



GS Advanced Program 2023

Generic Booklet

Test Name/Code/No. : ...24...

Name			
Email ID.			
Roll No.			
Mobile No.		Date	

Allotted Time : 60 Minutes

Instructions to Candidates -

- There are 7 Questions in this Question paper.
- All Questions are Compulsory.
- For all updates, please visit the noticeboard -
<https://noticeboard.forumias.com/gsap-2023/>

Important -

- Answers must be attempted in the QCA Booklet only.
- To upload the Answer Copies please visit to "My Course" section on -
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- Only those copies will be evaluated which will be submitted before the next class.

Q. No.	Grade/Score
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Overall Grade/Score	

Start Writing Here

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Q.1)

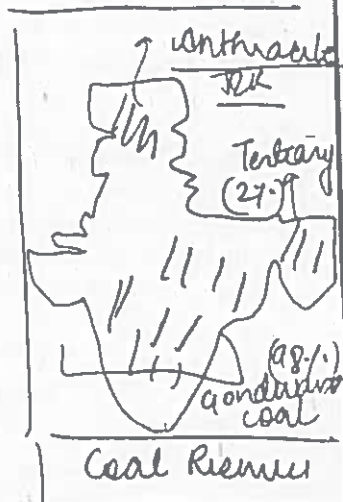
Coal sector in India faces plethora of issues, which aggravate into coal crisis annually. Critically analyse

Ans

India is second largest producer and consumer after China, with 56% energy met by it - however issues remain.

Coal sector Issues

- ① Captive mining led to less available stock of coal.
- ② Turf wars between Ministry of Coal and Renewable Energy
- ③ Lack of Transparency
(eg) coal scams - huge losses.
- ④ Low prices of Bidding
- ⑤ obsolete technology
(eg) Rat hole mining instead



of cutting edge lean technology

now this had to annual crisis a

- (*) Coal supply to Thermal Plants fell in 2022 leading to Energy crisis
- (*) states like Punjab Haryana experienced Black outs for 2 month.
- (*) This gave jolt to Manufacturing, Service sector.

However this crisis is due to reasons other than coal sector as →

- (*) Outdated Railway tracks with no DFUs, leading to delays.
- (*) geopolitical Reasons
eg Russia - Ukraine war → supply chain disruptions.
- (*) Reduced Imports
198 Mt → 188 Mt | 198 Mt / 199 Mt
2020 2021

govt. Responded by allowing blending of Indigenous coal with imported, further Renewable sources like ISA, green hydrogen be promoted.

Overall Grading (✓)

Poor			Average			Good		
1	2	3	4	5	6	7	8	9

Q.2)

National Digital Communication Policy 2018 -

Ans

India is world's largest telecom market. with 1200 million telephone subscribers 2021 - AMA

National Digital Communication Policy 2018 was introduced to replace Telecom Policy of 2012 with aim to

- ↳ Providing Broadband to all
- ↳ access to telecom
- ↳ affordability
- ↳ Inclusivity

This aim is reflected in features of policy as →

① aims to connect India by building Robust Digital Infrastructure

eg) Bharat Net - Internet to all

gram Panchayats by 2024.

- ① Propel India
to attract FDI to 100 Bn of that
can be used to address rural-urban telecom divide.

- ② Train manpower in skills

- ③ Secure India
↳ sound data protection network
↳ to make it accessible to all.

Steps to Reform Telecom Sector

- ① PHI scheme under Atmanirbhar Bharat, Shriyam.
- ② Public hotspots (eg PM WANI).
- ③ Rationalisation of FCR
- ④ spectrum sharing
- ⑤ Design linked Incentive scheme to attract FDI.

Telecom sector in case of 4th IR, needs robust infrastructure, data protection law, digital literacy. PMGDISHA sums to attain it.

Overall Grading (✓)

Poor			Average			Good		
1	2	3	4	5	6	7	8	9

Q.3)

Indias dependence on oil

Ans Energy security refers to affordable and regular supply of energy resources to a country.

- India is dependant on oil
- ↳ Developing country with 130 crore populace
 - ↳ 80% oil imported from west Asia.
 - ↳ 60% crude oil imported - Indonesia

Challenges to energy security to India

- ① Less domestic Production
only 8 Mtn from few areas like Bombay high.
- ② Geopolitical tensions
(eg) Russia Ukraine war → disruption

oil supply from Russia.

- ① Lack of Diversification
 - (eg) highly dependent on West Asia.
- ① widening Fiscal Deficit
- ① posing threat of BOP crisis
- ① oil price rise by OPEC

Steps taken to solve

- ① Promoting Renewable energy
 - (eg) National Green Hydrogen Mission (NTPC)
- ① vehicles promoted
 - (eg) FAME India scheme.
- ① Diplomatic efforts
 - (eg) I2U2 grouping → cooperation with UAE
- ① National mission on edible oils
 - ↳ Enhance palm oil production to 1m hectares by 2030.

India on way to 5 trillion \$ economy needs energy security -
 "consumers cartel" for oil consumers
 can be formed to secure oil supply as Italy PM said.

Overall Grading (✓)

Poor			Average			Good		
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Q.4)

Solar energy

Solar power is clean, green
source of energy - India a subtropical
country with 290+ sunshine days
for 50GW solar energy production.

Net Zero or when emissions are
offset by absorption - referred by
IPCC pact - India at glasgow
(COP26) decided to achieve it by 2070.

solar energy can help
achieve Net Zero as →

① Renewable source with
no GHG emissions, thereby
help achieve Net Zero.

② Aim to produce 300
GW solar energy by 2030



will aid here.

① Geographical conduciveness of India with huge sunshine can help India in Net Zero by it.

② Being largest share in Renewable energy - it will have greatest impact at Net Zero.

Challenges → No Net Metering by DISCOMs
→ Quality of PV Modules debate
→ huge maintenance cost

Steps by govt

① Solar Parks schemes
(eg) easing financing by Rajasthan govt

② International solar alliance
group efforts towards solar energy

③ Set up solar parks
at concessional land rates
(eg) Kurnool, Pavagada

④ PH scheme
→ PV modules incentivised.

Further one sun, one world, one grid
aims at solar power potential. India
can use Presidency at G20 to push it.

Overall Grading (✓)

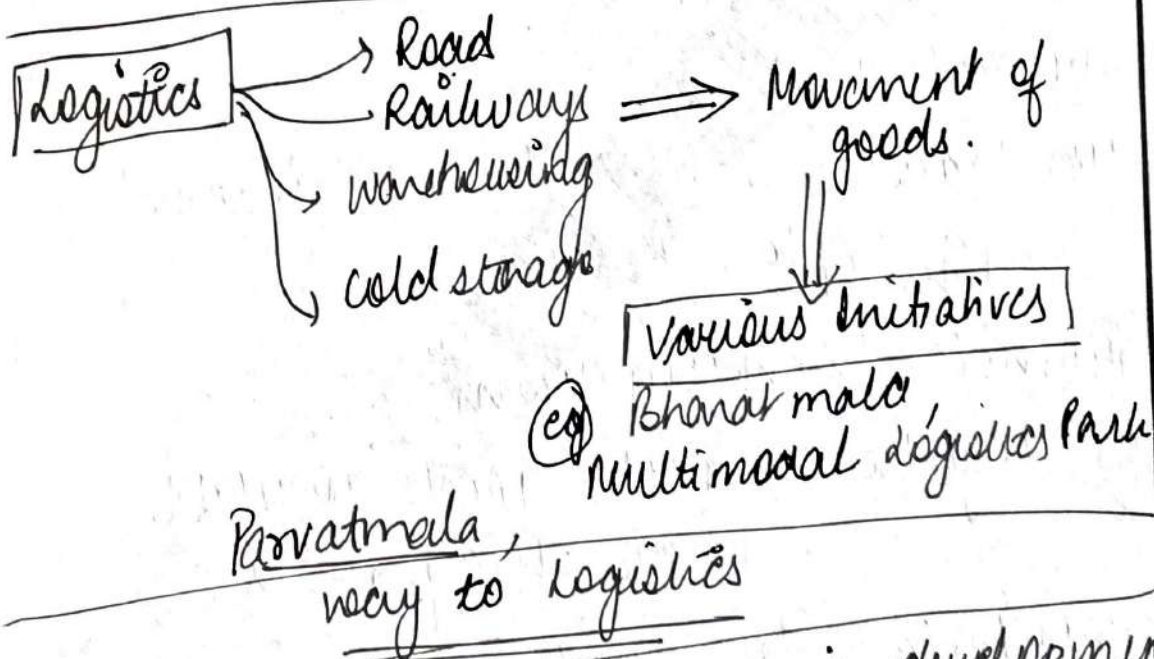
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Q.5)

Discuss and Analyse Role played by Logistics sector in economic development of Nation.

Ans

Logistics is the management of movement of goods from place of origin to consumption - in India provides jobs to 22 million. (Budget 2022)



Logistics Role in economic development of Nation →

- ① seamless, movement of goods
 ↳ (eg) Carpet Industry → Panipat to Delhi

① Promote ease of Doing Business

World Bank → Better Logistics → More Firms Invest.

② Quotas Tolls

eg various sectors → Road, Rail (14 lakh)

③ Spur Industrialisation

eg DFC carry coal to steel plants in Bokaro.

④ attract FDI

Better Logistics → More Business Invest

eg Apple, Google

⑤ Promote "Consumerism"

eg Logistics → Better goods available at cheap prices.

⑥ Contribute to Country's GDP

in way of more taxes.

⑦ Economic connectivity to Nation

eg connect Tier 2, 3 cities with

- ⊗ Reduces Transportation cost
(eg) currently logistics $\rightarrow$ 14% GDP

However logistics face challenges
in economic development. $\rightarrow$

- ⊗ Unorganised sector
i.e. private groups, etc.
- ⊗ Huge cost
40% of total cost of product.
- ⊗ Lack of connectivity between Road,
(eg) No integration
Rail, port
- ⊗ Regulatory chaos (economic survey)
turf wars among ministries

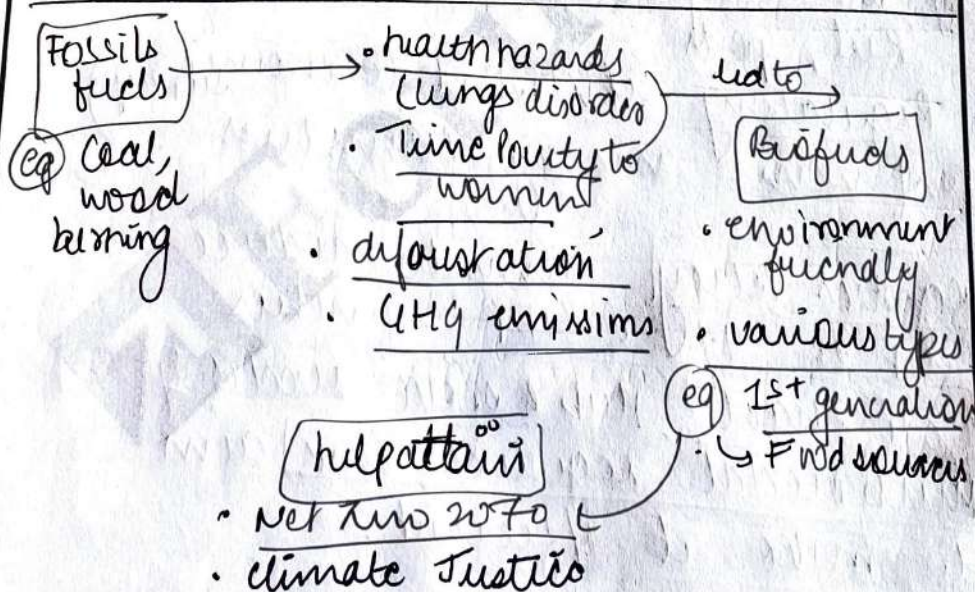
India's Logistics Policy aims to reduce cost to 9% of GDP, further
(eg) shakti Hub & spoke model of
multimodal logistics Park aim
to make it efficient.

Overall Grading (✓)

Poor			Average			Good		
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Q.6) Biofuels are not green alternative to fossil fuels. They take up finite land resources at cost of food production and carbon storage. Discuss food-fuel paradox of Biofuels.

Ans Biofuels are hydrocarbon fuels that are produced from organic matter or can be solid (wood), liquid (Bioethanol), gas (Biogas).



Journey to Biofuels

Biofuels are not given alternative
to fossil fuels as →

- ① land requirement - huge tracts
of land needed.
- ② No guaranteed GHG cuts
- ③ Deforestation due to clearing of
lands.
- ④ Unfit to ecosystem - water stress
increases.

This led to Food-fuel Paradox →

- ① Biofuels though led to Production
of cleaner fuel like Biodiesel,
they pose threat to Food
Security.

- ② Increased use of food crops will
lead to shortage of food →
Inflation → Malnutrition →
Anaemia.

- ③ Further Imports of Food may
lead to Fiscal deficit,
loss of strategic autonomy.

However - there doesn't exist food-fuel paradox as -

- ① unusable lands to be used for Biofuels.
- ② Food surplus or waste to be converted to Biofuels for circular economy and double farmer income as National Biofuel Policy

2018 says.

- ① usage of 3rd generation like algae - reduce land use.
- ② use of 2nd generation like stubble will ensure solution to air pollution

Biofuels like Biogas using low dung led to fuel security to Tripura, further for Energy Security Initiative like PM JIVAN are in right way.

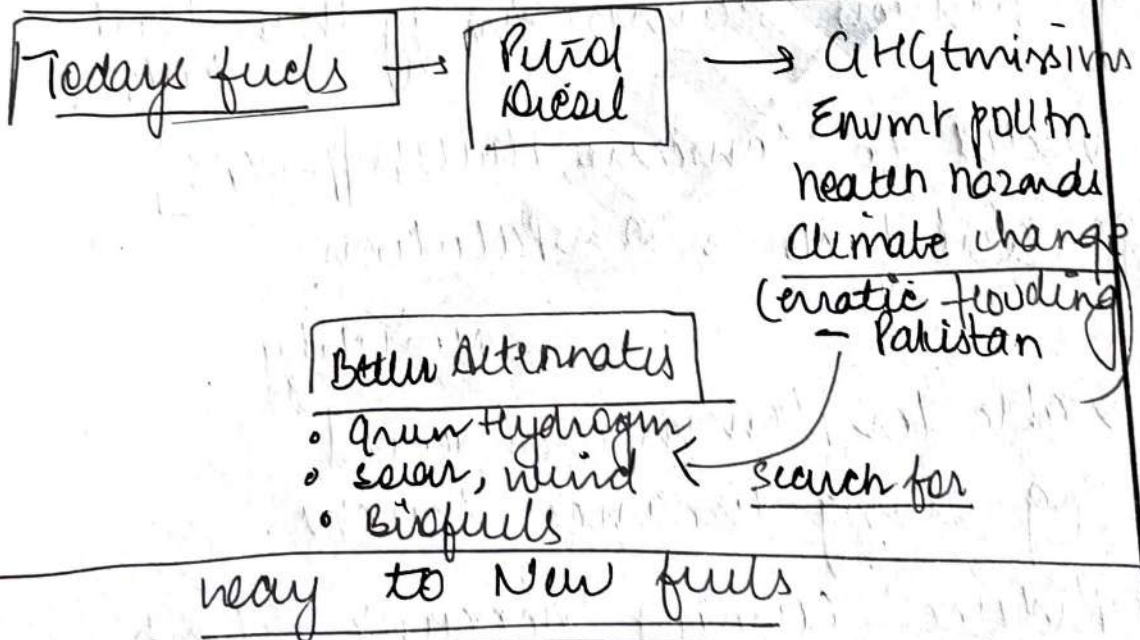
Overall Grading (✓)

Poor			Average			Good		
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Q.7)

Is Green Hydrogen fuel of future?
critically analyse.

Ans Green Hydrogen is produced by electrolysis of water using Renewable sources of energy (wind, solar) with byproduct of water vapour, heat.



Green Hydrogen can be fuel of future as →

- ⊛ Environment friendly
less SOx, NOx emissions as compared

to petrol, diesel.

★ Growing demand

eg IRENA Report → green hydrogen
will be 12% by 2030

★ cheap cost

eg easily prepared by Renewable
sources.

★ High energy density

eg produces 3 times energy than fossil
fuels

★ Need to conserve Health SDG3

eg Fossil fuels → air pollution

mortality

★ viable for commercial uses

eg long distance trucks.

★ Reduce current account deficit

eg India imports 80% oil.

★ Required for Strategic autonomy

eg crisis happened during Russian
- Ukraine war

★ Decarbonise Transport sector

However, green hydrogen faces
issues to be full of future +

★ Costly Production

eg Technology absent in poor nations

★ Safety Issues

Fire accidents occur due to
thermal Breakaway.

★ No guaranteed GHG cuts
as fossils used in Production.

★ Lack of Infrastructure
the refuelling stations absent.

★ Other Better Alternatives

eg Lithium Batteries, Biofuels.

Green Hydrogen can be Promoted
to achieve 50 GW target by 2030.

National Green Hydrogen Mission
by NTPC is in Right way.

Overall Grading (✓)

Poor			Average			Good		
1	2	3	4	5	6	7	8	9