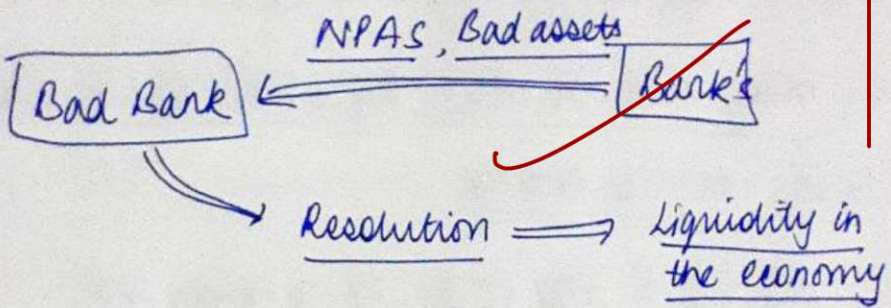


प्रश्न की संख्या दीजिए
Enter number of questions

उम्मीदवारों को इस स्थान पर नहीं लिखना चाहिए
Candidates must not write on this margin

Q1. Recently, govt has decided to setup a Bad Bank (Budget 2020-21) to deal with Twin balance sheet crisis, gives rise in NPA worsened by pandemic

Used that you began with mentioning 'Bad Bank' in the end.



Advantages

1. Eases NPA problem (in short term) by overtaking bad loans
2. Raises liquidity by allowing banks to create fresh loans
3. Better management of NPAs by concentrating them in a central hand
4. Eases balance sheet issue as quick resolution

(By specialist)

It can also be used for privatisation
free up money for the parent firm

Not a panacea

1. Total supply of NPA remains same
only change of ownership -
2. Doesn't deal with corporate fraud → if it continues, NPAs ~~will~~ continue
3. may worsen crisis by concentrating all
risk in one entity

Q1
can
also
demonstrate
Banks' +
no addition
of
new
professionals

4. Experience globally not encouraging
Unless effective norms for corporate governance,
strict reporting framework are instilled in
corporate tradition, NPA problems shall not
ease in long run.

4 1/2

Good understanding,
just bring more
points -



Q2.

Drone management & licensing policy has long been released by govt, however the Jammu attack reveals severe loopholes.

Need for betterment

1. lack implementation of law is an issue
↳ openly flouted in case of wedding photography etc

2. Lack of anti-drone shields in usage
↳ procurement has been slow
(ex Russia's \$400)

3. No specific criteria to manage weaponised drones → only civilian drones considered

unnecessary classification based on weight has only made it complex to administer the rules

+ Also
while
it
needs
with
increased
security
threats



5. Vulnerable nature of technology - any such tech in wrong hands can be misused without much ado
↳ ex easy to fit a bomb on a drone

6. No clauses to deal with traceability in case drones drop-objects and escape

hood,
but also
suggest ~~some~~
additional
safeguards
in rules →

more stringency is needed in framing policies, keeping in mind potential for drones to be weaponised.

Better air space
mapping and air traffic
control management etc

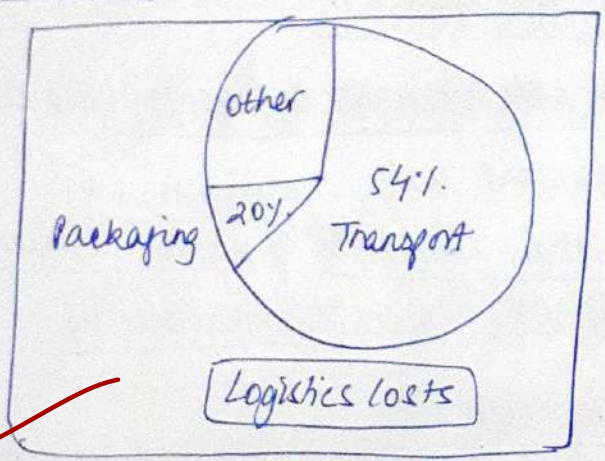
4



Q3

India spends as much as 14-17% of its GDP on logistics costs acc. to logistics Performance Index (World Bank). This significantly reduces competence

used that you quoted data to introduce it.



challenges

1. Lack of infrastructure — low permeability of roads, multi modal terminals
2. No economies of scale in sector due to large number of small firms
3. Lack of human resources trained in logistics



+ जी संख्या
दी जाए
प्रश्न
की संख्या

over
dependency
on roads.

poor
warehousing
infra etc.

4. Barriers to inter-state movt. due to
permits systems in place

↳ lack of tech usage - ex. NO use of drones

poor warehousing delivery (ex Amazon USA)

infra etc.

Significance of Logistics

1. Raises competitiveness of Exports due to Cheaper transport costs
2. Serves urban demands of faster delivery
↳ ex Blinkit, Grofers 10 mins delivery
3. Raises employment
4. Forward, Backward linkages are high
5. Raises rate of growth by ensuring faster delivery, safer delivery of materials

Good points.

Covid 19 showed the importance of a robust logistics sector in keeping a work from over at home, lockdown economy on its feet.

5

Overall a
good
attempt

Adequate investment must be made, given
such changes in work structures may be here to
stay.

Don't
waste in
this part.



Q4. Agricultural subsidies comprise nearly 40% to total agricultural GVA, acc- to Budget 2020-21, having several ramifications

Issues

quote some examples of such subsidies as well.

1. High burden on exchequer due to farm loan waivers, PSL targets, MSP

quote some data and response etc to carbon etc it further.

2. Skewed pattern of agriculture - bias towards Rice-wheat

↳ over-exploitation of groundwater (90% withdrawal for agri.)

3. Slow lining of drought resistant crops like millet as subsidies not there

↳ imparts nutritional security

↳ raises vulnerability to drought

(67% India is drought vulnerable)



Link it with Subsidy on Power.

4. Water subsidy encourages over-use,
water use inefficiency → depletion of
17.5% water blocks (6)

5. Higher use of electricity due to subsidy
causes coal usage → pollution

6. Subsidised M4Y seeds need higher
water, fertiliser usage → depletion

+ Soil degradation

However, few positives

1. Supports 40% employment

2. Food security ~~and~~

3. Exports are largest in Rice, Banaras etc.

India's subsidy policy must support farmer
but must be tempered with concerns for
social responsibility (FRBMA) and ~~etc~~

Need to incorporate

more specific



suggestions →

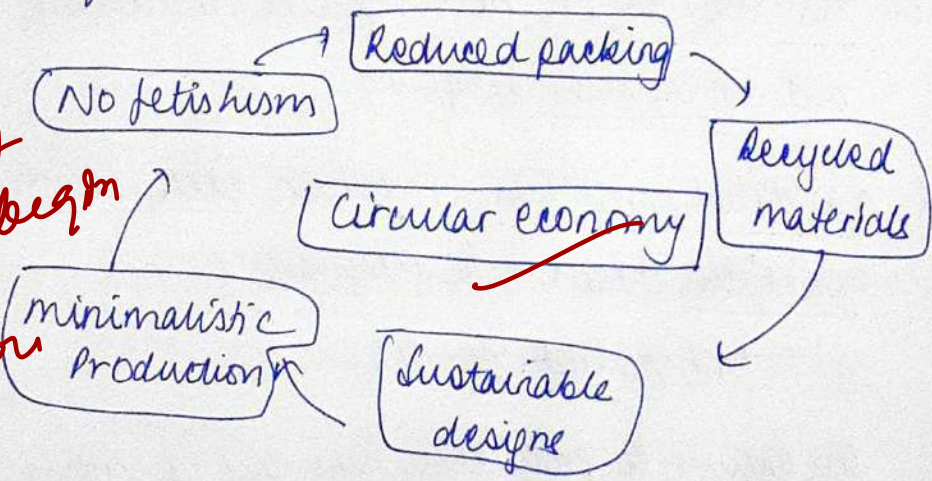
DBT based subsidy, linking

subsidy with
farm holding
size etc

4

Q5. "Circular economy" refers to an economy based on "reduce, reuse and recycle" of materials such that no excess waste is generated.

Used
along
to begin
this
answer



Role of Circular economy

1. Allows meeting NDC commitments via reduced overall emissions
2. Employment generation of recycled, designed
3. Boost to public health by reducing wastes

Also
further
need for
raw materials

minimalistic production → low cost → competitive exports



5. Meets growing demand for "conscious consumption" (~~Plastic pact~~ etc.)

Vehicle Scrapage Policy

1. Tax rebates on new vehicles on scrapping old incentives recycling

all features can be highlighted in very short and

mandated timelines for when each category of vehicle needs to be recycled

→ structured approach

then discuss its advantages and certain challenges.

3. Incentives to producers by way of credits for recycling old vehicles

4. Addresses big source of e-waste - given growing urban affluence and demand for personal vehicles

→ inculcating wisdom of maratma gandhi
→ "usage for needs, not wants" is the way forward to bring shift to circular economy

4



Q6. The National Green Tribunal was set up under Article 323-B, part XIV-A of the Constitution's provisions under NGT Act to ensure ecological justice and has come a long way environmental

Significance

1. Experts advise is inculcated into judicial process by way of membership to policy makers
2. Final and Binding provisions reduce time loss in appeals and ensure justice
3. Raises ability to meet NSCC at COP21 for India by way of judicial activism
4. Grounds for shaping legislation which is ecologically sensitive
ex ICZM rules, CRZ rules

+
Based on the principle of Natural Justice



ISSUES

1. Environment in concurrent list, 7th schedule creates centre-state tussle
2. Allegations of judicial over-reach
3. Slows down pace of reforms - stays on POCSONI Act, Odisha etc.
4. Vacancies reduce speed of justice delivery
5. Lack of real time ecological data - Forest surveys etc. are done with time lags
↳ hampers decision making

Also add
↳
WPA
1972,
FRA
not
covered
under
the
Act

(limited
jurisdiction
cell)

Recent rulings on Aney colony trees, Kerala housing society in Vembanad Kol, CRZ

notifications, Shutting of Faridabad brick kiln

Show the rising importance of NW7. effective

Good data availability and cooperative federalism

are needed to further boost NW7.

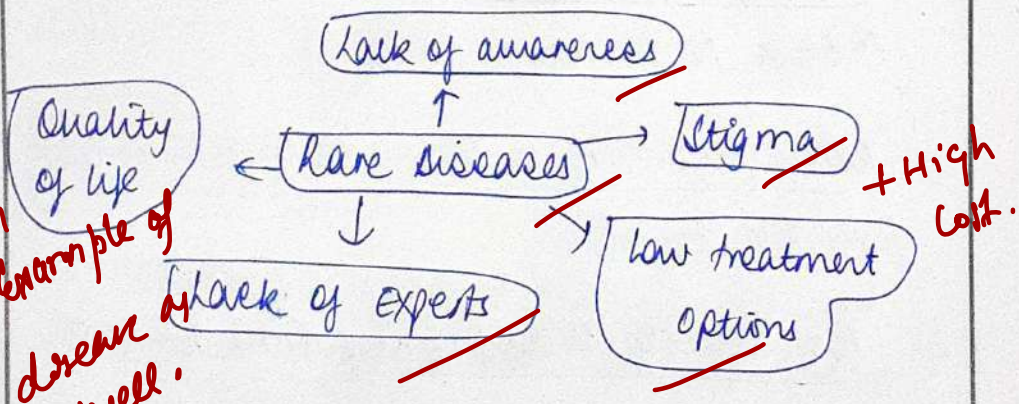
a few corrective measures to conclude better.

4 1/2

07.

"Rare diseases" are defined by USFDA as diseases whose incidence is nearly $1/1,00,000$ individuals.

mention any example of rare disease well.



National Policy for Rare diseases, 2021

1. NISAAAN Kendras set up to monitor and counsel people
2. One time grant for treatment of rare diseases which are treatable + crowd funding also provided.
3. Psychological counselling to people with rare diseases

under the policy R. Prine...

4. R&D support to super speciality hospitals for orphan rare diseases
 core info 3 categories

Issues

1. No provisions for diseases which require chronic treatment ex Alzheimer's
2. Lack of separate funding — Rashtriya Arogya Nidhi grants used
3. Rea expenditure is low — only 0.67% of GDP (vs 3% Israel)
4. No awareness campaigns planned — this causes lifelong stigma and reduced quality of life

Cost capping also for diseases

Rare diseases must be treated holistically and with empathy to ensure health for all (SDG 3).

you should have also covered Indian scenarios till date in beginning to make it more comprehensive

4

Q8.

A "notified disaster" is one which is declared by centre or state under Disaster management Act, 2005 to ensure urgency of response and priority of relief

Mechanisms

1. Ensures release of National Disaster Response funds to centre, states to respond
2. Necessary powers to notify "Essential commodities" under ESMA for public relief
3. NDRF forces may be used for civilian aid
4. Imposition of curfews etc becomes easier

COVID 19

1. Funds released helped ease demand-supply mismatch for medical O₂ etc.



Also enabled
states
we SDF
Fund!

- to Imposition of curfews and social distancing in public places
- 3. Reduced inter-state movement of people - helped reduce spread of disease

Issues

1. Non-coordinated approach of states - each dealt in own way, at diff pts of time
2. Non release of funds in time - large no. of deaths
 ↳ PM CARES funds had to be put in to augment efforts
3. Non humanitarian approach - public beatings in Bihar ⇒ police state approach
4. Could not deal with migrant labour exodus

overall
you
it

Non humanitarian approach along with coordination
are lessons to be learnt for the
future use of the act

well!
 also covered
 issues!

5



Q4.

landslides are caused by sudden movt.
of land under force of gravity causing
loss of public property and lives



Used
description
to
introduce
such questions

Reasons

1. Tectonic activity in Himalayan region causes
instability and crust faulting

↳ Sudden movt are common

2. loose debris, glacial till → easier to move

3. steep slopes of Himalayas, western ghats

↳ Higher pressure of gravity

Flash rains in w-ghats → gravity
more of land aided by soil erosion

Need to
describe
anthropogenic
factors as
well.

5. Glacial lake outbursts in Himalayas ~~cause~~
land move.

6. Climate change aided glacial melt
→ flash floods (Charnoli 2021)
causes landslides

measures

National Disaster management policy

(A) Pre disaster

(1) Landslide Hazard mapping

(2) Community drills

(B) During disaster

(1) Targetted aid to vulnerable

(2) Shelters

(C) Post disaster

(1) Satellite data analysis

(2) Build back better infra

Others

(D) Glacial lake damming

→ community afforestation → erosion →
landslides

→ No construction zones in hazardous areas

→ land embankments to reduce land from

NLRMP
Developing
Early
warning
system.

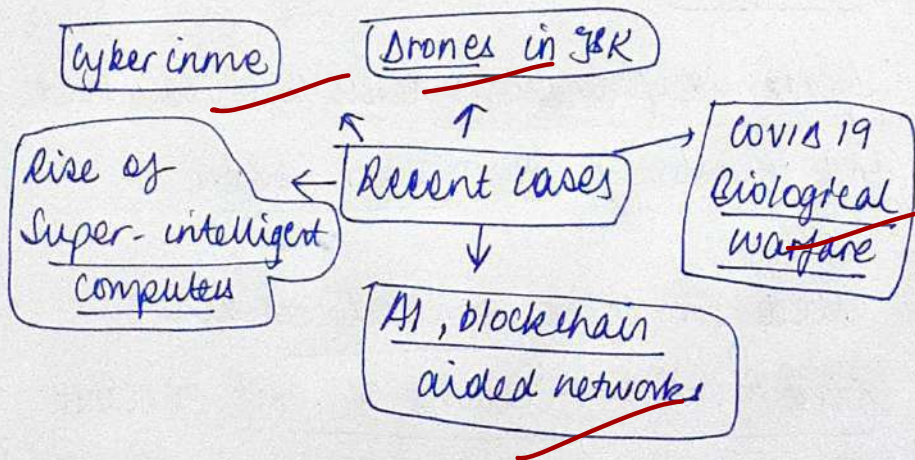
13.5

Anthropogenic
factors are
mind ed.



Q10.

Security is no longer just about armed forces → it has turned into a highly technology intensive, competitive and lethal field creating several asymmetries



Used.
But
Include more
aspects of
security
↳
Climate
change,
migration,
Disasters
etc.

Need for Reforms

1. Weaponisation of sublime entities ex Biological agents
2. Trans-national nature of threats - need for globally coordinated approach
3. Cyber-physical systems investment needed to keep data grids safe



4. Adegnate data privacy needed in era
of data colonialism

5. Recalibration of old weapons systems
for new threats ex Airforce needs drone
interceptors

6. Space weaponisation needs to be countered
and invested in ex mission shakti

7. Need for inter-connectedness across
crime monitoring sections of govt ex CCNS

to deal with connected nature of crime

& h's infused warfare is reality of today

need to amp up from current 0.67%

gov expenditure

"survival of fittest" theory beckons

us to invest into security for the future

to preserve the sovereignty and integrity of our
nation

Argue for
a national
intelligence
co-ordination,
skilled
workforce
time & resource
to
will
shortage

3.5



SECTION B

प्रश्न की संख्या
दीजिए
Enter number
of questions

011.

"Dark web" and "Dark Net" are referred to the part of internet which is not searchable with usual servers, and is used as a platform for crime, trafficking, terror finance and international smuggling.

Surface web 20%.	→ google <u>searchable</u>
Dark web 60%.	→ cash receipts, hospital <u>records</u>
Deep web 20%.	→ illegal transaction, <u>Pornography</u>

Existing framework

1. IT Act, 2000 and IT Rules, 2021
2. POCSO Act - against child pornography
3. CrPC, 1973 - against trafficking, pornographic representation

New challenges thrown open

1. Trans-National flow of data - difficult to administer one area's norms on content from elsewhere

उम्मीदवारों को इस हारींग
में नहीं लिखना चाहिए
Candidates must not
write on this margin

Can also
be used
for
positive
purposes
as it
provides
anonymity



Good
Coverage
of
issues.

2. Cryptocurrency - enables anonymous
transactions online : ~~difficult~~ to track

3. Lack of Human Resources - to deal with
specialised servers used in dark net trans-
actions ~~ex~~ The onion ring

4. Obsolete criminal tracking networks which
is un-integrated across multiple agencies

5. New grounds for trafficking - done via
informal networks which are invisible to
traditional surveillance

6. Rise of Supra-national organisations like
ISIS → cross country buying/selling of
sex slaves for sustaining and attracting
young men into their fold

Way forward — Holistic legislation

1. Draping a basic minimum law based on
international consensus to deal

↳ as Dark web is a globally operating
entity



2. Information tech should be fused into traditional policing

↳ ex A1 for hotspot mapping of illegal trade

3. Regulating crypto currencies to ensure it doesn't fund illegal activities

4. Use of social media to track and trace criminals and runners of criminal nexuses

5. Community and child awareness to guard against the lure of entering deep web
ex Shark games which caused child deaths globally

6. Personal data protection bill should have

more clarity in definition to deal with

Deep fakes, phishing attacks

Enhanced cyber security via HR development as and effective legislation.

With 600 million internet users and 54%

population below 25, Indian youth must

not be allowed to be taken advantage of

by anti-social elements on Dark net

Argument for
a more

comprehensive

law

well

action taking
GT net

7

Q/2

"Fintech firms" are a fast-rising type of businesses which leverage technology to offer various financial services to its buyers. PayTM, GPay, CashKaro are examples.

Need surely
 you mentioned
 examples.

Fintech firms	Traditional firms
1. massive <u>use of Tech</u> to offer <u>solutions</u>	1. used <u>use traditional banking methods</u>
2. mostly use <u>internet</u> and <u>mobile apps</u>	2. usage of <u>brick and mortar</u> offices
3. <u>Easily scalable globally</u> on <u>click of a button</u>	3. Requires <u>user to be physically present at location</u>
4. Being <u>promoted</u> by govt for <u>Financial inclusion</u> and <u>digital literacy</u>	4. Witnessed promotion in <u>1970s</u> (<u>Bank Nationalisation</u>)
5. Issue of <u>digital divide</u> in <u>access</u>	5. Issue of <u>literacy divide</u> — as requires <u>basic use of numeracy, writing</u>

you highlighted differences well.

Opportunities

1. Cashless economy after 2017 demonetisation
is pushing more people to fin tech
2. High data usage — at 10gb per capita
per month → easily accessible
3. Complements financial inclusion — as solutions
available even while at home
→ women, elderly included
4. Leverages Industrial Revolution 4.0 — via
use of tech to give speed of financial
transactions

5. Removes middlemen like brokers, cashiers
also dealing with fiscal products

6. Promotes rural savings via ease of
access → higher savings available to

7. Use of technology is boosted → creates
digital literacy

8. Remote places are no longer excluded
in case of bank-era (underserved areas)
balanced growth

Lead,
Can also
work
opportunities
with
facilitating
leads to

MIMES



and also
financial inclusion
etc

Challenges

1. Digital divide - only 20% rural houses have computer, and only 7% have net
↳ access is an issue
2. Asymmetry in device ownership - like women don't own mobiles as much → asymmetric access
3. Low internet penetration due to slow pace of BharatNet project

+ Regulations
difficultly
and
Data
privacy
issue.

4. Phishing, cyber attacks - India is 2nd most vulnerable to these → reduces public trust
5. Low human interface creates trust deficit
which hinders adoption of tech
↳ vs personal contact with bank agents
↳ lifelong bond

Fintech firms are here to stay and may well become a force of financial inclusion, but with adequate internet penetration, data protection and trust.

↳ good attempts

7



Q13.

Organic farming in India makes up 8% land area, 2% farm output, with world's largest number of organic farms in India.

Advantages of organic farming

1. Environmental sustainability due to reliance on bio-organic pesticides etc.
2. Reduces land degradation (30% India's land is degraded, UNCCD) by maintaining soil moisture (mulching etc.)
3. Groundwater usage is minimal
4. Addresses rising global demand for healthy food
5. Health outcomes are better due to non-use of chemicals for ripening etc. (carbides)

Good, but you focused

largely upon

environmental and health

benefits

Also, discuss how it may also lead to more productivity?



* Recent steps

1. Paramparagat Krishi Vikas Yojana
2. Mission organic Value chain development
3. Participatory certification scheme
4. 2BNF push (budget, 2019)

Issues with Andaman & Nicobar LAC scheme

1. Threat to fragile ecosystem based on mangrove forests, near coastal zone
2. Reduces biodiversity by converting land into agricultural land ex Palm oil cultivation (Indonesia)
3. Declining yields have been experienced in Sikkim
4. Threat of Bio-pesticides going wrong - Rise of incidents of murder hornets (VSA) used as bio pesticides ~~or~~ have raised alarm bells
↳ threat to Wildlife
- T. Presence of indigenous tribes - Jarawas, Orge, Chompens have nearby 80-240 people left → introduction of large scale farming may interfere with way of life



1st part
white organic farming may help replenish
soils ~~overused~~ ^{covered} by traditional farming (10/15)
also ~~been~~ ^{been} it must be applied intelligently to ensure
biodiversity is not endangered

2nd part
but with agricultural
better with an intellig.
productivity

6 1/2



Q14. It is estimated that by 2050, 21 of Indian
metropolises will run out of ground water which
has fallen by 60% b/w 2007-17, and with
17.5% blocks as 'critical', India's water stress
is imminent

Good
use of
data.

Causes

1. overuse of groundwater - 90% is used
by agri sector → inefficiency in water use
planning
2. Non use of traditional knowledge ex Bunds,
Baolis for water harvesting
3. Untreated wastewater from industrial
discharges causes further pollution
ex Rishikesh polluted due to pharma sector

Use of well is harvested in India
Lack of water harvesting - only 7% water



5. over-reliance on water intensive exports -
Rice exports use 6-7 times more water
6. Global warming has raised droughts in
west India \Rightarrow water scarcity
7. Sam mismanagement causes floods and
droughts alternately
 \hookrightarrow Chennai floods, 2019
8. Urban flooding due to urban heat island
causes polluted sewage water to mix
with other water \Rightarrow non-harmtable
9. Double-burden of water stress on women
due to child care responsibilities, duty to fill
water tanks for home
10. Regional inequality in water availability
is being exacerbated
 \hookrightarrow Rajasthan, Marathwada : Farmer
suicides due to droughts

A110
relate
with
population
growth



★ Govt. Efforts

1. Atal Bihari Vajpayee
2. National water policy, 2000
3. Water Information Systems
4. River Interlinking Scheme
5. Har Ahar Jal Yojana
6. Swachh Bharat Mission

Can mention purpose of a few schemes.

Issues

Despite best efforts, situation needs further improvement due to issues like:

1. Lack of behavioural change - affluent families often misuse water
2. Skewed cropping pattern due to MSPs doesn't favour drought resistant millets
3. Lack of investment in micro irrigation causes reliance on water intensive techniques
4. Centre-State disputes causes River-water tribunals being ineffective (Carvery dispute)
5. Competitive Federalism reduces scope for cooperation via River interlinking



6. Lack of R&D into drought resilient seeds,
new flushing methods, water desalination
as India spends only 0.67% on R&D vs
USA, China (3-6%)

While govt. has tried to overcome the issue,
having tech-driven, cooperative and
holistic approach ~~alone~~ will ensure

Overall
good.

Sufficient water availability and associated
good health (SDG 3), sanitation (SDG 6)

But triggered equality (SDG 10)

to describe
state of water
security in India
in more detail -

6 1/2



Q15) E-waste refers to end-of-life waste electric
and electronic equipments like used computers
etc. which remain un-recycled.

★ Scenario

Qm 2018-19,
only 10%
of E-waste are
collected.

1. 2nd largest e-waste generator
2. only 20-25% waste recycled
3. 85% recycling by informal units
4. Large scale groundwater leaching of toxins like mercury lead from waste

3rd behind
U.S and
China.

E-waste management Rules, 2016

1. Extended producer liability to collect back
waste equipment for recycling
2. E-waste recycling plan at district-level
3. E waste segregation and recycling units
4. Buyback / deposit scheme for customers
when they return waste equipment or

+
PRO

Phase wise
Collection
recycling targets
were also introduced.



Performance

1. limited effect due to non-maintenance of e-waste plans at each level
↳ diets. planning committees do not meet
2. Lack of awareness among youth and fetishism → not addressed by policy
↳ people buy new smartphones, even if no need → new waste
3. Informal value chain causes poor recycling methods → hazard to waste workers ex Silicosis
4. No funds for setup of ewaste plants — creates kunden on companies
↳ Raises costs / disincentivises recycling
5. Usage of non recyclable materials causes limitations in re-use
6. No insurance policy for waste workers (ex Safai Karmachari insurance)
↳ hazard to life

Coverage of insures.



With a population of 600 million internet
and smartphone users, India has the
potential to turn e-waste into e-gold
if tenets of circular economy and
responsible production & consumption
(SDG12) are followed.

Good
understanding.

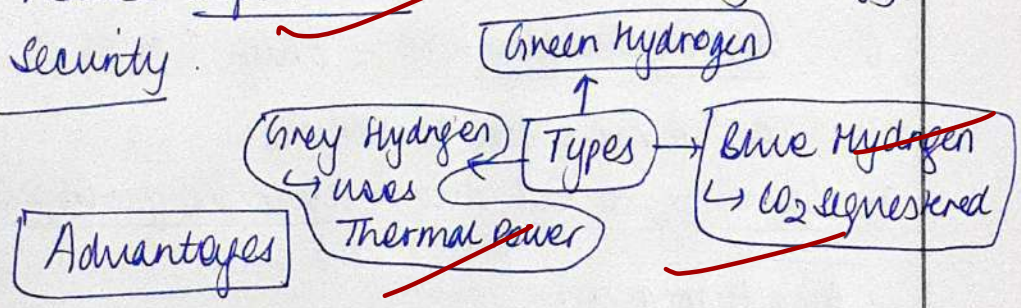
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Q16.

India is touted to double her energy needs by 2050. Given our import dependance of 85% on oil and 60% for gas, hydrogen fuel is an opt choice to reduce import bill while ensuring energy security.

Introduced
very well



1. Abundantly available - Hydrogen is most widely available element.
2. Green energy - usage of Green hydrogen uses electrolysis of water via renewable energy.
3. No emissions - hydrogen fuel only creates water as byproduct.

Good → Health benefits, no easier to meet CO2/NSCs



4. Use in defense tech — as hydrogen
fuel equipment is lighter → can be used
for faster mobility

5. Multiple uses — is Both as fuel cell
as well as internal combustion

Better
efficiency
well.

^{all} lesser charging time — only 5 mins vs
25-30 mins for e-vehicles.

7. Lower export bill due to lower oil, gas exports

Disadvantages

1. Highly combustible — accident-prone
2. Requires cryogenic compression — to
reduce its volatility
→ higher tech used
3. Needs more investment
4. Grey and Blue Hydrogen (uses thermal
power for generation) is not "green" as

Expensive,
produces combustible fumes
it also depends on fossil fuels

measures by govt.

1. Hydrogen fuel policy, 2000 - first step towards hydrogen energy
2. H-CNG buses in Delhi, using Hydrogen blended CNG
3. Hydrogen fuel cells PLI scheme
4. PSL target in clean energy
5. FAME II scheme for Hydrogen fuel vehicles
6. Delhi-Serhi bus route to have 8 hydrogen buses

In order to fulfill its commitment of reducing energy intensity of GDP by 33-35% by 2030 and meet SDG goal 13 (climate change), govt. is taking necessary steps for all round development of this new technology

By and large you attempted

this answer very well.

7 1/2



Q17.

AI and related technologies like Deep learning, machine learning etc. are expected to usher in Industrial Revolution 4.0, and India with a large, young and skilled population is posited to be benefited from it.

Strengths and Opportunities

1. Greater user experience - via recommendation for songs, products using AI algorithms
↳ Businesses, Startups can grow
2. Disaster management is easier by identification of hotspots, prediction of cyclones
3. "Complementary labour" in form of Robots ease workload in hazardous situations
ex Sandevot Robot for waste cleaning



4. Faster development of new tech like vaccines, frontier tech devices etc. has shortened testing time ~~of~~ COVID 19 vaccine

5. medical usage - like prediction of rare diseases using genetic sequence analysis

6. Terrorism can be handled better alongwith trafficking, money laundering via analysis of transactions data of tax returns etc.

7. Emotional and Psychological support can be extended via humanoid AI based bots for the elderly, depressed

However, without large scale adoption strategies AI may be a force of greater social divide :

1. Digital divide may be widened as people without access fall behind

2. Global North vs. South divide between

Good,
can
also
mention
its
usage
in
Agriculture
transport
section.



rich and poor may deepen as more AI-
based systems are used due to costly
tech.

3. Privacy concerns can give ~~rise~~ to AI-
hesitancy and cybercrime

↳ Deep fakes

4. Criminal networks may easily hack onto
virtual network based governance systems

+ Jurisdiction
issues,

5. Rise of 'Superhumans' - are feared for the
consequences on human race's survival

more
consumption
of
energy etc.

6. Data Colonialism - may happen due to
lack of effective data legislation

↳ large data generating countries may lose
(like India) for the benefit of users in USA

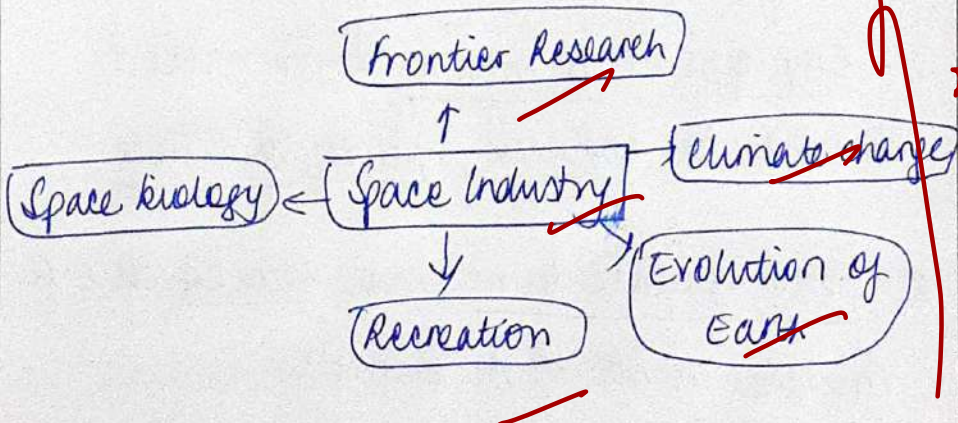
"Data is the new gold" in an AI based
economy, which is soon approaching. The
benefic side of AI can surely be ~~enhanced~~
enhanced by use for the greater good, possible
only if effective national, transnational policies
are in place.

6 1/2



Q18. The recent manned space flight by Virgin Atlantic, a private aerospace firm, has ushered in a new era of growing footsteps of private capital into space industry

hook that you linked intro with recent examples



Impact of Private participation

1. Raises investments into the area
↳ earlier, only national govts had ones
↳ fiscal burden
2. Encouragement to new R&D — as more and more firms enter, seeing profits
3. Boost to competition — govt-backed enterprises like ISRO will have to stand upto enhanced



competition

4. New domain of recreation - as private firms will like to encash upon human flights for profits

↳ enhances quality of life

5. Employment generation from raised demand for engineers, pilots, scientists

6. Issue of space debris may worsen due to

Concern increase in no. of missions

Can be mentioned separately.

↳ Space debris is already a threat to existent space assets

7. New space divide as already developed countries like USA are likely to have more firms investing in the area

ex Elon Musk's SpaceX, Virgin Atlantic are both USA based

+ security concerns for countries due to data leak etc



Steps in India

India has 2% share of global space industry with USA 1.3 billion invested (1/20th of USA).

1. New Space India Ltd. — new entity to allow transfer of tech to priv firms
2. InSpace — for info sharing and joint development
3. Antrix — private wing of ISRO for commercial development in space industry
4. Space business incubators encouraged in IITs and IIITs to raise space startups

Govt steps
are
described
well

PRARAMBH — Startup India Summit —
platform for show casing

New Science, Tech and Innovation Policy,
2021 — encourages space education.

With highly skilled labour and zeal for space dominance, India is bound to do well if the private sector's finance, professionalism and zeal is effectively harnessed.

7



Q19.

With roughly 85% of Indian landmass prone to some type of disaster, disaster risk insurance takes centre-stage.

* Disaster Risk in India

1. 67% land prone to drought
2. 56% land prone to earthquakes
3. 12% prone to flooding

Word that
you highlighted
India's
vulnerability.

Need For Disaster Insurance

1. Growing volatility and uncertainty of disaster due to climate change
ex cyclones in Arabian sea

2. New disasters like nuclear leakage,
Cyber threats / hacking of govt networks
→ not adequately covered under
Disaster Management Act, 2005

3. Vulnerability of the poor is high as agriculture
(employs 42.5%) most vulnerable
→ locust attacks, only 50% area irrigated



4. Trans-national nature which cannot be effectively managed within national Jurisdiction

5. Low insurance penetration at only 1.4% GDP

6. Double burden on women, elderly due to Social hierarchy

7. Resilience in supply chains is needed, risk management is crucial to ensure

8. Effective food security to feed 1.3 billion people

9. Lesser gap between haves - have nots which is exacerbated on disaster occurrence

Significance of the program

1. Vulnerable Sections have special provisions to mitigate double burden

2. Raises resilience of agriculture by ensuring income of farmers

3. Ensures basic min. std. of living by people even on occurrence of disaster

4. Already mentioned under the programme

Need to come in

Significance

with



प्रश्न की संख्या
दीजिए
Enter number
of question

उम्मीदवारों को इन क्षेत्रों
में नहीं लिखना चाहिए
Candidates must not
write on this margin

Sovereign
Disaster
Risk
finance,
Market
development,
knowledge
management
eff

I. Humanitarian approach
6. Timely disbursement to avoid penalty
The Sendai framework for disaster risk
reduction, and charter of coalition for
disaster resilient infrastructure must be kept
in mind when furthering cause of disaster
insurance

5

you have
general
understanding,
But specifics
have been
skipped in
part.
end



प्रश्न की संख्या दीजिए
Enter number of questions

Q20 - Recent allegations post COVID-19 pandemic outbreak on China having used SARS-CoV-2 to break the back of competition has raised concerns on the issue of Bioterrorism or, usage of biological agents to destroy the enemy ex Anthrax scare, 1970s USA

Lead beginning.

Issues and concerns

1. Ethical concerns - biologically sublime species being used to kill the other is against law of nature
2. misuse - can not be easily traceable
3. Trans-national spread is easy, given era of globalisation
↳ difficult to control spread
4. Genetic mutations may occur which may lead to destroying species forever
ex Wombats, bats killed in Denmark

Need to highlight more issues for India's boundaries with neighboring countries

Crack down on laboratories etc in India.



6. Food security may be compromised by
use of ~~seeds~~ terminator seeds, toxic
fertilisers

measures to tackle

1. Effective legislation to define biological
disaster

2. SOP must be fixed to ensure proper
use of command

3. Use of technology to predict attacks
using AI and deep learning.

Resilience should be built via surveillance
in health systems and R&D in ~~rese~~

farming sector to develop resilient produce

5. Global consensus and provisions for fixing
liability via International court of Justice
must be developed

"Prevention is better than cure." India must
take cue from COVID 19 and prepare for the
future.

Argue to
build
infrastructure,

Developing
diseases

Common
reporting
standards etc

6 1/2

