Cloud Burst triggers earthquake

③ Most vulnerable and sensitive region as per

④ Low quality structures gets broken

⑤ Issue of Rehabilitation of victims

Thus way ahead is to prepare vulnerability mapping, hazard zoning and take concrete steps to prevent, prepare and mitigate disaster risks.

Feedback

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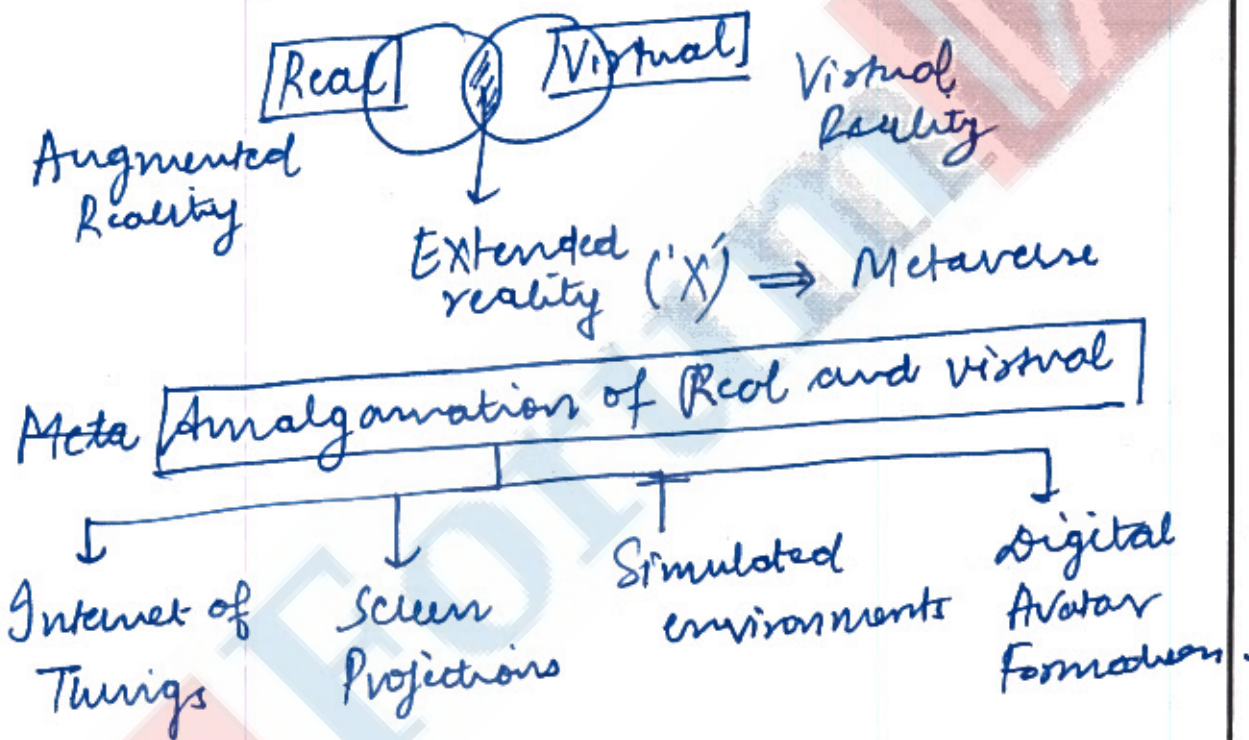
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TOTAL MARKS

Q.7) As the emerging technologies enhance their reach and extent, the amalgamation of real and virtual will become inevitable. In this perspective, discuss how metaverse will alter the lives of common man. (10 marks, 150 words)

जैसे-जैसे उभरती प्रौद्योगिकियाँ अपनी पहुँच और सीमा बढ़ाती हैं, वास्तविक और आभासी का सम्मेलन अपरिहार्य हो जाएगा। इस परिप्रेक्ष्य में, चर्चा कीजिए कि मेटावर्स आम आदमी के जीवन को कैसे बदल देगा। (10 अंक, 150 शब्द)

In the era of technological advancement and Industrial Revolution 4.0 technologies have become multifaceted



Metaverse will alter the lives of common man in following ways:-

- ① Ease of living: - enhance ^{reform} social connections
- ② Learning outcomes enhanced

② Ease of doing Business

⑨ Work from home and office simultaneously

③ 3D Visualisation of Concepts

⑨ Educational Quality

④ Health Sector

⑨ Boost in discoveries like remedy to Antibiotic Resistance

⑤ Defence Sector

⑨ simulating test environments on real

Concerns

- ① Einstein: fear the day - People will become slave of technology
- ② Scope of misuse ⑨ Cybersecurity breach
- ③ Privacy concerns (Article 21)

However, Metaverse offers a new dimension to new and emerging technologies

Feedback

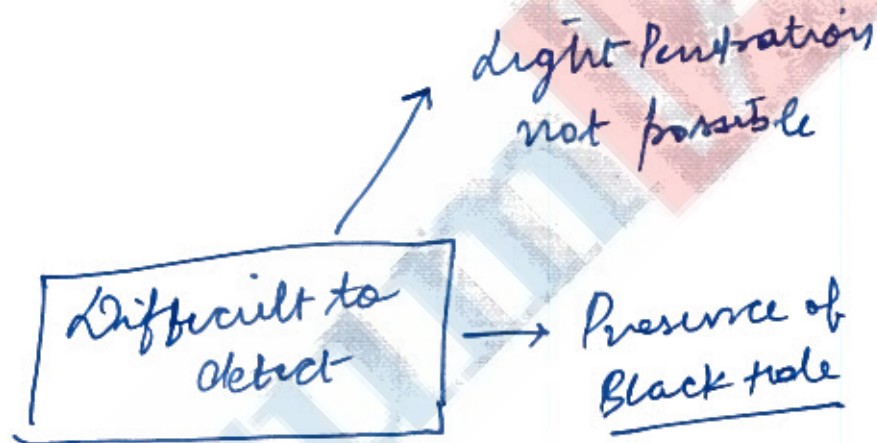
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TOTAL MARKS			

Q.8) What makes dark matter difficult to detect? Also, analyse how the search for the elusive dark matter has influenced the trailing of modern pursuits in science. (10 marks, 150 words)

क्या कारण है कि डार्क मैटर का पता लगाना कठिन हो जाता है? साथ ही, विश्लेषण कीजिए कि मायावी डार्क मैटर की खोज ने विज्ञान में आधुनिक गतिविधियों को कैसे प्रभावित किया है। (10 अंक, 150 शब्द)

Dark Matter is defined as 27% matter present in the universe through which light cannot pass



Search for dark matter influenced modern pursuits:-

- ↳ Discovery of Black hole (Stephen Hawking)
- ↳ ~~Ever~~ Exploration of universe (evolution)

Feedback

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Poor.

TOTAL MARKS	
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Q.9) While AFSPA has been criticised for promoting excesses by the security forces, its profound utility to upkeep the security situation cannot be overstated. Comment. (10 marks, 150 words)

हालाँकि सुरक्षा बलों की ज्यादातियों को बढ़ावा देने के लिए AFSPA की आलोचना की गई है, लेकिन सुरक्षा स्थिति को बनाए रखने में इसकी गहन उपयोगिता को नजरअंदाज नहीं किया जा सकता है। टिप्पणी कीजिए।

AFSPA (Armed Forces Special Protection Act) (10 अंक, 150 शब्द)
is a necessary evil which ensures national security but has certain issues.

Promoting excesses :

- ① Excess power to military
Eg) Sec 4(1): Arrest or kill even without warrant.
- ② Acts of sexual violence reported
Eg) Phongsom Manorama incident
- ③ Unbridled security to personnel
Eg) Difficult to arrest without permission.
- ④ Against Article 32 of Indian Constitution
(Right to seek justice)

Profound utility of AFSPA :

① Gen. VK Singh : says that it is much needed tool to protect national security at strategic location

② Border Infrastructure Protection
Eg China's Nomenclature acquisition Cartographical

③ Against North East Insurgency

④ Sense of security and safety to population

Way Forward → Justice Verma Committee calls to dehumanise AFSPA
→ JARC: repeal AFSPA for being draconian law

Thus AFSPA is needed intervention to ensure balance. But it should not be used negatively

Feedback

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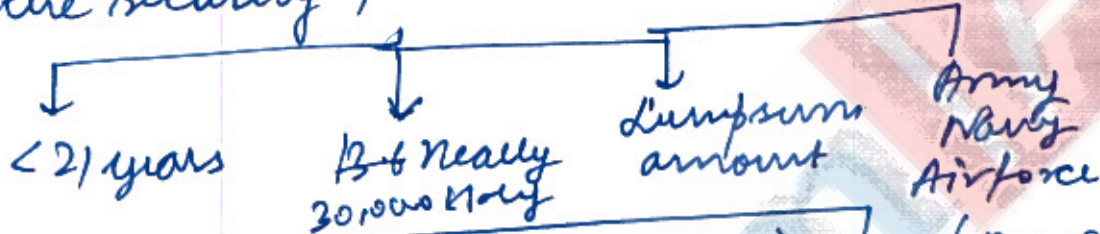
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TOTAL MARKS	
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Q.10) Its not only the heft but also the agility, efficiency, and swiftness which will define the warfare in the contemporary times. In this context, discuss the relevance of the Agnipath scheme. (10 marks, 150 words)

यह न केवल अनुभव बल्कि चपलता, दक्षता और तेजी भी है जो समकालीन समय में युद्ध को परिभाषित करेगी। इस संदर्भ में अग्निपथ योजना की प्रासंगिकता पर चर्चा कीजिए। (10 अंक, 150 शब्द)

Agnipath scheme is an initiative by Ministry of Defence to rationalise the security, decrease the age of soldiers



Warfare in contemporary times :- (Relevance of Agnipath)

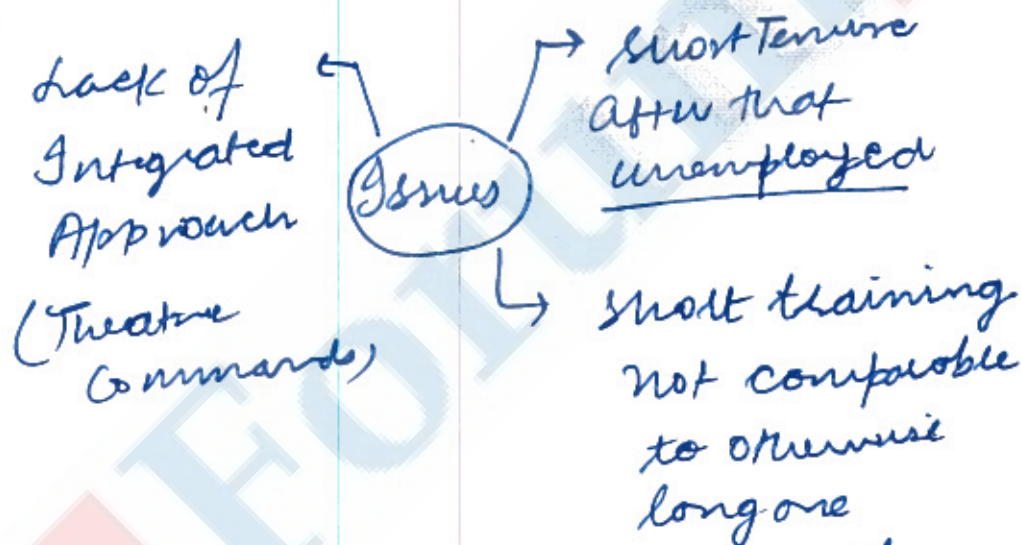
- ① Heft
 - Training based on experience
 - 6 months training program
 - Reduction in expenditure
- ② Agility
 - young soldiers (upto 23 years)
 - Passionate minds, Physical vigour
- ③ Efficiency
 - short time duration (4 years bring best of potential)
 - After 4 years 25% will go

to further service) will ensure efficiency

④ Swiftness

- ↳ onground working potential
- ↳ Address shortage of soldiers
- ↳ Trained in Difficult Terrain, Threat, Task

g



Thus Agnipath scheme is one of the kind which fulfils Article 51A (fundamental duty) to render service when called upon to do so

Feedback

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TOTAL MARKS	
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Q.11) The path towards an Atmanirbhar Bharat traverses through an overhaul of industrial policies. Comment, with special reference to the Production Linked Incentive (PLI) scheme.

(15 marks, 250 words)

आत्मनिर्भर भारत की दिशा में मार्ग औद्योगिक नीतियों में व्यापक बदलाव से होकर गुजरता है। प्रोडक्शन लिंक्ड इन्सेंटिव (पीएलआई) योजना के विशेष संदर्भ में टिप्पणी कीजिए।

(15 अंक, 250 शब्द)

India envisions the path of Atma-Nirbhar Bharat i.e. self reliance and not narrow approach of import substitution

Production linked Incentive Scheme (PLI) was announced in 2019 to boost domestic production and reduce import dependence.

Path towards Atmanirbharata - overhaul of Industrial Policies :-

- ① Domestic Demand Revival ::
 - Ⓔ Electronics Industry
(Mobile, and 14 more sectors)
- ② Make In India, Assemble in India ::
Policies.
- ③ Boosting Ancillary Industries

④ Export Promotion

(Eg) Defence Production -
Brahmos Missile to Philippines

⑤ Employment focus and skill generation

Reskill
Upskill
Skill

(Eg) PM Kaushal Vikas Yojana 40
(Budget 2023)

⑥ Focus on Strategic Sectors

(Eg) Semiconductor manufacturing
Indian Semicon Mission

⑦ Technology Transfers

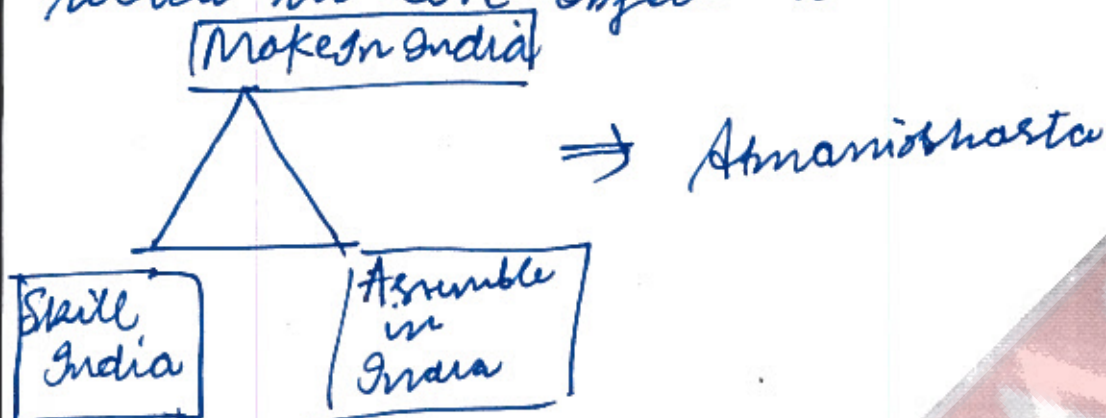
(Eg) Recent USA - Deal -
GE + HAL (Jet Engines)

⑧ Foreign Policy objectives

(Eg) Banning Chinese products

However, it not necessarily
requires overhaul of industrial policies

rooted in core objectives:-



> Infrastructure Boost (PM Gati Shakti National Infrastructure Pipeline)

> Potential of reaping demographic dividend

> Economic boost

(Eg) Target of 5 trillion \$ economy

> Demand Creation (domestic industries)

> Strategic Sectors (Government Presence)

> Thus, Atmanirbharata vision

Keeps India dedicated to rise as 'Vishwaguru' in Amrut Kaal

Developed country by 2047.

Feedback

(For OFFICE use only)

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Please put tick marks in the above table.

Here G is Good, A is Average and P is Poor.

TOTAL MARKS	
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Q.12) Infrastructure investments are crucial for socio-economic development, as they have a multiplier effect on economy, however, concerns for safety must not be ignored. Discuss in the light of recent events. (15 marks, 250 words)

बुनियादी ढांचे में निवेश सामाजिक-आर्थिक विकास के लिए महत्वपूर्ण है, क्योंकि उनका समाज पर गुणक प्रभाव पड़ता है, हालांकि, सुरक्षा के लिए चिंताओं को नजरअंदाज नहीं किया जाना चाहिए। हाल की घटनाओं के आलोक में चर्चा कीजिए। (15 अंक, 250 शब्द)

Infrastructure, both physical and social is the lifeline of economy and identity of any nation.

Infrastructure Investment are crucial

① Socio-economic development

→ 1) Ensures Supply Chain:

(Eg) Food Processing Industries

→ 2) Reduces Logistic Costs

(Eg) Recent Logistic Performance Index rank reduced to 6 points (38/137)

→ 3) Ensures Ease of doing Business

↳ Ease of living

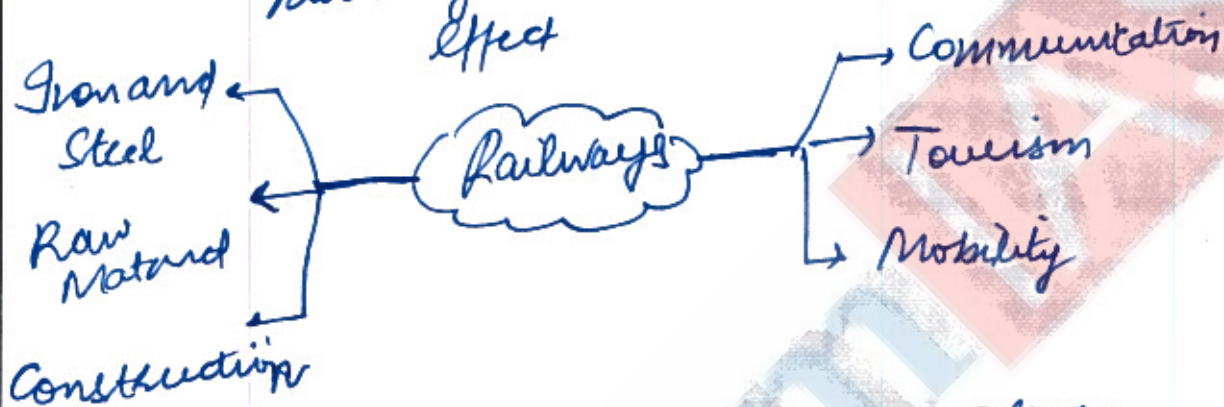
→ 4) Transport and communication

(Eg) PM Gram Sadak Yojana
Rural Development

Multipplier effect of Infrastructure

① Ensures Forward and Backward linkage

(Eg) Economic survey highlighted railways have 5.5 multiplier effect



② It ensures development of ancillary industries

(Eg) Basic Industries

However, there are certain

Concerns for safety :-

① Poor Quality Material

(Eg) Satyendra Dubey (IES) revealed NHAI scam

② Frequent Accidents due to overburdened staff

(Eg) Recent Balasore rail tragedy

③ Road Safety concerns

(Eg) India accounts for 1% of highways but 11% road accidents worldwide

④ Environmental Safety

(Eg) Waterways - marine pollution

⑤ Social Safety - Social infrastructure

(Eg) Fire safety hazards in hospitals
Children safety in schools.

Way ahead

→ Amal Kumar Panel (Railway safety guidelines)

→ Frequent Audits (Internal + external)

→ Social Infrastructure Safety

(Eg) Install CCTV

→ Risk Management through Renewed Public-Private-Partnership - People

Thus Safe and Secure infrastructure is
Sine-qua-non for **SASHAKT BHARAT**
SURAKSHIT BHARAT

Feedback

(For OFFICE use only)

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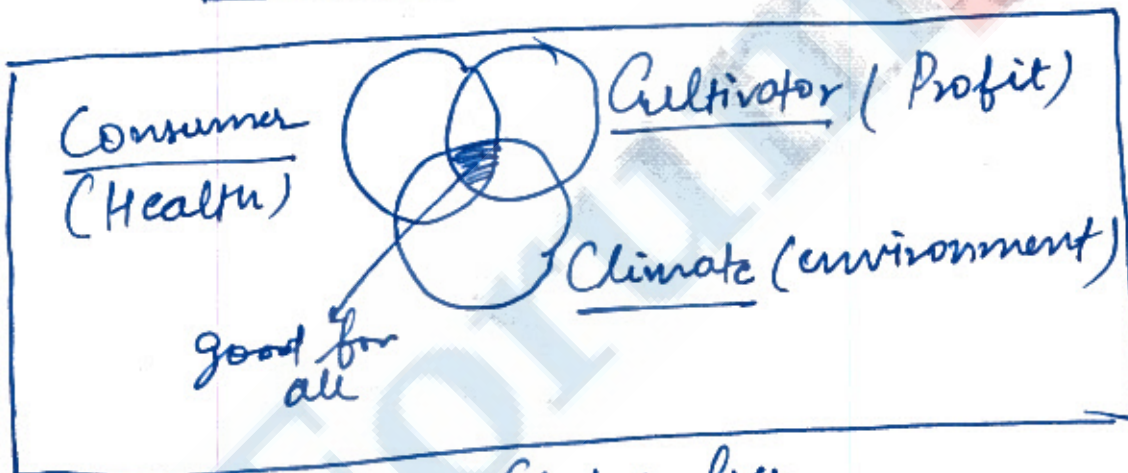
TOTAL MARKS	
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Q.13) How will you explain the irony of poor adoption of millet crops despite their multifarious advantages? Also, recommend measures to curb this anomaly. (15 marks, 250 words)

आप मोटा अनाज की फसलों को उनके विविध लाभों के बावजूद खराब तरीके से अपनाने की विडंबना को कैसे समझाएंगे? इसके अलावा, इस विसंगति को रोकने के उपायों की सिफारिश कीजिए। (15 अंक, 250 शब्द)

UN declared 2013 as International Year of millets and Finance Minister called millets as 'Shree Anna' during Budget Speech

Multifarious Advantages



- (1) Consumer: → Gluten free
 → Rich in nutritional Benefits
 (Iron, Calcium, Micronutrients)
 → Cures lifestyle diseases
 (Diabetes)
 → Low glycemic index
 → Improve hunger outcomes (Poor GI Index Rank 107)

(2) Cultivator:

- ↳ Low input cost, drought resilient
- ↳ Boosts Income - Food Processing
(Eg) Doubling Farmer Income
- ↳ Traditional Indigenous crop
(Suits Indian Climate)

(3) Climate

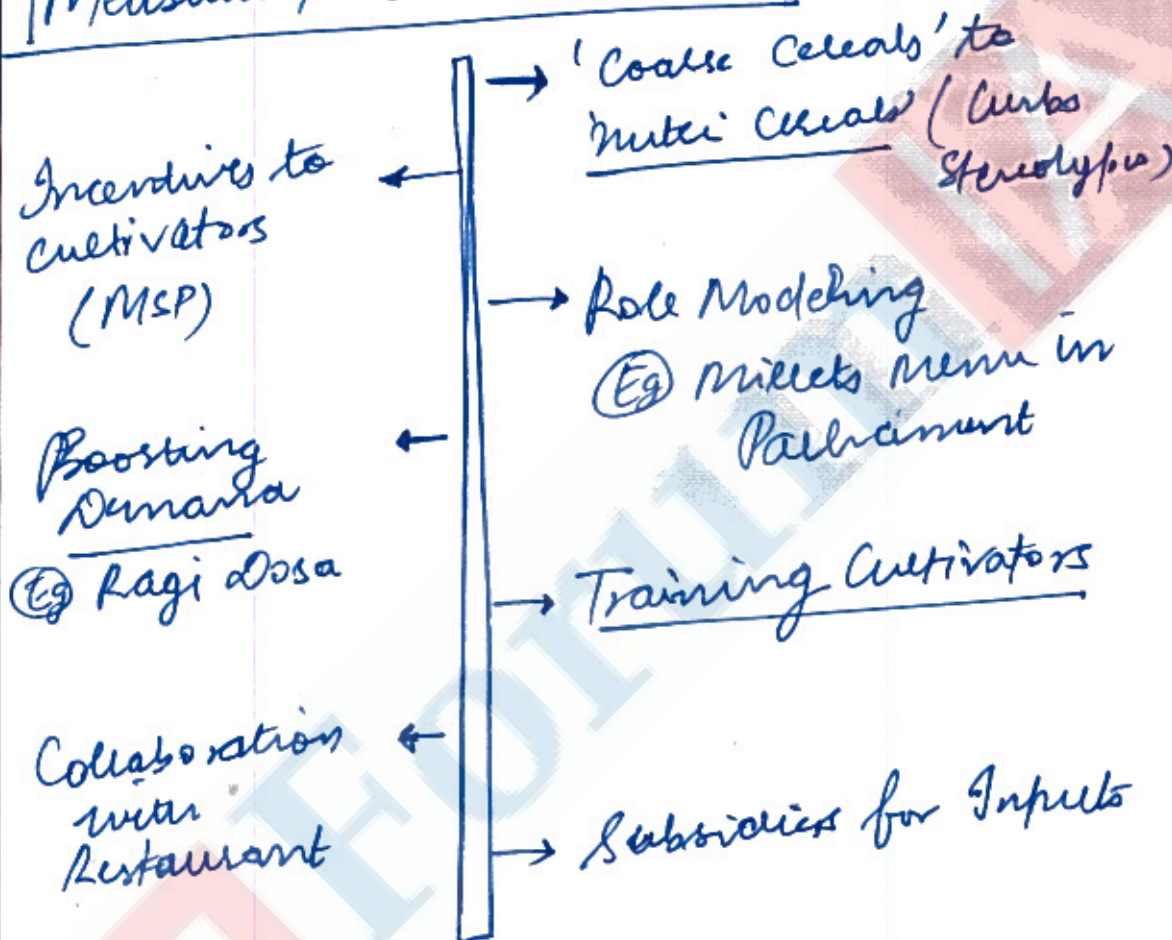
- ↳ Grows in arid and semiarid regions (groundwater saved)
- ↳ Climate Smart Agriculture (FAO)
- ↳ Boosts Soil health and Productivity
(Eg) Soil rejuvenation

Poor Adoption:

- ① Stereotypes: Branded as 'coarse cereals'
- ② Taboo attached:
(Eg) Feed for animals
- ③ MSP not issued for millets
- ④ Green Revolution - changed cropping patterns.

- ⑤ Limited Export Potential of Millets
- ⑥ Historical Inertia (Consumers)
- ⑦ Difficult to digest millets products

Measures to curb Anomaly



Thus Millets has immense potential to curb hunger and reduction in poverty ensuring food security (SDG1, SDG2)

Feedback

(For OFFICE use only)

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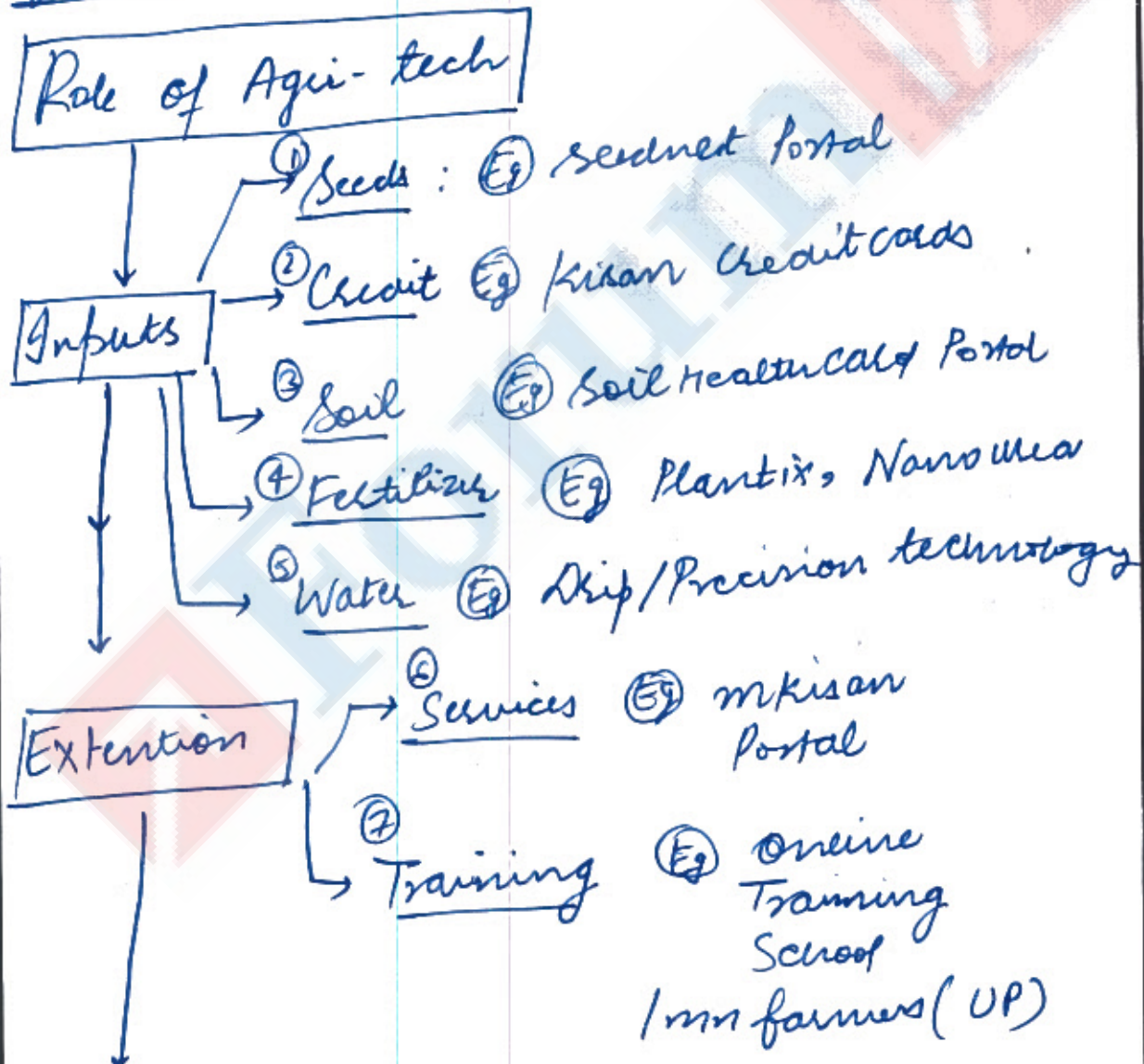
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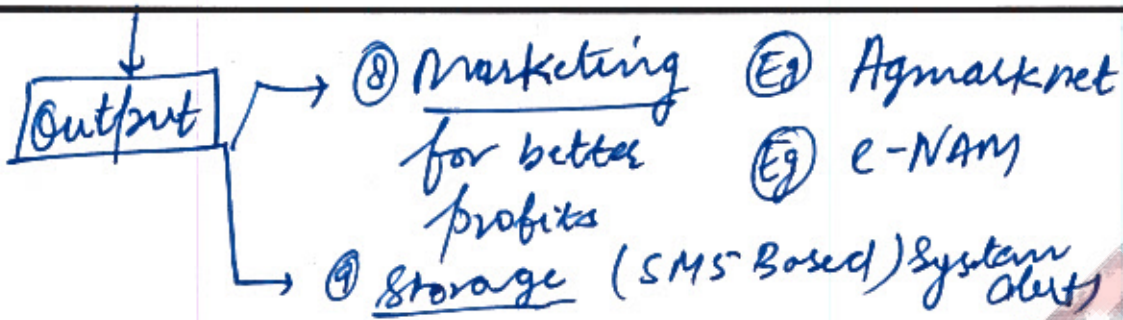
TOTAL MARKS	
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Q.14) Analyze the role Agri-tech can play in penetration of technology in agriculture. In what ways can Agristack help address the crisis in the farm sector. (15 marks, 250 words)

कृषि में प्रौद्योगिकी के प्रवेश में कृषि-प्रौद्योगिकी की भूमिका का विश्लेषण कीजिए। एग्रिस्टैक किस तरह से कृषि क्षेत्र में संकट का समाधान करने में मदद कर सकता है। (15 अंक, 250 शब्द)

Agri-technology is an innovative measure to use e-technology in the aid of agriculture productivity and growth.





AgriStack is much needed initiative to keep a database of agriculture related data at one place. It can help address the crisis:

- ① Policy Formulation: evidence based decision making
- ② Sharing Best Practices
(Eg) Zero Budget Natural Farming
- ③ Broad based service delivery
(Eg) Targeted interventions - DBT
- ④ Preserving indigenous varieties
(Eg) Seedbank - native seeds in wake of HYV seeds
- ⑤ Integrated Data Management
(Eg) Exports Promotion

- ⑥ Altering cropping patterns
 - ⑥ Rationalising subsidies.
- ⑦ Promotion of Integrated farming
 - ⑥ Regional Resource Mapping
 - Bookkeeping

Issues

- ↳ Lack of digital literacy in rural areas.
- ↳ Farmers land records not updated
- ↳ Lack of record maintenance at APMC mandis

Thus Agriculture can bring necessary interventions in doubling farmers income as recommended by Ashok Dalwai Committee.

Feedback

(For OFFICE use only)

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Please put tick marks in the above table.

Here G is Good, A is Average and P is Poor.

TOTAL MARKS	
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Q.15) The objective of an inclusive clean energy transition will remain incomplete without leveraging the potential of the biofuels. Enumerating the seminal provisions of the National Biofuel Policy, analyze the possible challenges in its smooth implementation. (15 marks, 250 words)

जैव ईंधन की क्षमता का लाभ उठाए बिना समावेशी स्वच्छ ऊर्जा परिवर्तन का उद्देश्य अधूरा रहेगा। राष्ट्रीय जैव ईंधन नीति के मौलिक प्रावधानों की गणना करते हुए इसके सुचारु कार्यान्वयन में संभावित चुनौतियों का विश्लेषण कीजिए।

National Biofuel Policy was proposed in 2018 to transition towards a clean future and sustainability (15 अंक, 250 शब्द)

Clean Energy Transition through Biofuels :-

① Biofuel is
 → inexhaustible
 → replenishable
 → Renewable in nature

② Complements other clean energy resource

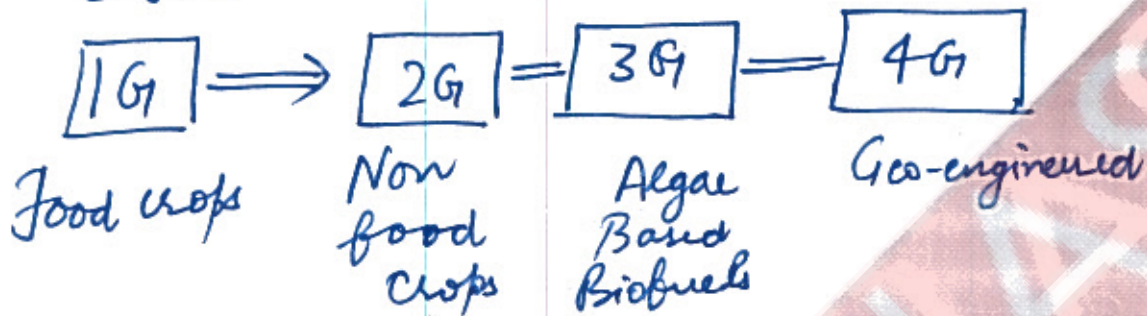
③ lack of 24x7 power availability in solar energy

③ Biofuel also has multiple double benefits
 → Arrests over production of sugarcane
 → Stubble Burning
 → Clean Energy source

④ 'Phase down' of coal and India's Panchamrit Targets will get push

Provisions of National Biofuel Policy

① Categorisation and classification



② Incentives in setting up Biofuel Plants

② Paripat Plant recently set up.

③ Blending Programs (Target)

Ethanol Blending : 20% by 2025 in Petrol

5% Biodiesel in diesel

(Achieved) - 10% in Petrol

Possible Challenges in smooth implementation of Biofuels are:-

- CHALLENGES**
- ⇒ ① Food security concerns
(eg) Storing food grains
 - ⇒ ② Lack of ecosystem: infrastructure, transport
 - ⇒ ③ Cost of adoption by farmers (limited incentives)
 - ⇒ ④ Low Energy efficiency as compared to fossil fuels
 - ⇒ ⑤ Obsolete technology of plants
 - ⇒ ⑥ Lack of awareness among people

Way ahead → Biopellets
→ Research and Development efforts - 3G, 4G Plants.

Thus Biofuels are way ahead in helping towards 'fuelling the future' and Clean energy transition (SDG 6)

Feedback

(For OFFICE use only)

#	(C)	(A)	(P)
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Please put tick marks in the above table.

Here G is Good, A is Average and P is Poor.

TOTAL MARKS	
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Q.16) Despite having a robust legal architecture in the form of Disaster Management Act, 2005, a coordinated on ground response to disaster remains in a state of want. Comment.

(15 marks, 250 words)

आपदा प्रबंधन अधिनियम, 2005 के रूप में एक मजबूत कानूनी संरचना होने के बावजूद, आपदा के लिए जमीनी स्तर पर समन्वित प्रतिक्रिया अभाव की स्थिति में है। टिप्पणी कीजिए।

(15 अंक, 250 शब्द)

Disaster management is defined as organisation and management of resources and responsibilities to minimise or lessen the impact of disaster.

Robust legal Architecture

① Disaster Management Act 2005 moves

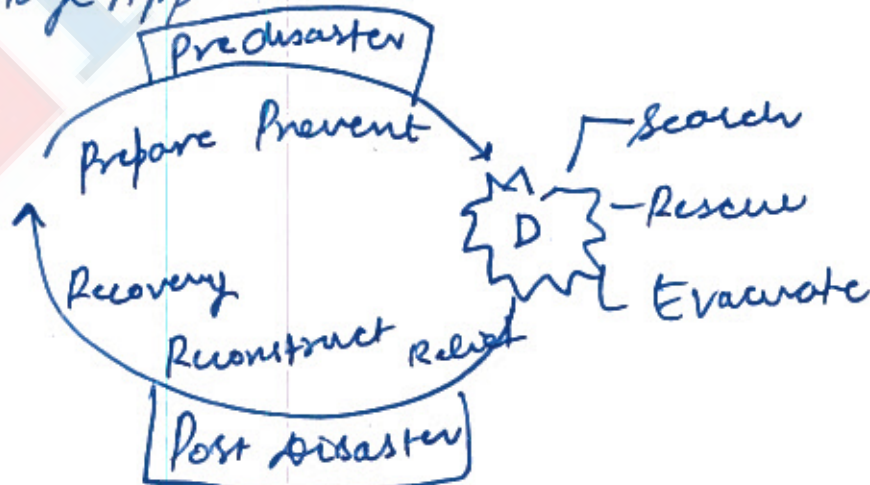
from

Passive,
Reactive

→ Pro-active
Response

(Build Back Better → Recovery Rehabilitation Reconstruction)

② Multistage Approach



③ Institutional Setup

NDMA (National)

SDMA (State)

DDMA (District)

Forces (NDRF, SDRF)

Institutes

NLMC (head-cabinet secretary)
(Chiefs)

however, coordination on ground
remains in state of want.

① Disaster not mentioned in VII schedule
↳ lack of coordination { Centre
State

② Lack of effective structural and
non structural Measures strategy

③ lack of funds allocation to states.

④ No clear demarcation of responsibilities

⑤ lack of proper list of qualified
disasters

(Eg) lightning not a disaster

⑥ Lack of practical exemplification of legal rules.

(Eg) Lack Mock Drills, fire Proofing.

⑦ Basic Fundamental Planning Issue

(Eg) low seismic resistance in Buildings

Solutions :

① Following NDMA guidelines

Natural

Man-Made disaster

② Disaster should be made part of concurrent list

③ School curriculum (Eg) Training to deal disaster

④ Safety auditing at regular intervals

Overall Sendai framework

should be adopted in letter and spirit, Coalition for disaster Resilient Infrastructure (CDRI) is a welcome step in this regard

Feedback

(For OFFICE use only)

#	G	A	P
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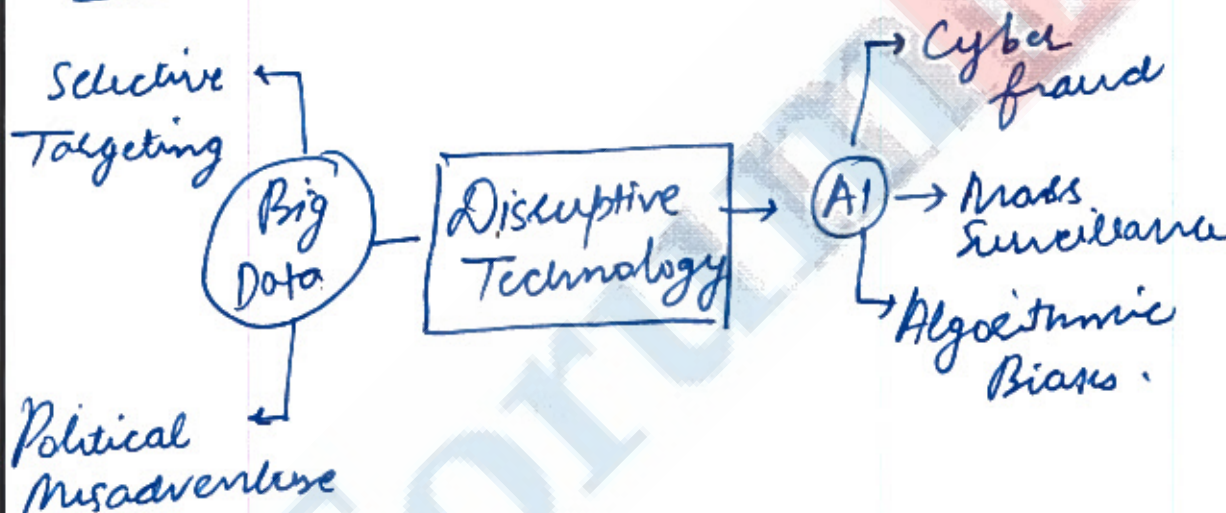
Q.17) With suitable examples, throw light upon the use of disruptive technologies like Big Data and Artificial Intelligence (AI) in enhancing the service delivery component of good governance.

(15 marks, 250 words)

उपयुक्त उदाहरणों के साथ, सुशासन के सेवा वितरण घटक को बढ़ाने में बिग डेटा और आर्टिफिशियल इंटेलिजेंस (एआई) जैसी विघटनकारी प्रौद्योगिकियों के उपयोग पर प्रकाश डालिए।

(15 अंक, 250 शब्द)

Good governance is use of mechanisms processes to ensure quality service delivery through Consensus Building, Responsiveness, Transparency, Accountability, efficiency.



However, it can be used in

enhancing service delivery :-

- ① Targeted Beneficiary Identification
 - (Eg) Public Distribution System has 36% exclusion error
- ② Delivering capabilities

(Eg) Medicine through Drones in Telangana

③ Enhanced Access and Reach of Governance

(Eg) AI Simulation Models.

④ Evidence Based Policy Making

(Eg) Defence AI Council

⑤ Educational Sphere

Affordability Accessibility Availability
Quality

(Eg) Remote learning tools of Artificial Intelligence.

⑥ Information Dissemination

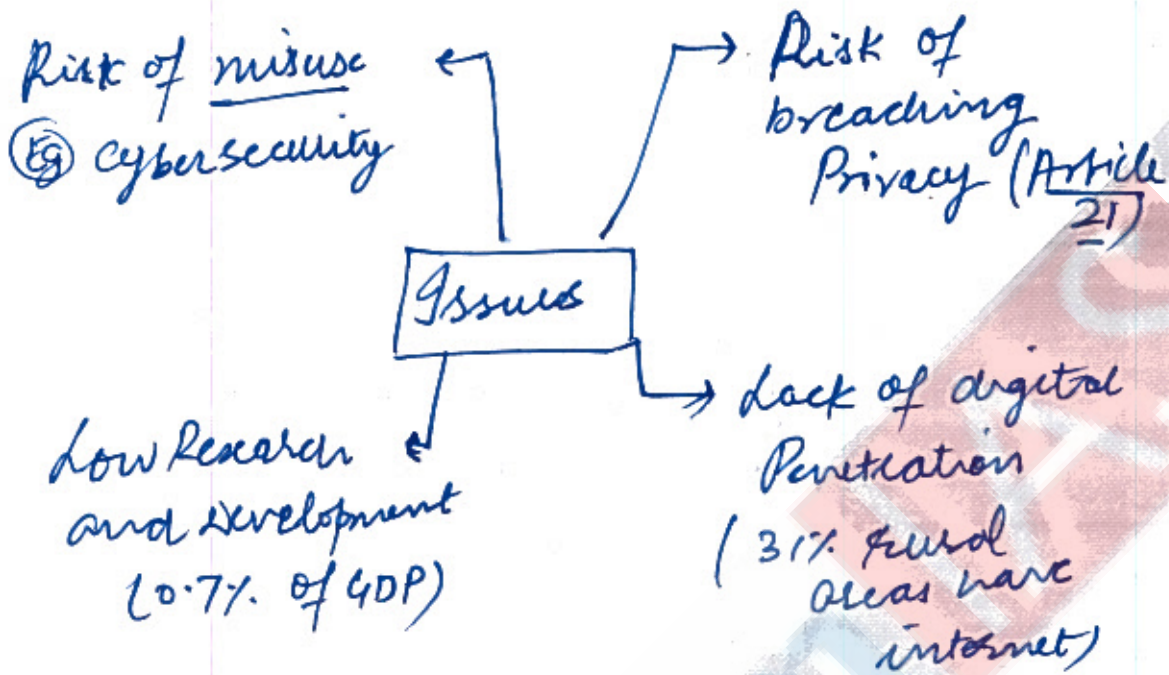
(Eg) During Disasters

⑦ Health outcomes improve

(Eg) Precision Medicine and Personalised care ensured

⑧ Data Analysis and Record Making

(Eg) Nutrition among malnourished citizens



Thus it is often said that it is 'guided technology, misguided men'. We must use technology for our good fulfilling the Welfare state objectives.

Feedback

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Please put tick marks in the above table. Here G is Good, A is Average and P is Poor.			
TOTAL MARKS			

Q.18) Trace the evolution of Indian Space Research Organization (ISRO) from its humble beginnings as the space agency of the government to becoming a technology behemoth, spearheading innovations with respect to satellites, launch vehicles, and planetary explorations.

(15 marks, 250 words)

भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) के सरकार की अंतरिक्ष एजेंसी के रूप में मामूली शुरुआत से लेकर प्रौद्योगिकी दिग्गज बनने तक, उपग्रहों, प्रक्षेपण वाहनों और ग्रहों की खोज के संबंध में नवाचारों का नेतृत्व करने तक के विकास का अन्वेषण कीजिए। (15 अंक, 250 शब्द)

Indian Space Research Organisation (ISRO)

was started in 1969 and has covered the distance from 'Cycle to Chand' in a span of few years

Evolution of ISRO

With the efforts of Vikram Sarabhai, Homi J Bhabha, APJ Abdul Kalam to recent K Sivan, it has travelled a long journey of innovation:

(1) Satellites

↳ First satellite launched - Rohini

↳ 'Aryabhata' was another satellite

↳ Today, ISRO has spanned across education. (Eg) Educom Satellite

- Communications Satellites.
- Mapping of earth
- Indigenous versions (NAVIC)
(Navigation for Indian Constellation)

② Launch vehicles

- Small Satellite launch vehicle (SSLV)
for smaller versions
- PSLV: imaging functions (Polar orbit)
- GSLV - heavier payload capabilities
 ↳ Geosynchronous orbits
 ↳ Geostationary orbits
- Cryogenic boosters capacity

Now launching satellites of other countries through NewSpace India Limited (NSIL) and IS-SPACE

③ Planetary Explorations

(a) Mars Orbiter Mission

→ PSLV-C25 was used - India became the first country to launch Mangalyaan in its very first attempt

(b) Moon Missions

Chandrayaan 1
(2008)

↓
discovered
Water Presence

Chandrayaan 2
(2019)

↓
Orbiter
Success

Chandrayaan 3

↓
Lander and
Rover
Success

(c) Gaganyaan - planned manned mission for space exploration

(d) Shukrayaan (Venus)

→ Low international Presence (1.5 bn \$ India & 50 bn \$ Global)
→ Less Risk Appetite

(Concerns)

→ Low Research and Development

However, what countries achieved in centuries, India through ISRO achieved in decades. Recent Artemis Accord is way ahead

Feedback

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TOTAL MARKS

Q.19) In what ways has Drug trafficking taken new forms and new routes in recent years. Elucidate the steps taken by the govt in this regard, with special reference to Operation Samudragupta. (15 marks, 250 words)

हाल के वर्षों में नशीले पदार्थों की तस्करी ने किस तरह से नए रूप और नए रास्ते अपनाए हैं। ऑपरेशन समुद्रगुप्त के विशेष संदर्भ में, इस संबंध में सरकार द्वारा उठाए गए कदमों को स्पष्ट कीजिए। (15 अंक, 250 शब्द)

Operation Samudragupta is an intervention by Indian Navy which seized tonnes of heroin morphine highlighting the evolving form of Drug trafficking

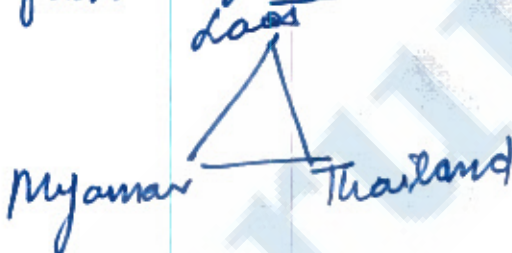
Drug Trafficking - new Routes and forms

New forms :

- ① Culture of Rave Parties (Goa commonly)
 (Eg) Hotbed of Drug sellers
- ② Organised crime linkage
 (Eg) Funding Terrorism activities
- ③ Rampant drug addiction among youth (Eg) Punjab (shown in Uttar Punjab)
- ④ Emergent state and non state actors (Eg) Peddlers,
- ⑤ Disillusioned youth most vulnerable

New Routes

- ① Afganistan (Taliban Takeover)
 - (Eg) UNODC Report: 20-30% increase in opium production
- ② Custom Routes
 - (Eg) Hiding in food packets.
- ③ Divergent routes through different means of transport from Golden triangle and Arabic



Afganistan

Gulf

Pakistan

Steps taken by the government :

- ① Legal Measures
 - (Eg) Narcotics Drugs and Psychotropic Substances Act 1985
- ② International Conventions
 - (Eg) UN single convention of Narcotic Drugs 1971

③ Ministerial level

⑨ NCORD Portal by Ministry of Social Justice

④ Database Maintenance

⑨ Secure Information Management System (SIMS)

⑤ State level - targeted initiatives

⑨ Punjab, North East States (Mera Paisa)

⑥ Rehabilitation of victims

⑨ Shauhol district formed 'football playground' for drug rehabilitation centres.

Thus, drug trafficking is a menace which must be eradicated from root and branch and drug addicts should not be treated as perpetrators rather 'victims' through reformatory approach

Feedback

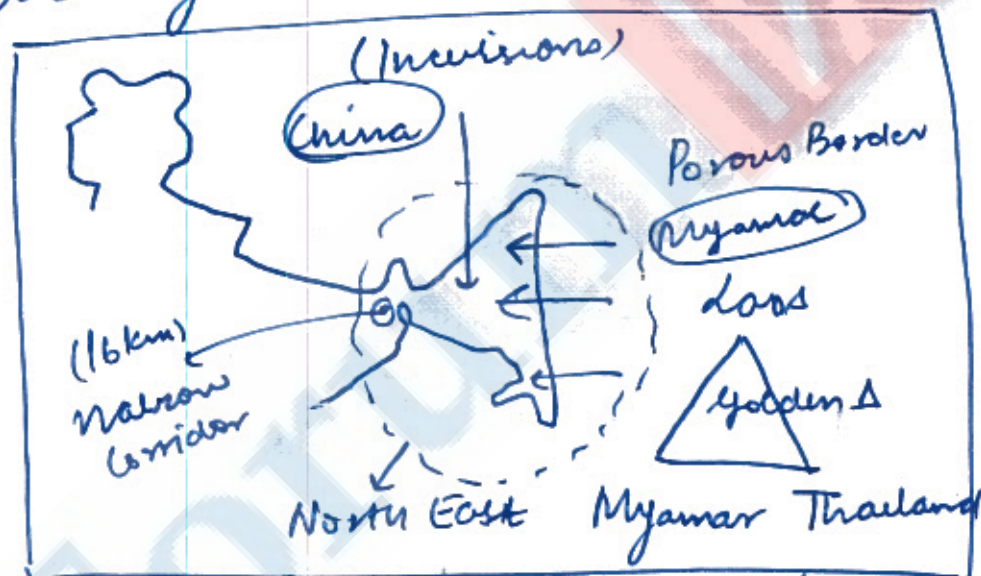
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TOTAL MARKS			

Q.20) Why does the North East remain a hotbed of insurgency? With special emphasis on government measures, discuss the steps to ameliorate the situation. (15 marks, 250 words)

पूर्वोत्तर उग्रवाद का केंद्र क्यों बना हुआ है? सरकारी उपायों पर विशेष जोर देते हुए स्थिति सुधारने के कदमों पर चर्चा कीजिए। (15 अंक, 250 शब्द)

North East consists of 7 sister States and is gateway paradigm to east Asia with 4500 km borders with internationally



(Fig.) North East vulnerable

North East remains hotbed of insurgency

- ① Development Deficit
 - ⊕ Isolation from mainland India
- ② Ethnic Conflicts
 - ⊕ Recent Manipal crisis

between Kuki and Meiti

- ② Externally aided insurgency
(Eg) China factor
- ④ Historical faults
(Eg) Border issues - Mizoram, Tripura
- ⑤ Militant groups emergence
(Eg) ULFA, NSCN, KNo
- ⑥ Secessionist Trends
(Eg) Greater Nagalim another country
- ⑦ Difficult Geography and terrain of North East

Government Measures :- (Steps)

- ① Dialogue and Discussion (Platform)
(Eg) successful resolution Namsai Declaration - Assam Arunachal
- ② For Institutional Measures
(M-DONOR) (Eg) North East Regional Council Act 1971,
Ministry of Development of North East

③ Targeted Policies

② PM-Dev-INE (Budget 2022)

④ Economic Development

② TRIFED, Tribal Haat, IMPVTG
GOAL - Skill development ^{mission}

⑤ Educational Measures

② Eklavya Model Residential
Schools (EMRS)

⑥ Border Management

② CIBMS, Proper fencing,
Assam Rifles

⑦ International Collaboration

② Bhutan helped through

Operation 'Machal' to counter
insurgency

Thus with the spirit of
Tribal Panchsheel - North East should
be developed to usher in an era of
Sabka Samr, Sabka Vikas, Sabka

Vishwas

Feedback

(For OFFICE use only)

#	③	④	⑤	⑥
AWIS				
CD & VA				
S & F				
P & R				

Please put tick
marks in the above
table.
Here G is Good, A is
Average and P is
Poor.

TOTAL
MARKS

Mentor Feedback Questions

- 1
- 2
- 3
- 4
- 5

Test Goal

- 1 ☐
- 2 ☐
- 3 ☐

Outcomes

- 1
- 2
- 3

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
20 Marker	7.75 - 10	6 - 7.5	< 6
✓✓	Key / Relevant Point		
✗	Vague / Irrelevant		

* Subject to change without prior notice.

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