

NEXT IAS

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Roll No. :

Registration Number : Date of Examination :

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MTS IGP Batch 2023

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. :

1. भुगतान संतुलन (बीओपी) के घटकों के रूप में पूँजी खाते और चालू खाते के बीच अंतर का सविस्तार वर्णन कीजिए। भारत के बीओपी घाटे को संतुलित करने के लिए कुछ उपाय सुझाएँ। (150 शब्दों में उत्तर दीजिए) 10 अंक
 Elaborate on the difference between Capital Account and Current Account as components of Balance of Payment (BOP). Suggest a few measures to balance the BOP deficit of India. (Answer in 150 words) 10 Marks

Balance of Payment (BOP) is a systematic account of transactions between the residents and non-residents of a country in a given time period (usually 1 year)

Current Account	Capital Account
<p>1. <u>Components:</u></p> <ul style="list-style-type: none"> → <u>visible</u>: <u>merchandise trade</u> → <u>invisible</u>: <ul style="list-style-type: none"> → <u>services trade</u> → <u>primary income</u> (wages, profit) → <u>secondary income</u> (remittances, etc) 	<p><u>Components:</u></p> <ul style="list-style-type: none"> → <u>FDI, FII</u> → <u>external borrowing</u> <ul style="list-style-type: none"> → <u>sovereign</u> → <u>ECB</u> → <u>FCNR accounts</u> (non-resident accounts)
<p>2. Usually negative for India, (ie) <u>Current Account Deficit</u> (except in <u>FY 2008-21</u>)</p>	<p>Usually positive for India, (ie) <u>Capital Account surplus</u></p>
<p>3. <u>Reflects:</u> net (income + trade)</p>	<p><u>Reflects:</u> net (investment + borrowing)</p>
<p>4. Related to <u>short term</u> transactions (eg) salary / trade</p>	<p>Related to <u>long term</u> transactions (eg) investments</p>
<p>5. Broadly relates to <u>non-capital generating</u> / <u>revenue</u> transactions</p>	<p><u>capital generating</u> transactions</p>

To balance BOP deficit :

(I) : Encourage exports :

1. Invest in logistics and infra

↓
Bring down logistics cost (14% of GDP)

↓
make exports more competitive

2. Reform SEZ policy - as acc to Baba Kalyani recommendations

3. focus on exporting MSME products

(eg) GI tags - marketing
"Invaluable measures of Incredible India"

(eg) Help MSMEs in resolving SPS issues

4. Sign FTAs (Free Trade Agreements)

5. focus on getting integrated MNCs GVCs and LCs
(Global value chains)

(via) PLI scheme Make in India

6. focus on sunrise sectors (for India)

(eg) new tech, defense, toys, pharma, etc

(II) : Decrease imports

1. Faster transition to renewables → reduce coal, crude imports

2. NITI Aayog - improve resource efficiency

(eg) \$1 billion worth of gold from e-waste annually

(eg) vehicle scrappage

3. Hydrocarbon exploration in India, Lithium mining, etc

(III) : Attracting investments : FPI policy, ease of doing business, etc

These steps will surely bring down BOP deficit

2. लॉजिस्टिक्स (रसद) क्षेत्र, विनिर्माण उद्योग के विकास के महत्वपूर्ण घटकों में से एक है। चर्चा कीजिए। साथ ही, हाल ही में घोषित राष्ट्रीय लॉजिस्टिक्स नीति, 2022 के विभिन्न घटकों का भी उल्लेख कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

The logistics sector is one of the important components of the growth of the manufacturing industry. Discuss. Also, mention various components of the recently announced National Logistics Policy 2022.

(Answer in 150 words) 10 Marks

Morgan Stanley CEO recently said - "India has everything going for it - young population, domestic demand, cheap labour, raw materials, favorable govt policy. Still no global company has ~~excited~~ historically been excited about manufacturing in India. [Only 1 reason - poor logistics]"

It is MOST CRUCIAL component of growth of manufacturing as:

1. Logistics cost as a percentage of GDP in India is 14%. { BELCS ~ 10-11%, China ~ 8-9%, USA ~ 7-8%. }

2. Even if a manufacturer is getting a [5-6%] benefit due to low costs in India - after adding logistics cost, it becomes [ZERO].

3. further, it prevents [productivity from increasing] (by keeping [working capital cycles] longer).

Economic Survey: productivity of 40 year old firm in Mexico is 3X that in India

4. it [reduces exports]. Economic Survey: transporting goods from Delhi to USA: of the [40 days] - [24 days] is [logistics delay] in India vs [only 3 days in USA]

In such a scenario, an importer wouldn't mind paying a higher cost to import from China/Bangladesh

↓
[As waiting increases his costs too.]

(Eg) This happens in [textiles].

5. Components of National Logistics Policy :

1. Bring down logistics cost to GDP : [to 9%].
 2. Stages of logistics :
 fragmented → consolidated → integrated → [digitized]
 INDIA WANTS TO leapfrog from stage 1 to stage 4 via new logistics policy
 3. Focus on Multimodal transport including [Multimodal Logistics Parks].
 4. Standardization and benchmarking of services via [CLAP] : Comprehensive Logistics Action Plan.
 5. Digitization via [ULIP] - Unified Logistics Integrated Platform → linked to [India Stack].
 6. Increase [share of railways in freight], from 27% to 45%.
 7. convergence with PM Gati Shakti, Bharatmala, Sagarmala, etc.
 8. Reducing [port turnaround time]. (to < 48 hours)
 9. Encouraging PPP in logistics.
- These steps will help India improve in world Bank [Logistics Performance Index] from [44 to top 10]

Candidates must not write on this margin

3. डब्ल्यूटीओ के तहत मत्स्य पालन सब्सिडी पर नए समझौते पर भारत का क्या रुख है? भारत के लिए मत्स्यपालन क्षेत्र किस प्रकार महत्वपूर्ण है? इस क्षेत्र के विकास के लिए सरकार द्वारा उठाए गए कदमों का उल्लेख कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

What is India's stand on the New Agreement on Fisheries Subsidies under WTO? How is the Fisheries sector significant for India? Enumerate the steps taken by the Government to develop this sector.

(Answer in 150 words) 10 Marks

WTO - 12th Ministerial Conference 2022 -
adopted fisheries subsidies Agreement

India's Stand :

1. There was an attempt by developed countries and China - to strongarm India and other developing countries into taking decisions which would harm subsistence fishing

Yet: India's stand: DID NOT COMPROMISE

As Piyush Goyal (Minister) said:

"Gone are the days when India could be arm-twisted into hurting the poor"

2. Thus: India got exemptions for

- traditional and subsistence fishing
- artisanal fishing

(from the restriction on harmful subsidies)

3. (major outcome): curbing harmful subsidies

3. Ban on IUU fishing - Illegal, unregulated, unreported

4. No subsidy for fishing on high seas

5. India's stand: India has been one of the lowest subsidisers.

POLLUTER PAYS principle should be applied

Significance of fisheries sector to India.

1. Food security:
esp protein (omega-3 essential amino acid)
2. Employment: ~ 2.8 cr people
(directly + indirectly)
3. Exports: 10.4% of total exports
↓
largest basket of exports within
agriculture.
4. Role in national security:
→ 1st line of alert
→ "Sagar Swasthya Pal" - informal group
of fisherman
↓
help in intelligence gathering.
5. Inclusive growth: via share of inland fisheries
gradually rising
($\sim 70\%$ today)

Steps taken:

1. PM Matsya Sampada Yojana:
↳ cold storage infra
↳ modernization of vessels.
2. Ekspansi services: via "Sagar Mitra"
3. Subsidy for algae farming } ie, diversification
seed culture }
4. 5 new fishing harbors:
(eg) Petughat in West Bengal.
5. GAGAN - GEMINI - receiver - for GPS on sea.

Ans ii) These steps will create ~ 55 lakh new jobs.

4. उन प्रणालीगत और संस्थागत बाधाओं का विश्लेषण कीजिए जो भारत में भूमि सुधार प्रयासों में बाधा बनी हुई हैं और भूमि के न्यायसंगत वितरण को सुनिश्चित करने के लिए व्यावहारिक समाधान प्रस्तावित कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Analyze the systemic and institutional constraints that continue to hinder land reform efforts in India and propose pragmatic solutions to ensure equitable distribution of land.

(Answer in 150 words) 10 Marks

Land reform is an unfinished post-independence agenda of successive govts in India

Systemic and institutional constraints:

1. Conflicting interests

decentralization of land ownership

v/s

Land consolidation / pooling to improve agri productivity.

2. Conflicting interest:

expansion of urban areas / infra v/s land reform

3. Poor land record management

corruption and red tapism

failure of institution of District collector (whose responsibility is that of land records)

b.b.r. civil cases pending in courts are land disputes

4. Lack of political will

→ often politicians themselves are land owners
→ prioritize owner's interests over tenants.

5. Hence, no adoption of Model Tenancy Act or Model Land Leasing Act

6. land → state sublet
[Lack of centre - state coordination]
7. ^{low} use of technology (digitization)
(gradually changing)
8. poor implementation of Forest Rights Act
(eg) only 3% community rights granted

A.

Pragmatic Steps:

1. Nationwide roll out of SWAMITVA
→ use of drones + GPS - [continuous operating reference system]
→ [land titles] to all
2. ULPIN - [Unique land parcel Identification Number]
↓
Nationwide implementation.
3. use of blockchain - to store land records
↓
[immutable database]
↓
[Criminal bureaucrats + mafia + politicians can't change]
4. Crackdown on benami transactions.
5. [Divest District Collector] of responsibility of land record management
↓
[Create independent] [State level Agency]
6. [for urban areas: Odisha JARA model
(UN Habitat Award)]
7. Creation of land banks:
→ [at village level: for landless]
→ [for development: so that land acquisition does not encroach on farmland]
8. Implementation of Model Tenancy Act, land leasing Act (etc)

5. ब्रह्मोस सुपरसोनिक क्रूज मिसाइल की अद्वितीय विशेषताएँ और क्षमताएँ क्या हैं, और इसने भारत की रक्षा क्षमताओं और सामरिक स्थिति के क्षेत्र में किस प्रकार योगदान दिया है? (150 शब्दों में उत्तर दीजिए) 10 अंक

What are the unique features and capabilities of the BrahMos supersonic cruise missile, and how has it contributed to India's defence capabilities and strategic position in the region?

(Answer in 150 words) 10 Marks

Brahmos missile has been developed by a joint venture between DRDO, and Russian NPO - based on the vision of ex-President [Dr Kalam].

Unique features and capabilities:

1. 2 stage missile:
 - Stage 1: solid propellant
↓
supersonic speed.
 - Stage 2: liquid ramjet
↓
hypersonic speed.
2. Low radar signature
↓
Hard to detect
(ie) → cruise mode ⇒ can be manoeuvred.
3. Can be used in → 'fire and forget' mode
4. Range increased to 800 km
(after MCTR).
5. can be used from air, land, sea
↓
also from underwater
(submarine launched)
↓
(latest)
6. successfully integrated with Indian Army, Navy,
Airforce

Contribution to India's defence and strategic position:

1. Missile deterrence

↳ from land, air, sea

2. Credible deterrence

↳ manoeuvrable

↳ accurate

3. 2004

↓

15% indigenization

2023

↓

78% indigenization

ⓐ: self-dependence (atmanirbharta)

4. Contribution to defence exports

out of \$ 5 billion target by 2025

↓
\$1.5 - \$2 billion is expected to be BrahMos.

ⓑ: 35-40% of India's defence exports

↓
to Indonesia, Philippines,

talks on with other nations

5. Multi-fire capability: credible attack

6. Multi-terrain mobility (cross-terrain launch platform)

↓
flexibility

Brahmos shows potential of Indian defence industry.
Others should take inspiration

6. समुद्र की गहराई का पता लगाने और उसमें मौजूद संसाधनों का दोहन करने के देश के प्रयासों के अनुरूप, भारत सरकार ने गहरे समुद्र में अन्वेषण मिशन 'समुद्रयान' का प्रस्ताव रखा है। यह मिशन देश में समुद्र विज्ञान और प्रौद्योगिकी की प्रगति में किस प्रकार योगदान दे सकता है? (150 शब्दों में उत्तर दीजिए) 10 अंक

In line with the country's efforts to explore the depths of the ocean and harness the resources it holds, the Indian government has proposed a deep-sea exploration mission Samudrayaan. How can this mission contribute to the advancement of ocean science and technology in the country?

(Answer in 150 words) 10 Marks

Recently, it was said that "we know more about outer space than deep ocean"

In this context, Ministry of Earth Sciences has announced Deep Ocean Mission, and Samudrayaan

It aims to go till depth of 6000m with manned submarine

↓
becoming one of first few nations to achieve this

Contribution to advancement of ocean science and tech:

(I) : Economic:

1. understanding of sea resources

(G) poly metallic nodules - cobalt, manganese, etc

2. boost to MSME industry

(~~and~~) sourcing of parts, etc)

(II) : Climate change:

1. understanding change \rightarrow undersea temperature
 \rightarrow in undersea current
 \rightarrow in undersea CO₂ concentration

2. Tidal energy and Ocean Thermal energy feasibility

(III) : Understanding biodiversity, marine ecosystem
 \downarrow
 boost to ocean research

(IV) : Strategy and Security

1. development of technology to build undersea drones
2. extremely relevant in context of rising Chinese presence in IOR
3. in line with vision of net security border in IOR

(V) : Blue economy

1. Sustainable use of marine resources
2. in line with SDG 14
"Our oceans, our future"



In future, just as students send satellites,
students can also send AUVs into deep sea

7. वैश्विक मीथेन प्रतिज्ञा क्या है? क्या आपको लगता है कि वैश्विक मीथेन प्रतिज्ञा मीथेन उत्सर्जन को कम करने की दिशा में एक सकारात्मक कदम है? इस मुद्दे पर भारत का रुख स्पष्ट कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

What is Global Methane Pledge? Do you think the Global Methane Pledge is a positive step toward mitigating methane emissions? Explain India's stance on this issue. (Answer in 150 words) 10 Marks

Global Methane Pledge is non-binding pledge

to reduce methane emissions by 30% by 2030
(from 2020 level)

It was launched at COP26 by USA and

countries of EU, which have historically not

~~met~~ met any of their pledges made earlier

(eg) kyoto

Global methane Pledge as a positive step

1. Methane GWP potential:
- | |
|----------------------------------|
| 80x CO ₂ in 20 years |
| 20x CO ₂ in 100 years |

↓
Pledge will help significantly in
reducing pace of GHG emissions

2. It will help catalyze finance towards
methane

(contributes ~30% to GHG)

yet limited focus so far)

3. It will help in transparency in monitoring

4. will reduce wasteful emissions such as

leakages from oil and gas fields

Concerns :

1. Main ~~sp~~ initiators of pledge - USA, EU

↓
 Not known to keep their climate change promises

2. Happening outside ambit of UNFCCC

↓
 attempt by developed nations to not take responsibility via Paris agreement, etc (under UNFCCC)

3. ~~low~~ Methane has life span of < 20 years.

India's stand :

1. UNFCCC Agreement should be under ambit of UNFCCC and INDCs

2. Indian methane emissions are "emissions of survival"

NDS
 "emissions of luxury"

according to Minister for Environment

3. India is 5th largest emitter, with only 3.7% cumulative contribution to global warming

4. methane emissions (in India)

→ 50% from livestock of small and marginal farmers

→ 15% from paddy fields

↓
 (ie) necessary for food security, and livelihood of millions

5. India would take steps via INDCs, and independently

(eg) Kausth Dhan feed; Koobar-dhan scheme, SRP, etc

(India's stand is in interests of poor and developing nations)

8. कोविड-19 महामारी ने सार्वजनिक स्वास्थ्य में आपदा प्रबंधन के महत्त्व पर प्रकाश डाला है। महामारी और अन्य संक्रामक रोग के प्रकोप के प्रबंधन के लिए प्रमुख रणनीतियों और चुनौतियों पर चर्चा कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

The COVID-19 pandemic has highlighted the importance of disaster management in public health. Discuss the key strategies and challenges for managing pandemics and other infectious disease outbreaks.

(Answer in 150 words) 10 Marks

WHO Global Health Risks has future pandemics amongst the top 3 risks faced by the world.

In this context:

Strategy for managing pandemics / disease outbreaks;

①: During the pandemic / post-onset:

1. Testing → via accurate tech

(eg) RT-PCR.

2. Tracing → via use of tech such as

Darogya Setu

3. Collaboration:

→ between Centre and State

→ public and private health

→ Ayurvedh and allopathy

→ international level.

4. Isolation and treatment SOPs.

5. Research and development

→ Genome sharing

→ Vaccine development

} collaborative approach.

6. Patent pools for medicines.

- (11) - to mitigate:
1. ONE HEALTH approach.



2. Holistic approach: including food, livestock, crops, human health infra, etc.
3. Preparedness level of infrastructure
(Eg.) isolation wards, oxygen concentrators, etc.

Challenges

1. International level:
→ lack of transparency by certain nations
(Eg.) China
2. → not following safe lab protocols
(Hence COVID-19 is also called Wuhan virus)
3. National level:
→ Health is in state list
→ federalism issues
3. lack of coordination
(Eg.) fight between AYUSH and allopathy
4. Human encroachment into environment
5. Climate change - pest viruses/bacteria released into environment
6. fake news (Eg.) anthrax in Siberia.

Way forward: ONE HEALTH

9. "पूर्वी और मध्य भारत का संसाधन अभिशाप वामपंथी उग्रवाद का एक महत्वपूर्ण चालक रहा है"। इन क्षेत्रों के सतत और समावेशी विकास के लिए, उपायों को विस्तार से बताइए और सुझाव दीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

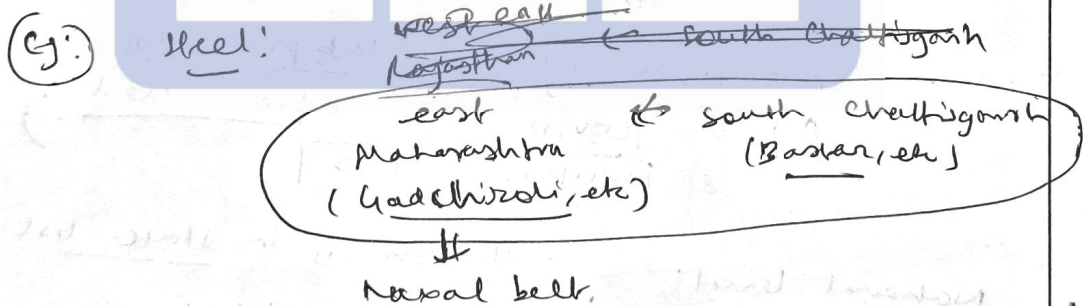
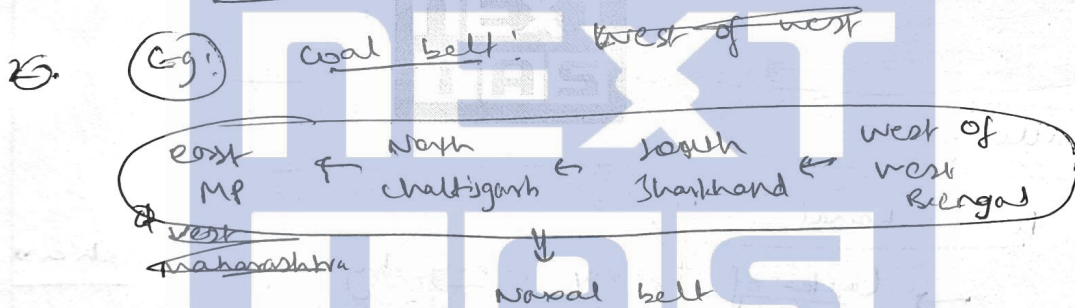
"The resource curse of Eastern and Central India has been a crucial driver of LWE". Elaborate and suggest measures for sustainable and inclusive development of the region.

(Answer in 150 words) 10 Marks

While number of LWE districts have decreased by ~50% in last decade, most are still concentrated in Eastern and Central India

Resource curse as crucial driver:

1. Benefit of local resources not reaching local population



2. Displacement of local population due to mining

3. Inadequate / no land rehabilitation

4. Poor implementation of PRA 2006

However, it is not the only driver, there are many others:

1. False news of by Maoists.
2. links of LWE by with organised crime.
3. use of civil society, etc.
4. lack of political will, etc.

Comprehensive strategy for development:

(I): Developmental steps:

1. 100% implementation of govt schemes.
2. Implementation of IFRA 2006.
3. road, mobile towers, other infra access
(physical infra)
4. social infra - schools, hospitals, etc.
5. [Suryodaya] - for integrated development of [steel].

(II): Rehabilitation steps:

1. Surrender and rehabilitation policy.

As in Telangana.

(eg):

Jetha - akka - former Naxal is now
Telangana MLA.

(III): to combat violence:

1. [SAMADHAN] approach.
2. Dedicated force (eg): [Grehand] in Telangana,
[Black Panther] in Chhattisgarh.
3. stop links of Naxalism with civil society,
organised crime.

These will lead to local participation in
economy, and end of LWE.

10. उत्तर पूर्व और जम्मू-कश्मीर क्षेत्र में हिंसा की घटती प्रवृत्ति के आलोक में क्या आपको लगता है कि एफएसपीए (अफ़्सा) अपनी उपयोगिता बरकरार रख पाया है? टिप्पणी कीजिए (150 शब्दों में उत्तर दीजिए) 10 अंक
In light of the declining trend of violence in the North East and J&K region do you think that AFSPA has lived its utility? Comment. (Answer in 150 words) 10 Marks

In light of declining viol

Acc to MHA report card: terrorism in J&K has reduced 32% and violence in North East has reduced 68% on account of steps taken for peace and development.

In addition:

Home Minister Amit Shah has already declared AFSPA would be ~~not~~ removed from entire North East in next 4 years.

Already in last 9 years:

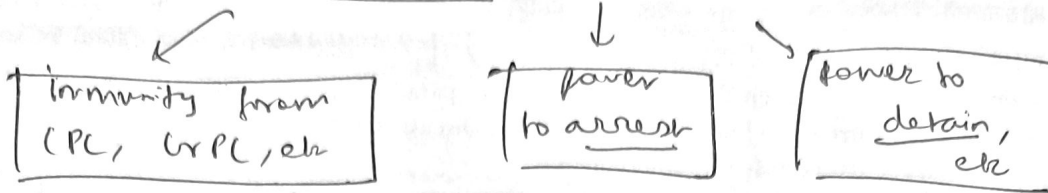
1. AFSPA area reduced by 76%.
2. removed from entire Tripura / Meghalaya.
3. Area reduced in Assam, Arunachal, etc.

this clearly in:

AFSPA:

1. Armed Forces Special Powers Act
2. enacted in 1958.
3. gives Union Govt power to declare area as "disturbed area"

4. Gives Armed forces wide powers



Outlined its utility in North East - YLS.

1. ~~No~~ Utility was there ~~as long~~ only as long as there was lack of effort to develop and effort to control by violence.

2. Desire to develop + desire to rehabilitate
 ↓
Peaceful settlement of disputes
 ↓
no need for AFSPA

(eg) Bodo accord

Armed forces J&K special Powers Act 1990

NOT outlined utility - as terrorism continues

Yet, with recent steps taken, if focus remains on development, it too will not be needed

- Way forward :
1. 100% focus on social and economic dev
 2. 100% implementation of flagship schemes
 3. zero tolerance for terrorists

11. अंतर्राष्ट्रीय व्यापार प्रमुख मुद्रा प्रतिमान (डीसीएम) पर केंद्रित है। अंतर्राष्ट्रीय व्यापार में हार्ड करेंसी (दुर्लभ मुद्रा) के महत्त्व का आलोचनात्मक विश्लेषण कीजिए और डॉलर साम्राज्यवाद के विकल्प के रूप में वैश्विक व्यापार में रुपये की स्वीकार्यता की संभावना पर चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक
- International trade is centred on the dominant currency paradigm (DCM). Critically Analyze the importance of Hard currency in International trade and Discuss the potential of rupee acceptance in global trade as an alternative to dollar imperialism. (Answer in 250 words) 15 Marks

Currently, 85% global trade and 55% global foreign exchange reserves are in US dollar (USD).

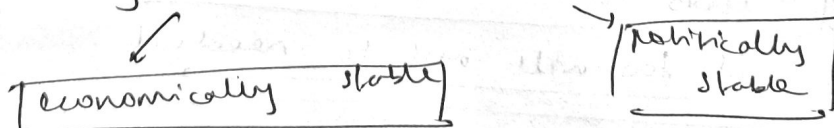
In this context: DCM as

~~Interact~~
Dominant currency paradigm (DCM):

1. USD determines the price at which trade takes place.
2. dominant currency, i.e., USD keeps strengthening
(eg): $1 \$ = \text{Rs } 4 \text{/- in } 1947$
↓
 $1 \$ = \text{Rs } 83 \text{/- today}$
3. interest rates in USA affect trade and investment globally.

Importance of hard currency in international trade

Hard currency is money that is seen as



Importance:

1. Trust (due to aforementioned stability).
(i.e., confidence in the fact that the USD will not collapse)

2. liquidity globally
3. full convertibility
 - ↳ in current account
 - ↳ in capital account

(not just for residents, but for all)
4. availability of credit and working capital
in that currency
5. supply of US treasury bills
↓
as store of value
6. integration into global settlement systems
(eg) SWIFT

However, in recent times, the importance is decreasing (because):

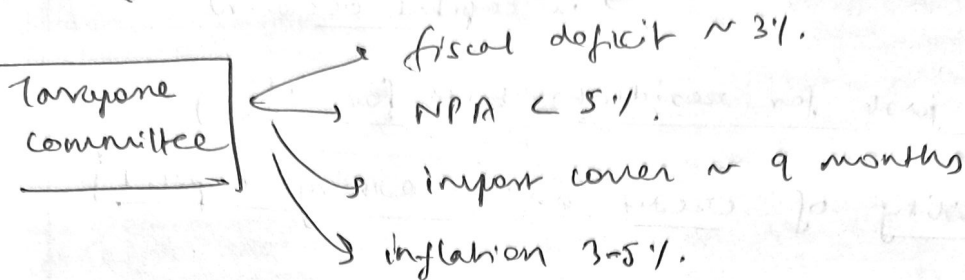
1. Bilateral agreements
(eg) rupee-rial; rupee-rouble, etc
2. Project loans in non USD
(eg) Japanese loan for bullet train in Yen
2. Rise of Euro as alternative in forex reserves
(~30%)
4. Nations apprehension about US weaponisation of USD
(eg) during sanctions on Russia.
5. Rise of parallel payment systems (settlement systems)
(eg) Chinese CIPS; Russian SPFS.

Full convertibility is pre-requisite for a currency being globally acceptable for trade.

NEXT IAS

Candidates must
write on this margin

currently, rupee is fully convertible in current account, not in capital account,



India should - based on Tarapore recommendations -
allow full convertibility, if this is done,

there is lot of potential:

1. India will account for 20% global growth in next decade.
 (ie) access to 20% of trade automatically
2. Trust in India → among global south
 → for democratic values
3. collaborative approach to international issues
4. wide range of relationships → with USA
 → also with Russia
5. strong forex reserves (~ 600 B \$)
6. expected future currency stability
7. no sovereign default ever
8. strong digital public goods infra (UPI, ONDC, etc)
 ↓
 can become foundation for global trade

Thus, India should start taking steps for full convertibility

12. जनसांख्यिकीय लाभांश संवृद्धि सुनिश्चित नहीं करता है; यह केवल सामर्थ्य उत्पन्न करता है। जनसांख्यिकीय परिवर्तन से उत्पन्न अवसरों का लाभ उठाने के लिए सरकार द्वारा उठाए गए कदमों पर चर्चा कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

A demographic Dividend does not ensure growth; it only generates potential. Discuss the steps made by the government to take advantage of the opportunities presented by the demographic transition.

(Answer in 250 words) 15 Marks

Demographic dividend is the window of

opportunity when the share of working

age population (15 - 64) increases, and

the dependency ratio falls.

India's dependency ratio is expected to hit

minimum ~ 2037, currently > 65% of

our population is < 35 //

Steps by govt for taking advantage:

①: Education

1. New Education Policy

- synergy between academic and vocational edu
- flexibility in curriculum
- multi-disciplinary, focused on skills of the future

2. Higher edu reform:

- proposed HECI.
- internationalization of higher edu: for best practices.
- proposed NRF - National Research Foundation

(I) - Skilling:

Skill India Mission : 4 components :

1. Setting up new vocational institutes and
 → ITIs.
 → upgrading skill institutions.

(G) NCVT and NSSA [merged] into NCVT.

2. Kaushik Vikas Yojana

3. Policy change : Reparative-to-oo around skilling

4. Skill loan initiative

(II) : Human capital :

To improve productivity of workforce

1. Gal Jeevan, Swachh Bharat - water and sanitation

2. Ujjwala - LPG cylinders

↓
 [new women don't have to walk to collect water/firewood.]

↓
increased labour productivity

2. Similarly, Health - PMJAY, etc.

(N) Social justice and empowerment

1. Boost to SHGs.

(G) Kandambashree SHG collective now
 selling all india via ONDC

2. 16 Aadi Mahotsavs organised by TRIFED
 in 2021 : to market tribal produce.

(v) : Employment and Social Security

1. For social security : to ensure secure employment

allows greater contribution from employees

(eg) Tax plan, Pension, Insurance, etc

↓
EPFO expansion

→ Jeevan Jyoti

Subakshre Bima, etc

2. For employment :

→ Make in India

→ PLI

→ Agri Infra fund., etc

(vi) : Encouraging entrepreneurship

1. In agri → ARYA
→ READY } by ICAR

2. Startup India, Standup India

funding

Handholding and incubation

access to markets

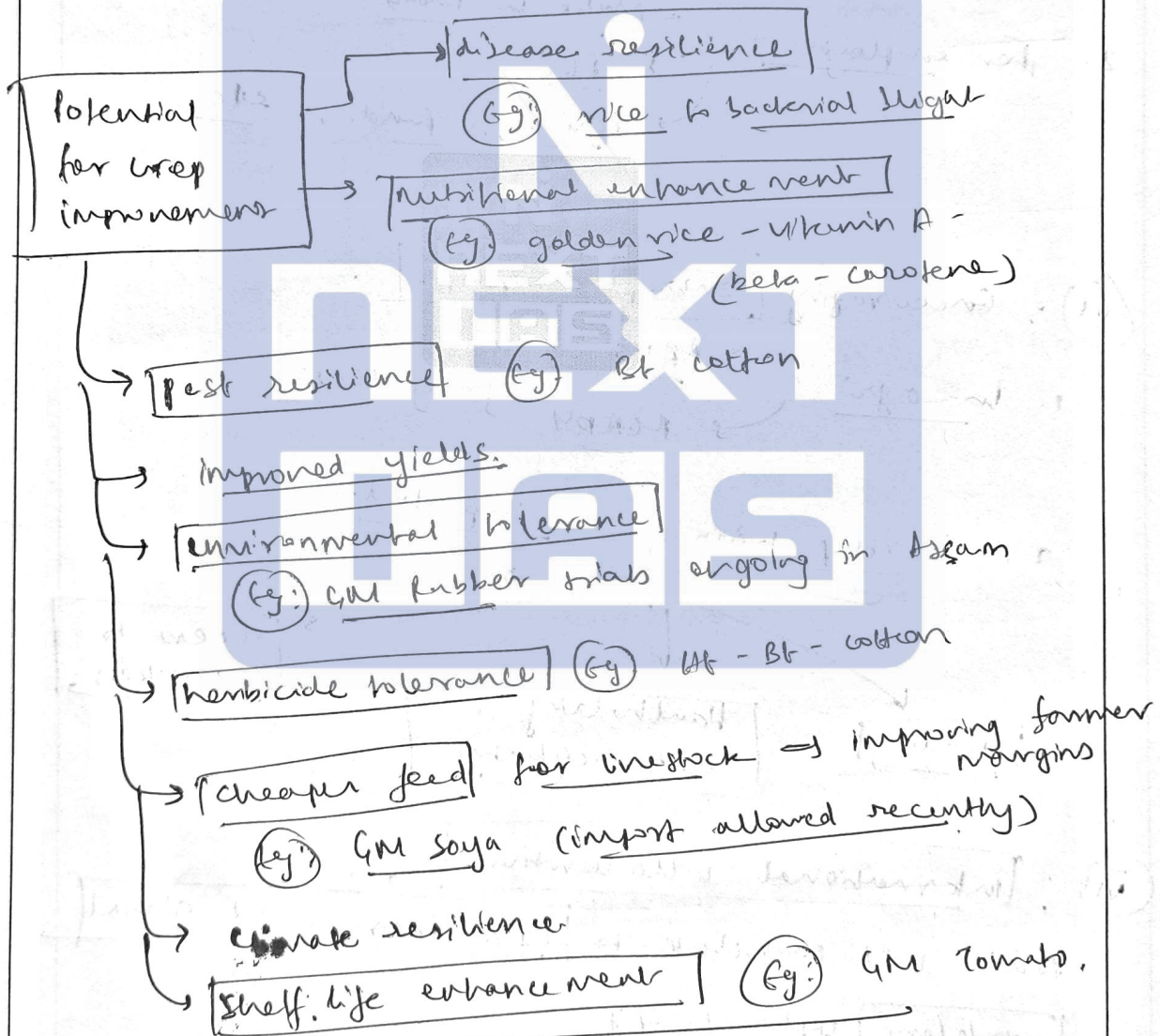
(vii) : International collaboration

India will contribute to 25% incremental global workforce upto 2047

Hence, ~~read~~ ensuring Indian workforce is ready for global opportunities & need of the hour

13. 'जीनोम एडिटिंग (जीनोम संपादन) में फसल सुधार की अपार संभावनाएँ हैं, लेकिन यह नैतिक और सुरक्षा संबंधी चिंताओं को भी जन्म देती है।' भारत में जीनोम-संपादित पादपों के सुरक्षा मूल्यांकन के लिए नए दिशानिर्देश आनुवंशिक रूप से संशोधित फसलों की सुरक्षा को कितना सुनिश्चित करते हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक
 'Genome editing holds immense potential for crop improvement, but it also raises ethical and safety concerns'. How far do the new guidelines for the safety assessment of genome-edited plants in India, ensure the safety of genetically modified crops? (Answer in 250 words) 15 Marks

There has been a lot of progress in genome editing recently - with multiple technologies such as ZFN, CRISPR-cas9, TALNs, etc



critical/safety concerns

1. Impact of low biodiversity
 ↓
 is only usually expressed after a few generations

2. Impact on human health :
3. "off-target mutations" -
4. Creation of pest-resistance β
(ie, pesticide resistant pests, etc)

SUPER BUGS

5. terminator gene technology :
 ↳ using dependence of farmers on companies

6. ethical concern : → where to draw the line?
 ↳ [if] it is okay to make a GM crop for pest resistance, is it also okay to make GM crops just to change color / texture?

7. inequity in access : haves vs have-nots

New guidelines (How they ensure safety?)

1. Applicable equally to public and RIT sector → comprehensive coverage to ensure safety

2. exemptions for researchers and REB (from GRAC permission) → faster analysis of impact
 → greater democratization of research
 → transparency

3. Genome recovery guidelines:
for "off target mutations"

→ ensuring "off target mutations"
Can't adversely affect human / env health

4. Requirement of SELECTION MARKERS in GM edited crops.

⇒ i.e., transparency about whether a crop is GM or not

↓
more effective field trials.

5. Clear Standard Operating Procedure to be followed, and penalty for non-compliance.

Regulatory clarity.

New guidelines are in line with global standards,

and also with Cartagena Protocol to UN CBD (on safe handling of Living Modified Organisms (LMOs))

India should focus on climate resilience, with particular concern for biological diversity.

14. भारत में कृषि क्षेत्र पर प्रत्यक्ष और अप्रत्यक्ष कृषि सब्सिडी के प्रभाव की चर्चा कीजिए। न्यूनतम समर्थन मूल्य (एमएसपी) ने कृषि अर्थव्यवस्था को किस प्रकार प्रभावित किया है? (250 शब्दों में उत्तर दीजिए) 15 अंक
 Discuss the impact of direct and indirect farm subsidies on the agriculture sector in India. How have Minimum Support Prices (MSP) affected the agricultural economy? (Answer in 250 words) 15 Marks

Approximately (₹ 5 lakh cr) is spent on agriculture subsidies annually, by Union govt, and (much more indirectly) and also by States.

Direct subsidies

Subsidy Impact

1. MSP

discussed later

2. PM KISAN - direct cash transfer

1. Positive: income support

2. Negative: inflationary; diverted for non-agri purpose by men of the household.

3. electricity

1. Positive: allows pump, etc to be run for irrigation

2. Negative: Discom losses; excess groundwater extraction

4. loan waiver

1. Positive: X

2. Negative: → "moral hazard"

- Unjilt Patel.

→ "strategic defaulting"

- Economic Survey

Candidates must write on this margin

3. Insurance :

(eg:) Kisan Bima Yojana

↳ Negative : None

Positive : safeguarded from pre/post harvest losses

6. Interest Subvention :

4% + 3%

Negative : X

Positive : helps in formal credit reducing impact of MSMEs.

7. Machinery :

(eg:) Happy Seeder, etc

Negative : X

Positive : helps decrease cost of production, increase yield

8. Subsidy for organic farming, millets, etc

Positive : helps in crop diversification, rebuilding soil health, etc.

9. Infra subsidies

(eg:) clean lampade
(eg:) operation green for T-O-P

Positive :

→ linkages of food processing with agri
→ value addition
→ prevents distress sale

Indirect subsidies

Subsidy

Type impact

1. Water (free) :

Positive : irrigation

Negative : groundwater exploitation
ground water pollution

2. Fertilizer :

(N to 1.75 lakh U)

(highest)

Positive : X

Negative : → promotes overuse
→ diversion of urea
→ eutrophication and pollution

3. Agri research and development

11X Multiplier effect

HIGHEST MULTIPLIER EFFECT AMONG ALL UNION GOVT EXPENDITURE
[EXTREMELY POSITIVE].

4. Agri extension services

Positive: awareness, training, support, handholding

MSP : (impact on agri economy) :

Positive:

1. Prevents distress sale
2. Sends price signal to market.

Negative:

1. Structural inflation → MSP increased every year.
→ vegetables, pulses, etc ignored
→ India imports 25% pulses.
 2. Discriminatory: Shanta Kumar committee - only 5.8% farmers use MSP. (mostly large farmers)
 3. Distortion in agri economy.
 4. adverse impact on food security: protein not part of diet due to shortage of pulses.
 5. Wastage: due to poor storage at AFCI.
 6. Environmental harm: due to excess water/fertilizer use
- Thus Economic survey has said - "Govt intervention has harmed more than helped"

15. रोगाणुरोधी प्रतिरोध (एएमआर) एक तेजी से बढ़ता संकट है जो दुनिया भर में सार्वजनिक स्वास्थ्य के लिए एक गंभीर खतरा है। रोगाणुरोधी प्रतिरोध की बढ़ती समस्या में योगदान देने वाले प्रमुख कारक क्या हैं, और इस वैश्विक स्वास्थ्य खतरे से निपटने के लिए कौन से कदम उठाए जा सकते हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक
- Antimicrobial resistance (AMR) is a rapidly escalating crisis that poses a grave threat to public health worldwide. What are the major contributing factors to the growing problem of antimicrobial resistance, and what steps can be taken to address this global health threat? (Answer in 250 words) 15 Marks

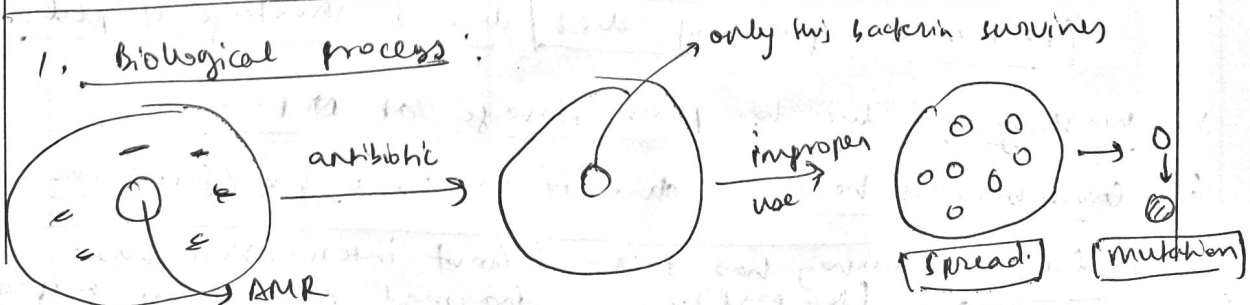
WHO has described Anti-Microbial Resistance (AMR) as the "silent pandemic" and the biggest threat to human health in the coming decades.

Rapidly escalating crisis

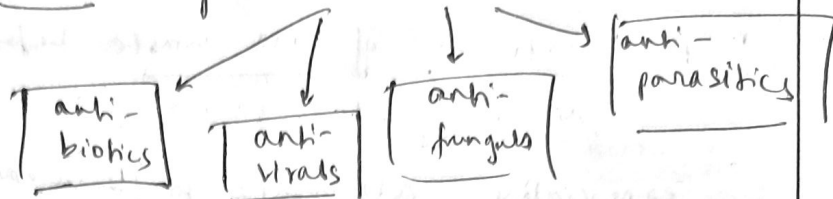
- According to research by ICMR, AMR is increasing at 5-10% annually.
 ↓
 This is faster than the rate of development of new medicines.
- High burden of XDR-TB in India
 (extremely drug resistant - TB)
- Annual death count (global) ~ 7 lakh/year
 ↓
may increase to 1cr by 2050

Factors for rising AMR:

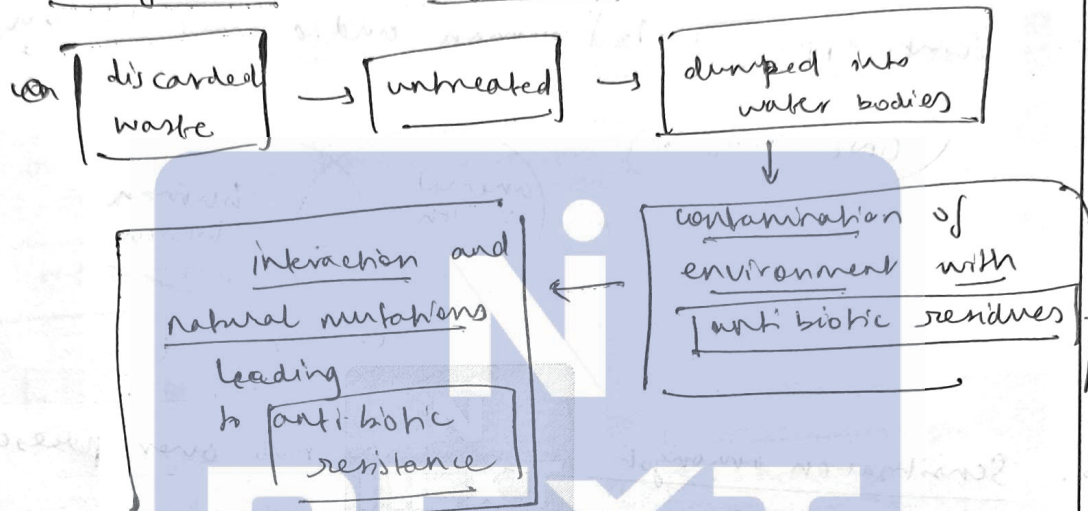
- Biological process:



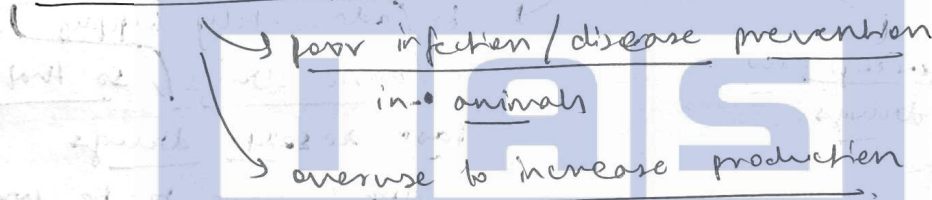
2. Misuse and overuse of anti-microbials



3. Lack of access to safe WASH (Water and Sanitation) :



4. Improper use in live stock



5. Lack of awareness about issue.

6. Interim to complete dosage once recovery starts

(ie) often people stop after taking half the dosage, if recovery has started.

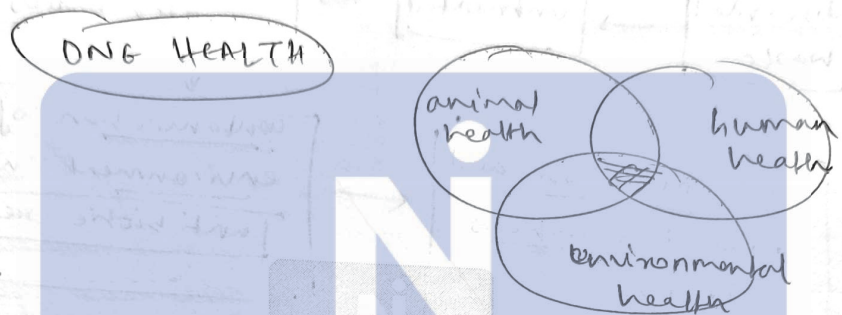
7. Self-medication → leading to use of anti-microbials when it may not be required.

8. Over-prescription by doctors : "culture of medicine prescriptions"

Steps to address AMR

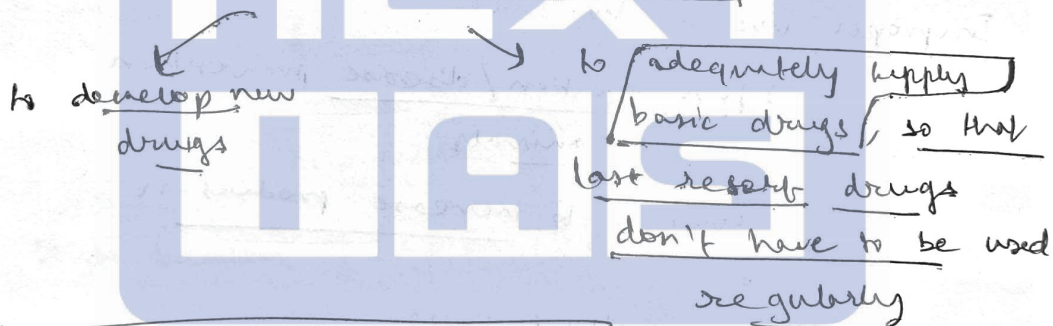
1. Proper treatment of all waste before discarding into environment,
 especially: adherence to Biomedical waste rules under GPA 1986

2. Joint approach to human and animal health



3. Sensitization amongst doctors : to not over prescribe

4. Development of pharma industry



5. Awareness amongst citizens - to avoid overuse / not following dosage / self-medication

6. local level - state govt - Union govt - international
 • not sector
 ↓
 "whole of society" approach

7. Regular genome sequencing to track

whole world must urgently come together to solve this menace, to achieve vision of SDG 3

16. विघटनकारी नवाचारों से आप क्या समझते हैं? हाल के दिनों में विघटनकारी नवाचार के कुछ उदाहरण बताइए और यह भी बताइए कि इन नवाचारों ने उद्योगों के संचालन के तरीके को किस प्रकार परिवर्तित किया है?

(250 शब्दों में उत्तर दीजिए) 15 अंक

What do you understand by Disruptive innovations? What are some examples of disruptive innovation in recent times, and how have they changed the way industries operate?

(Answer in 250 words) 15 Marks

Disruptive innovations are those that help in complete transformation of an activity or a process or a system - making it simpler, more affordable, and accessible to a broader population.

Examples of leapfrogging they help in technological.

Examples of disruptive innovations in recent times

Example	How it changed the industry
<p>1. <u>Mobile phones</u></p> <p><u>Technological leapfrogging from landlines</u></p> <p>(G) India landline density ~ 1-2% households</p> <p><u>mobile phones ~ 70% population</u></p>	<p>1. <u>convenience</u> : of <u>mobility while communication</u></p> <p>2. <u>Expanded range of possibilities</u> via <u>mobile</u></p>

2. Internet:
disrupted entire
communication industry

→ changed nature
of communication:

One-to-one to

many-to-many

→ democratized
access to info.

3. Smart factories:
uniformity and
automation in
assembly line

→ disrupting manufacturing

→ harbinger of IR 4.0

4. Online commerce:
brought all retail
globally at the
click of a button
(Eg.) Amazon, etc

→ expansion of choice
for consumer

→ fair competition

→ expanded range
of buyers for
sellers also

(Eg.) Kudumbashree SHG
collective now on
ONDC

5. cloud computing
cloud storage
etc

(Eg.) AWS, Microsoft,
etc

→ ubiquitous access to
digital infra.

→ measured use

→ democratization of
compute (storage intensive
activities)

Candidates must not write on this margin

(Eg): Meghalay -
govt cloud for
all e-services

6. AI and ML
predictive, descriptive
and prescriptive
analytics

→ wide range of applications
across sectors
→ improving quality of life

(Eg): AI based diagnostics
in healthcare,

7. Blockchain
decentralised ledger
technology

→ removed the need
for intermediary
of trust

→ applications in judiciary,
financial inclusion,
admin, etc

Yet: disruptive technologies also have some
challenges

→ job losses
→ concerns of ethics
(Eg) AI, genomics, etc

→ concerns about privacy
(Eg): due to e-commerce

In future, we need disruptive technologies for

climate change to keep from carbonized industrialization

(Eg): green hydrogen
NIT (1) Durgam ex-CEO: (Anilabh) (tant)

"India has opportunity to
become 2nd nation to
industrialise without carbonisation"

NEXT IAS

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17. हानि और क्षति (L&D) कोष के क्रमिक विकास को चिह्नित कीजिए। COP27 में हानि और क्षति कोष से संबंधित कौन-से प्रमुख घटनाक्रम हुए हैं? इस सम्मेलन में भारत ने क्या प्रतिबद्धताएँ व्यक्त की हैं?
(250 शब्दों में उत्तर दीजिए) 15 अंक

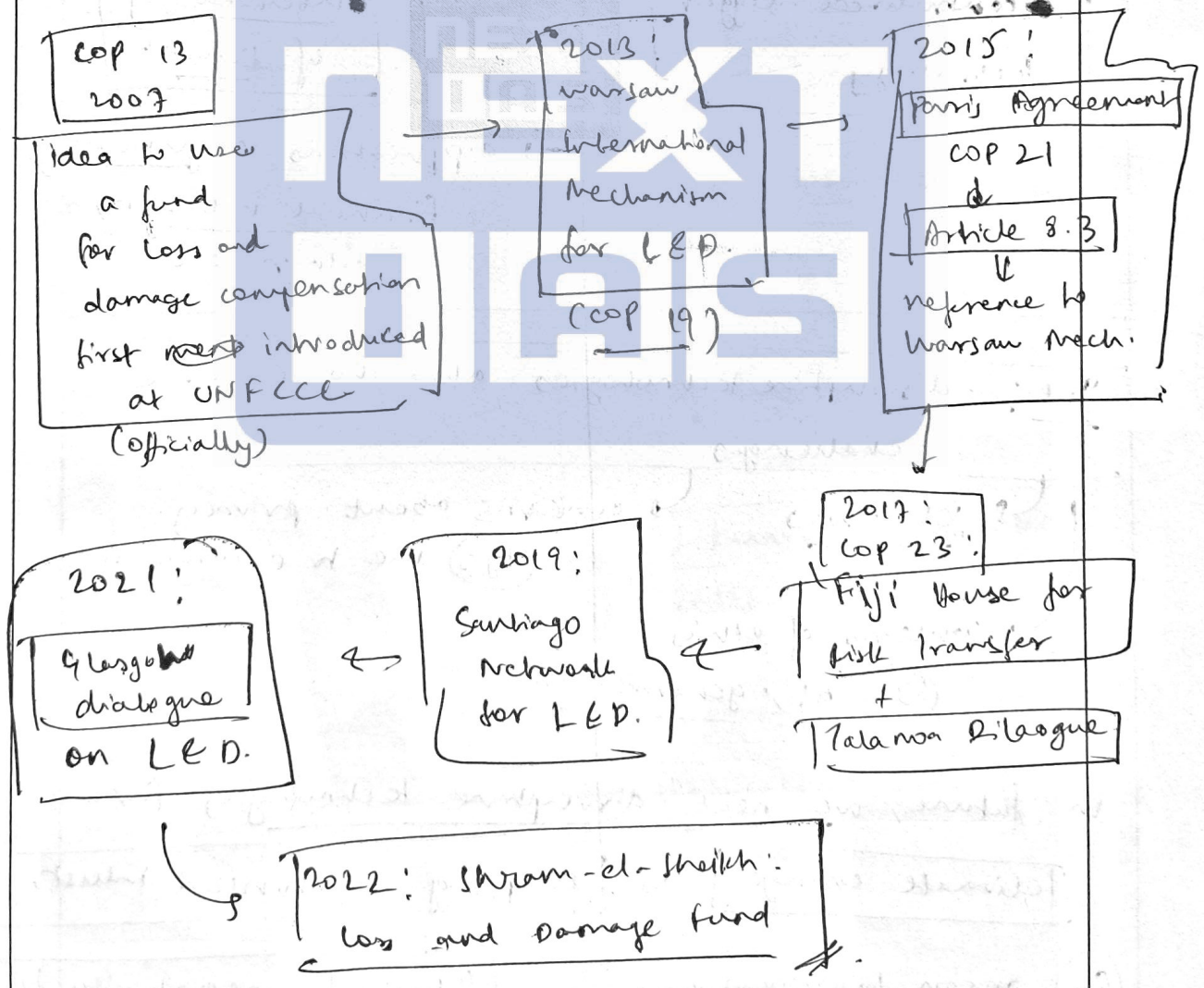
Trace the evolution of the Loss and Damage fund. What are the major development related to loss and damage funds in COP 27?, What are the commitments made by India in this conference?

(Answer in 250 words) 15 Marks

Loss and Damage is the long term, unavoidable negative consequences on human societies that have happened / are going to happen, due to anthropogenic climate change.

Loss and Damage → LED

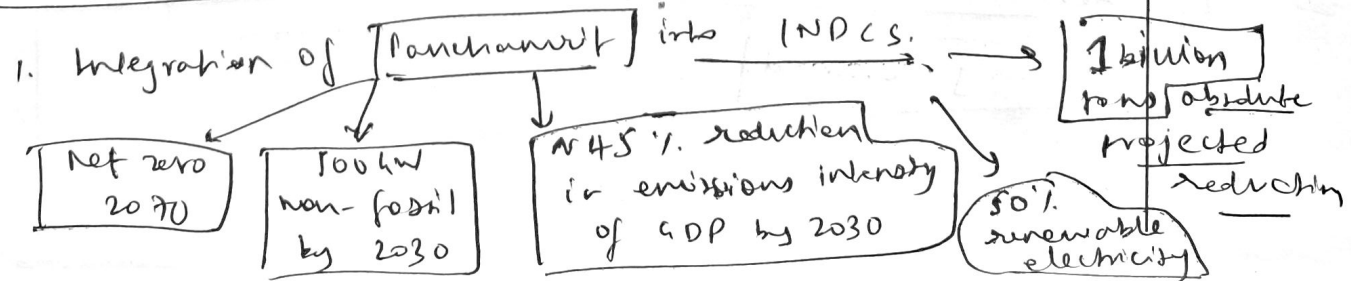
Evolution of loss and damage fund:



Major developments at COP 27 related to L&D fund:

1. L&D fund formed
 - ↳ in line with Glasgow Dialogue
 - ↳ " " " Article 8.3 of Pariis Agreement
 - ↳ " " " Warsaw Mechanism
2. US\$ 500 million already pledged.
3. Broad understanding of who fund will support
 - ↳ SIDS (Eg: Vanuatu)
 - ↳ LDCs (Eg: Uganda)
 - ↳ most vulnerable nations to climate change
4. rules to be finalized in subsequent COPs.
5. fund to be used to protect the most vulnerable communities; climate migrants; food security (due to climate change), etc.

India's commitments at COP-27:



2. Unveiling of LT-LCDI strategy
for net zero by 2070
(long term - low emission development strategy)

3. launch of MISSION LIFE campaign

↳ sustainable lifestyle ie SDG 12

↳ democratization of fight against climate change

focus on individual contribution, rather
than waiting for the world to change

taking power of climate action from the
hands of govt and organisations into
hands of ordinary citizens.

4. Soundings members of
Mangrove Alliance for Climate :

↳ unresponing launch of MISHATI in budget 2023

D.

Mission LIFE is most important Indian contribution
to COP 28.

In an era where govts and organisations have
been reluctant to act; citizens must show

the way forward.

18. आपदा प्रबंधन सिर्फ आपात स्थिति से निपटने के बारे में नहीं है, बल्कि लचीले समुदायों के निर्माण के बारे में भी है। उन प्रमुख रणनीतियों पर चर्चा कीजिए जिनका उपयोग सामुदायिक लचीलापन बनाने और आपदाओं के प्रभाव को कम करने के लिए किया जा सकता है।

(250 शब्दों में उत्तर दीजिए) 15 अंक

Disaster management is not just about responding to emergencies but also about building resilient communities. Discuss the key strategies that can be used to build community resilience and reduce the impact of disasters.

(Answer in 250 words) 15 Marks

During COVID-19, disaster management (DM) was aptly described as mitigation + emergency response + community resilience.

Thus, community resilience is one of the 3 essential pillars of DM.

Steps to build community resilience and reduce disaster impact.

① Social steps:

1. Leadership of women: in line with PM's 10 point agenda on Disaster Risk Reduction (DRR)

2. Dual-use disaster shelters

(Eg) cyclone shelters in Odisha

shelter during cyclone

community centres in non-disaster time

3. Coordination between society via [drills], [awareness], [standard operating procedures]

(I) : Building community links with environment :

1. Using traditional knowledge -

via National Traditional Knowledge Library

(Eg) earthquake resilient bamboo houses in North East

2. Social forestry - to prevent forest fires

3. Mangroves and fishermen community

↳ first line of defence in coastal disasters.

(II) : Economic strengthening of community

1. Resilience via financial instruments

Insurance,

or "Disaster bonds"

↳ rest for nature swaps.

2. Economic activity to build social capital

(Eg) Integrated agriculture

farmland (wheat) + farm pond (duck + fish)

↳ wheat to feed duck

→ duck droppings

↓
food for fish

leach fodder

→ cow dung

→ manure

→ fertilizer

and so on :

Community resilience via economic activity

(IV) : Political and administrative steps :

1. Empowering local govt : part of PM's
10 point agenda on DPP
Principle of subsidiarity
2. social audits :
3. land use planning / zoning - by local govt

(V) : Role of non-govt in building resilience :

1. Companies - CSR
2. NGOs / civil society - awareness

(VI) : Role of technology :

1. Pre-decided modes of communication
2. R & D into disaster resilient infrastructure
↓
coordination with CDR
3. Modern Early warning Systems

(G) : using GIS technology,
AI based predictive systems, etc

(VII) International collaboration :

Resilience of human community as a whole.

for this is in accordance with Sendai Framework

for 2015, to manage disasters, and prevent them,
 creating a PROACTIVE approach, not REACTIVE

19. मेटावर्स और वर्चुअल एसेट्स जैसी नई और उभरती प्रौद्योगिकियों के उपयोग के माध्यम से आतंकवाद का परिवर्तन चिंता का विषय है। हम आतंकवादी उद्देश्यों के लिए नई और उभरती प्रौद्योगिकियों के उपयोग का मुकाबला किस प्रकार कर सकते हैं? इस संबंध में "दिल्ली घोषणा पत्र" के महत्व को स्पष्ट कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

The transformation of terrorism through the use of new and emerging technologies like metaverse and virtual assets is a matter of concern. How can we counter the Use of New and Emerging Technologies for Terrorist Purposes and Elucidate the importance of the "Delhi declaration" in this regard?

(Answer in 250 words) 15 Marks

EPM S Jaishankar has described terrorism as

the "biggest threat to human rights"

Use of new and emerging technology by terrorists has increased this threat to human rights from terrorists.

concern from new technologies being used by terrorists

- radicalisation of youth (eg) via social media
- rise of "lone wolfs" who are radicalised from social media (eg) Christ Church

drug trafficking via drones in J&K and Punjab

Conducting "express investigations"

anonymity on dark web.

money laundering and terror financing via crypto

Attack on critical infra

(eg) attack on bygone pipeline by backside

Group

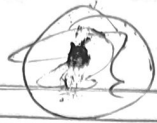
USA declared state of emergency



Candidates must not write on this margin

Steps to counter use of emerging tech by

terrorists:



(I) Reforming cyber security:

1. Clear roles and responsibilities

(eg) CERT-in v/s NCIIPC v/s NCCL v/s I4C

2. Collaboration with private sector professionals

3. Awareness about online radicalization

4. Use of bots to detect terrorist activity on dark web

5. Social media regulation via New IT Rules

(II) Counter terrorist funding:

1. Recently crypto currency companies were brought under ambit of PMLA 2002

2. Use of FATF to block terror funding

~~3. Border security~~

(III) Border security: BOLT, LIBMS, etc

to stop drones

(IV) Global collaboration

via INTERPOL
via OECD, etc
(for policy)

(V) : use of islanding of critical infra

(G) : electricity grids of key cities

↓
separating them from the rest
of the grid to protect them.

Importance of Delhi Declaration

Delhi Declaration

↳ Resolution of UN meeting of UN

Counter Terrorism Committee

↓
reports to UNSC

Significance :

1. focus on all aforementioned technologies

↓
drones crypto dark web drug trafficking malware (etc)

2. focus on collaboration

↳ within the nation
↳ across nations
↳ between nations and non-states

3. steps to fight against radicalization on social media

4. Human Rights attack due to terrorist activities

World must act on Delhi Declaration, and adopt

CCIT - Comprehensive Convention on Terrorism - to
with war against terror

20. "अग्निपथ योजना हमारे सशस्त्र बलों के लचीलेपन और प्रभावकारिता के लिए आवश्यक एक कड़वी गोली है।" प्रासंगिक तर्कों के साथ कथन का आलोचनात्मक विश्लेषण कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक
 "The Agnipath scheme is a bitter pill needed for the resilience and efficacy of our armed forces." Critically Analyze the statement with relevant arguments. (Answer in 250 words) 15 Marks

Agnipath is a [triservice recruitment] scheme, for [patriotic] and [motivated] youth to join the armed forces and serve for a

[period of 4 years],

after the said period, $\geq 25\%$ of the Agniveers would be absorbed for [permanent service].

why it will enhance resilience and efficacy

(1) Human resource program:

1. Decrease in [average age] of armed forces from [32+] to [26].

2. "future ready" young force.

3. Aid in formation of [integrated battle groups].

4. Aid in [interoperability] and [theaterization].

(due to joint recruitment and camaraderie from the outset.)

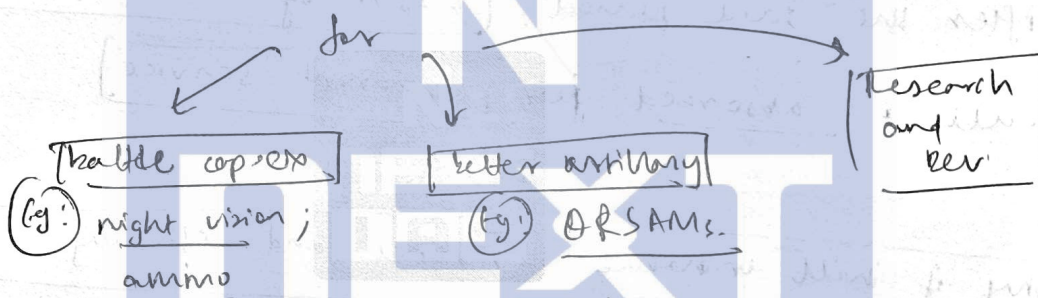
5. Aid in [inter-service collaboration].

(II) : It would help in

Modernization of Defence Acquisition.

1. currently - 80% of army budget spent on salary and pension
2. This leads to reduced expenditure towards cap-ex (capital expenditure)

3. Agniveer would free up budget
(by reducing pension burden)



Not only is Agniveer good for armed forces,
it is also good for economy and nation as a whole

1. would help in reducing govt. fiscal deficit
2. ECONOMY will get SKILLED, DISCIPLINED
and COMMITTED young labour force.
3. This has been appreciated by various industry
relations such as Atand Mahindra
4. States such as Uttarakhand have announced
recruitment for Agniveers who don't continue
into Police Dept

However, it is a bitter pill in short term :

1. will take a few years to settle down.
2. Setback for some of the youth ~~who~~ for whom the recruitment changed suddenly
3. Concerns around commitment during the 4 year period
4. Setback to India - Nepal international relations
Nepal was temporarily suspended visiting
under Agripath

Way forward :

Addressing concerns of reemployment of Agriworkers

If implemented well, Agripath would lead to discipline, and greater commitment in society, as entire society would benefit from the experience of Agriworkers