

Nitin Sir



TEST 02

MAINS MAXIMA 2024

FORTUNE IAS ACADEMY

GS - PAPER I

Name Of Candidate	NANDANAA G.P.		
Email Id	XXXXXXXXXX@gmail.com	Roll No	41107
Mobile No	XXXXXXXXXX	Date	07/07/24

Time Allowed: Three Hours

Maximum Marks: 250

INDEX TABLE

Total marks

112

Remarks:-

INSTRUCTIONS

1. Please do furnish Name, Email, Roll No, Mobile No and Test Code in answer sheets.
2. There are TWENTY questions printed in ENGLISH, all questions are compulsory.
3. Answers must be written in the medium authorized in the Admission Certificate which must be stated clearly on the cover of this Question-cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in a medium other than the authorized one.
4. Answers to Question Nos. 1 to 10 should be in 150 words, whereas answers to Question Nos: 11 to 20 should be in 250 words.
5. Word limit in questions should be adhered to. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

Start Time : 10am

End Time : 1pm

Mode Of Examination :

Online ☐ Offline ☒

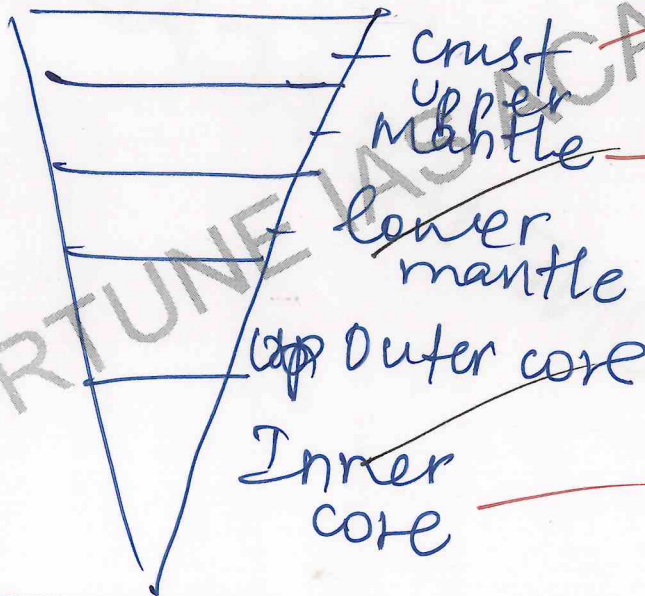
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TABLE OF MARKS			REMARKS
Q NO	MAXIMUM MARKS	MARKS OBTAINED	
1	10		Question Understanding:
2	10		
3	10		Presentation(Neatness):
4	10		
5	10		Content:
6	10		
7	10		Innovation:
8	10		
9	10		Other suggestions: <i>Minimize number of boxes you draw - draw box but rationalise it -</i>
10	10		
11	15		
12	15		
13	15		
14	15		
15	15		
16	15		
17	15		
18	15		
19	15		
20	15		

SECTION: A

1. Scientists had unveiled a link between Earth's surface and its core, indicating that surface water has penetrated deep into the Earth, forming a distinct layer known as the E prime layer. In the light of this statement explain the interior of earth. (10 marks, 150 words)

E prime layer was recently discovered in the outer core, changing our understanding of earth's core



Crust - contain uppermost part

Mantle - second layer with broken lithospheric plates.

core - molten lava

Candidates must not write on this margin

2

circulation result in earth's
electromagnetics

Candidates
must not
write on
this margin

FORTUNE IAS ACADEMY

2. India has to move from Green Revolution to Evergreen Revolution. Comment (10 marks, 150 words)

Candidates must not write on this margin

Green revolution in 1960s helped India to transform from ship to mouth economy to food secure nation.

Issues in Green revolution.

ECOLOGICAL

- ① Reduced soil fertility due to high fertilizer use
- ② Eutrophication led water pollution

POLITICAL

- ① Skewed focus to western India

ECONOMIC

- ① Reduced focus on other agri-product like millet, pulse

thus, India need an Evergreen Revolution

- ① Increased focus on organic production eg Sikkim model
- ② Equal focus on all region including North East

③ Focus on climate resilient agri

eg Tripura - Rice intensification

④ Focus on doubling income

of farmers eg PM KUSUM

Annadata → Ujjadadata

⑤ Technology oriented farming

eg drone use for pest, crop analysis

Way Forward

① Improving MSP of climate resilient products

eg Millets - Shree Anna

② Direct Benefit Transfer for

improving agriculture production

eg PM KISAN

③ Promoting new age agriculture through FPOs eg Hydroponics.

Evergreen revolution can develop India as a hub of climate resilient Agriculture.

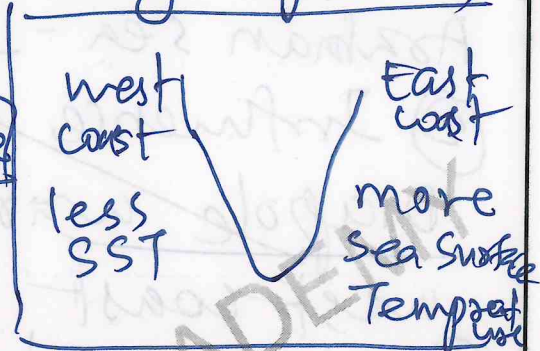
3. Historically cyclones were more confined to Eastern coast of India, but there is a rising trend of cyclones over Western coast. Explain (10 marks, 150 words)

Candidates must not write on this margin

Cyclones are low pressure system with spinning upward cause rainfall

Historically cyclones

more in west-coast because



- ① Increased temperature of Bay of Bengal
- ② Increased El Nino Influence on East
- ③ East coast being an emerging coast

④ More migration of ITCZ and wind shear effects on cyclone
↓ lesser in BoB.

Rising cyclones in West coast

In 2019, 5 out of 8 cyclones were in West coast

→ cyclone Biparjoy in Gujarat coast

Reason

- ① Marine heatwave induced temperature increase of Arabian sea - 0.7°C $\uparrow$ in 2023
 - ② Influence of Indian Ocean Dipole warming the west coast
 - ③ Increasing urbanization induced warming in west coast cities or
 - ④ Reducing effect of western disturbance due to climate change
- thus, cop 28 emphasize on global warming effect on climate change need to be recognized and Pans 1.5°C goals need to be achieved

4. Examine the geo-strategic significance of the Red Sea region for the world.
(10 marks, 150 words)

Candidates
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write on
this margin

Red sea connects Africa and
Arabian peninsula through
Babel mandeb strait

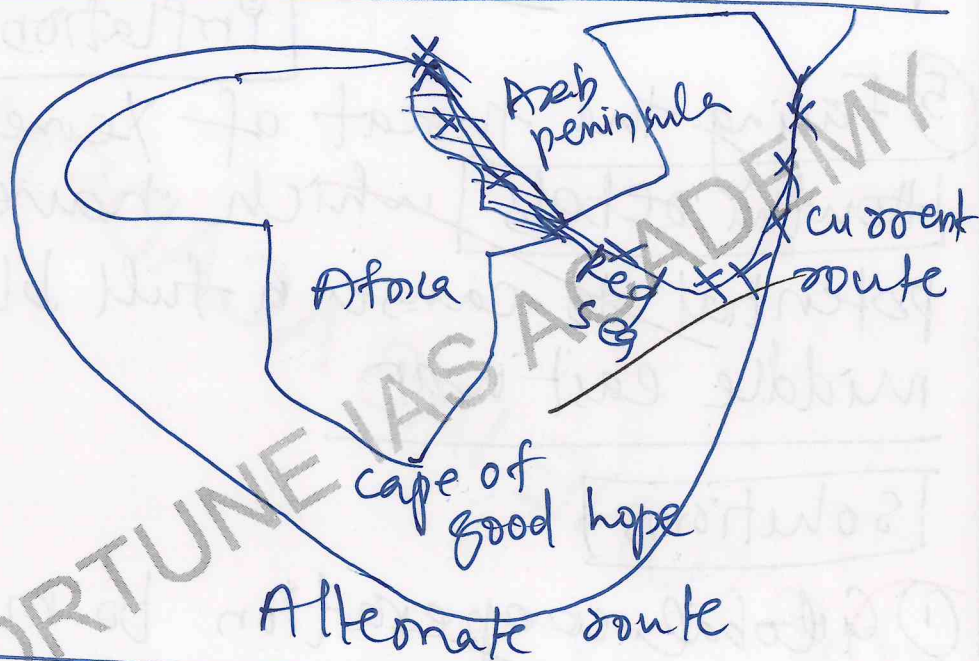


Fig. Red sea

Geostrategic significance

- ① Easiest trade route to reach Mediterranean - Cape of good hope route is long.
- ② Conde oil export which has ripple effect on Indian economy

③ Gateway to connect trade
of Europe, Asia and Africa

④ Disruption in trade here has
potential to cause global inflation

⑤ Facing the threat of Yemeni
Houthi rebels which have
potential to cause a full blown
middle east war

Solutions

① Global cooperation to make
chokepoints like this as
global common

② Negotiation & peace efforts
mediated by countries like
India

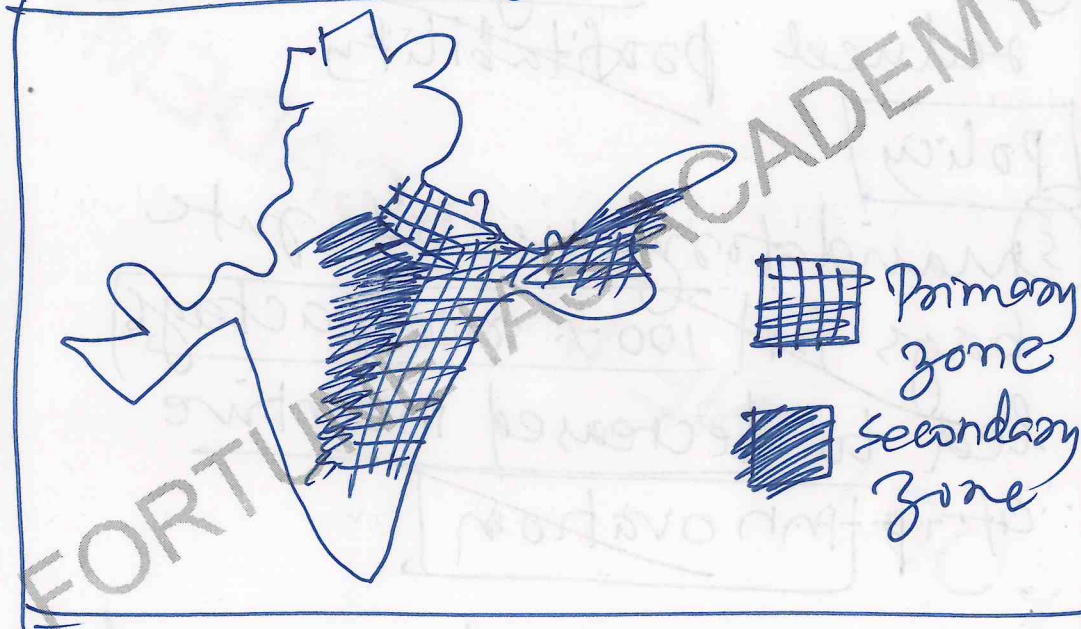
Though US's Operation
Prosperity Guardian is there,
a peaceful diplomatic solution
is the need of hour

5. Identify the jute producing areas and discuss the major causes of decline of jute mill industry in India. (10 marks, 150 words)

Candidates must not write on this margin

Jute is a tropical crop that need high rainfall and temperature.

Jute producing areas



Causes of decline

- ① Historical → Jute mills went to East Pakistan at time of partition
- ② International → competition from Bangladesh like countries

③ ECONOMICAL

Less profitable due to emergence
of alternatives like artificial
nylon fibre.

④ Increased wage demand
reduced profitability

Policy

⑤ Mandatory use of jute
bags for 100% rice package
led to decreased incentive
of innovation

Way forward

→ Technology upgradation

→ Focus on new age
products like textile clothes

→ Do away 100% rice bag
restriction

Jute industry can act as India's
backbone in ¹² export economy —
Bangladesh can be taken as a
model

6. Green GDP emerges as an alternative metric for gauging economic growth which takes into consideration the environmental consequences linked to economic activities. In this context, discuss the issues in shifting to Green GDP paradigm in India. (10 marks, 150 words)

Candidates must not write on this margin

Green gdp emphasize on
taking into account the
environmental damage while
gdp growth

Issues in shifting

- ① Quantifying green gdp
need specific accounting
tools
- ② Developing countries haven't
achieved their peak level
development yet — thus
common but differentiated
responsibility not achieved
- ③ Green washing threat by
corporates

④ No global consensus on how to calculate and what is good emission & bad emission

⑤ Double counting

Yet, green gap help us in achieving Sustainable development

②

7. Invasive alien species are a major threat to biodiversity. Comment. (10 marks, 150 words)

Candidates must not write on this margin

Invasive Alien species significantly affect target regions Biodiversity by eliminating native species

Issues of IAS expansion

① Eliminate ~~natural~~ gene pool of target region

② Environmental degradation

eg water hyacinth → water pollution

③ Threat to agriculture

eg African snail in Indian crops.

④ Natural balance of ecosystem lost

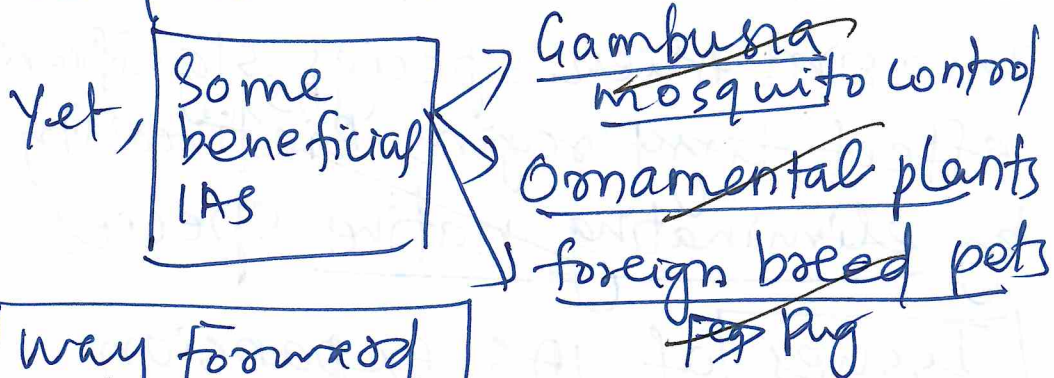
⑤ Threaten species

eg Lantana Camara threaten elephant reserves

⑥ Resource ¹⁵ crunch

eg Eucalyptus trees

lead to water suction



way forward

- ① Strict quarantine measures & guidelines applied in Airports
 - ② Ballast water of ships to be contamination free of invasive species
 - ③ Manage already spread
eg Kumbhi Mela form water hyacinth
 - ④ strict ban on introduction of IAs to natural ecosystem
- controlling invasive species threat as one of 23 targets of Kunming-Montreal
- CBD is a stepping stone

8. The recent Forest Conservation Amendment Act of 2023 has complex issues related to forest governance, indigenous rights, and environmental security. In this context, Analyse the features of Forest Conservation Amendment Act 2023. (10 marks, 150 words)

Candidates must not write on this margin

Forest Conservation Amendment Act
changed the forest governance
landscape of India

Features of Act

- ① Aligning with net zero 2070 goal - mentioned in act's preamble
- ② Balance development vs ecology debate
eg 5 hectare forest can be cleared for infra development in Left Wing Extremism Area
- ③ Scope for livelihood for tribals
eg Eco tourism allowed
- ④ National security balanced with environment
eg 100 km forest clearance near International border allowed
- ⑤ Compensatory¹⁷ Afforestation given prime importance

Complex issues in Act

I. Forest governance

- * Diluted role of goamsabha is giving approval for clearance
- * State Government need Centre approval for forest clearance

II Indigenous rights

- * Tribal rights compromised as outsiders can encroach land for ecotourism

III Environmental security

- * 100km security related forest clearance given blanket immunity

way forward

→ more power to Goamsabha for approval

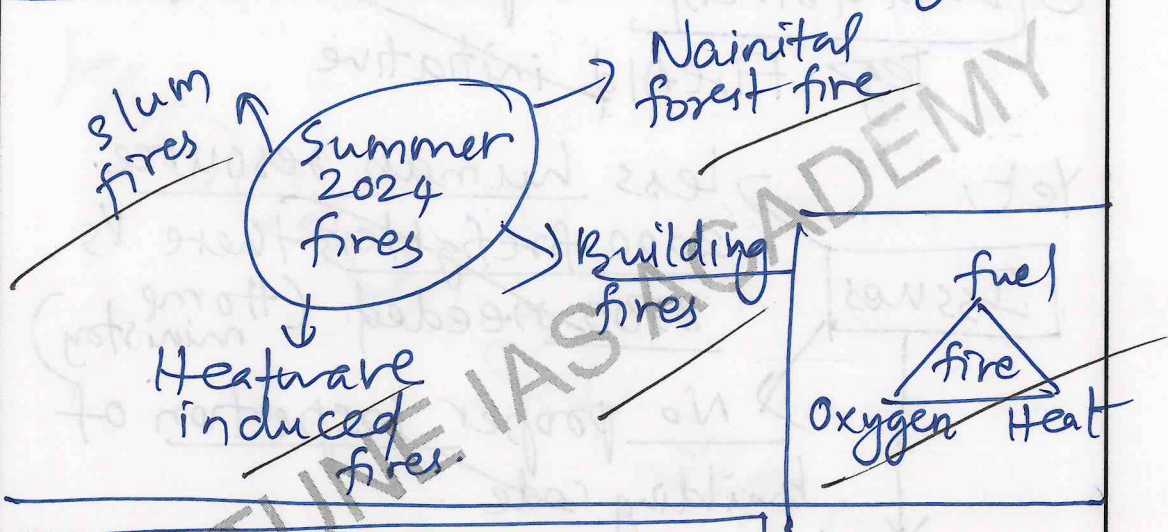
→ Consultation with stakeholders while implementing

The new bill need to balance security of nation with tribal rights & environmental protection

9. In the summer of 2024, India had witnessed many fire hazards in different parts leading to many lives being lost. In this context, analyze the fire preparedness and mitigation measures in India and suggest improvements. (10 marks, 150 words)

Candidates must not write on this margin

IPCC AR 6 warned that nations like India are likely to witness more fire hazards due to climate change



Preparedness & Mitigation measures

- ① BIS fire code to be applied to every building
- ② Proper inspection of buildings & ensuring fire code
- ③ Fire fighting devices, emergency exit to be ready.
- ④ Training people, give awareness

and mock drills

⑤ Technology like Lidar for monitoring and water mist device for firefighting

⑥ Data driven hotspot tracking
eg FireAid initiative

Yet,

Issues

→ Less human resource
2000 firefighters there vs
8500 needed (Home ministry)

→ No proper inspection of
building code.

→ concentration of fire fight
capability in urban area

Solutions

① Improve human resource
capability of fire fight

② Train labourers, common
people

③ Use of technology in fire fight

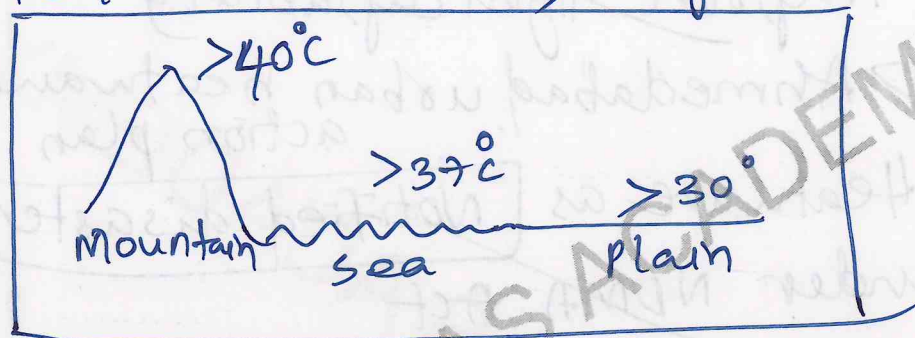
Improving UNEP fire
ready formula = 66% of fund for
mitigation & 33% of fire fight can be used

10. India had recently gone to elections amidst heatwave warnings. In this regard, explain what a heatwave is and discuss the strategies to manage heatwaves in the coming years. (10 marks, 150 words)

Candidates must not write on this margin

Heatwave represent the increase of temperature from normal of a region eg Hawaii heatwave 105°F

Heatwave condition, temperature

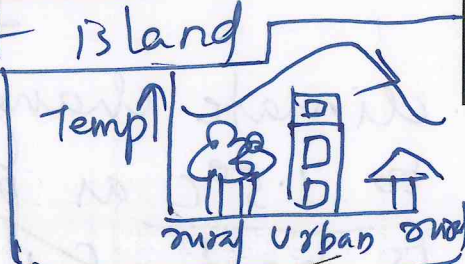


Heatwave & election

- decrease voter turnout
- silent killer - affect health
- Increase in fund needed for parties to fight heatwave.

Strategies to manage heatwave
climate change mitigation

① Increase Afforestation to counter urban heat island



② Strategies to reduce the temperature

Policy ~~eg~~ Telengana cool roof policy

③ ~~Urban~~ Heatwave action plan
to improve ~~fight~~ capability

~~eg~~ Ahmedabad urban heatwave
action plan

④ Heatwave as Notified disaster
under NDMA Act
short term measures

⑤ Aware people about
consequences

~~eg~~ TV Ads featuring do's & don't's

⑥ Behavioural change and acts
to mitigate heatwave

~~eg~~ water breaks in ~~many~~ schools
of Kerala

In the era of
climate change, reducing temperature
to 1.5°C as per Paris commitment
is need of hour

52

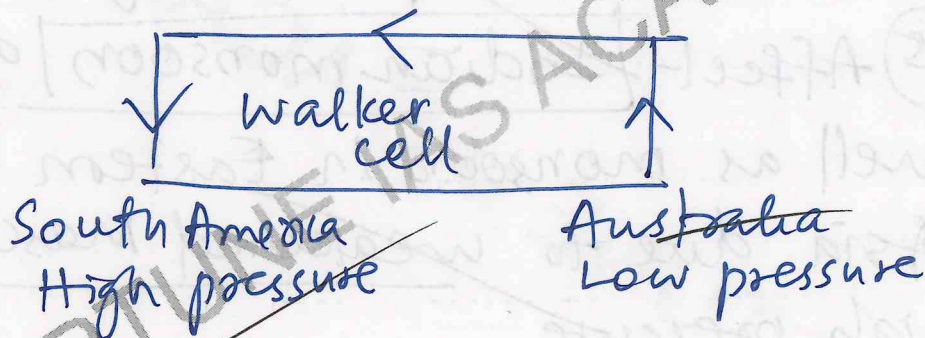
SECTION: B

11. What is El Nino? Discuss its impact on global weather patterns and how do they affect economy of India? (15 marks, 250 words)

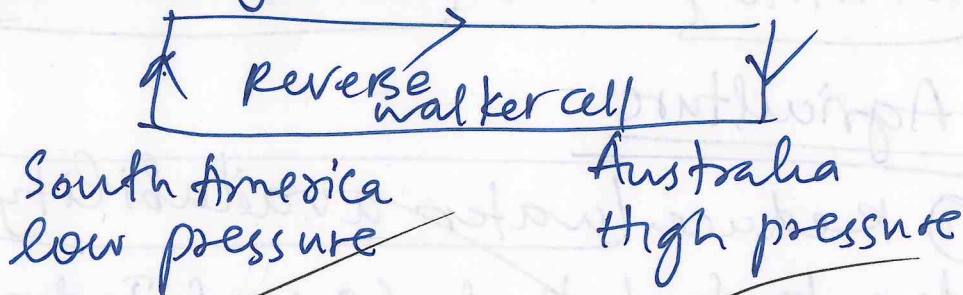
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El Nino is a climate pattern that occur due to differential heating of pacific ocean lead to Reverse walker cell

Normal year



El Nino year



Impact of El Nino in Global weather pattern

- ① Cause drought in Australia

due to dessication effect

② Heavy rainfall & flood in Peru coast

③ Reduced fish catch in Peru coast affect its economy

④ Cause heatwave and marine heatwave in pacific regions

⑤ Affect Indian monsoon as well as monsoon in Eastern Asia due to weakened Mascarene high pressure

El Nino affect Indian Economy

Agriculture

① Reduce water availability due to fact that 60% of Indian agriculture is rainfed

② Reduced agricultural productivity lead to loss for farmers

③ drought condition lead to crop loss for farmer -

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Market economy

① reduced production lead to food inflation which will lead to reduced purchasing power of common man.

② El Nino induced heatwave reduce worker productivity (6% loss as per ILO) affect worker income.

Livestock

① Affect livestock health and thereby reduction of milk product, diseases etc.

Strengthening farmer insurance like PM Fasal Bima and changing to climate resilient agriculture can help mitigate effect of El Nino in upcoming years

12. The blue economy encompasses sustainable use of ocean resources for economic growth, environmental preservation, and societal well-being. In the light of this statement, what is India's potential in this regard, challenges that persist and measures India has taken? (15 marks. 250 words)

Candidates must not write on this margin

World Bank define Blue economy as sustainable use of ocean resources without affecting nature ocean's equilibrium

India's potential in Blue economy

I. Sustainable use

I. for Economic growth

① Resource potential of ocean

eg Poly Metallic Nodule

② Sea bed mining opportunity

eg India got approval for cobalt mining in Aray Nicotin Basin

II for Environmental preservation

① Deep Ocean mission - for ocean literacy help in conservation
eg Samudraayan

② Sustainable use of ocean resources ~~eg~~ sea weed park
Ramanatha puram

III Social wellbeing

① Empowering local coastal population ~~eg~~ sea ranching
instead of trawling for fishing

challenges that persist

ECOLOGY

① May affect sea bed composition
due to mining

② Destruction of flora & fauna
in ocean

~~eg~~ Dredging for port led to
mass bleaching of coral.

Technology

① Reduced capability of tech
availability for harnessing resource
~~eg~~ Unable to mine methane
hydrate in ocean bed.

Candidates
must not
write on
this margin

Social

- ① Resistance from coastal population
eg Protest against Vizhinjam port

Measures India has taken National

- ① Deep Ocean Mission for ocean literacy
- ② Chennai declaration of 420 on Blue economy
- ③ Sagarmala project
- ④ New age devices for Ocean exploration eg Varaha, Samudra Ratnakar like devices

International

- ① India - Norway Blue economy task force
- ② SAGAR doctrine as net security provider

Harnessing Blue economy is crucial to harness
SDG 14

13. What are the characteristics of monsoon? How India's monsoon rain pattern has been changing amid climate change? (15 marks, 250 words)

Candidates must not write on this margin

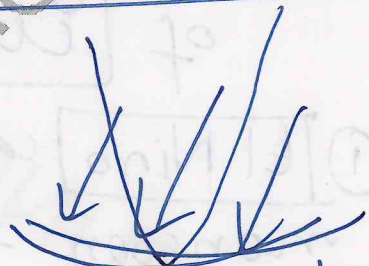
55% of Tehsils in India experienced increase in monsoon rainfall while 11% faced decline (IMD) which shows climate change effect on monsoon

Characteristics of monsoon

- ① ITCZ migration causing the arrival and withdrawal of monsoon



South West Monsoon



North East Monsoon

- ② Monsoon break due to differential pressure

- ③ Different amount received in different parts as per geography of region

eg Western Ghats receive more due to blockage of wind.

④ Differential heating of land
mass attracting monsoon wind
to India

⑤ Influence of Mascrene High
pressure and Tropical easterly
jet stream on monsoon.

changing monsoon in midst
of climate change

① El Nino causing decreased
monsoon fall & frequency of
El Nino increasing

eg earlier El Nino once 5-7 years
to now 1-3 years

② Reduced snowfall in arctic
as well as tibetan plateau
affect monsoon pattern

③ Increased particulate matter
in atmosphere act as condensation
nuclei causing heavy rain

④ Increased cyclone disrupting
monsoon fall due to increased
sea surface temperature

eg 5 out of 8 cyclones in
2019 was in Arabian sea.

changes in rainfall pattern

① 2023 saw a below average
monsoon

② 55% area saw increase in rain
while 11% saw decrease

③ Traditionally low monsoon
region get increased rainfall
eg 10% increase in Tamil Nadu

④ North East region saw decrease
in rainfall

⑤ Disrupted western disturbance
reducing winter rainfall in
North India

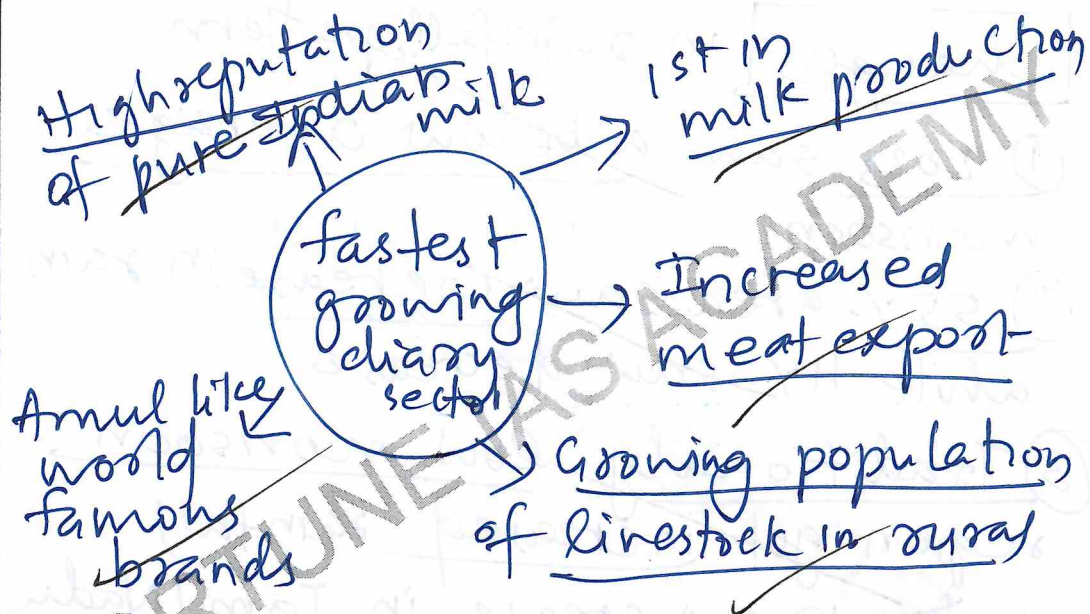
Achieving 1.5°C
aim of Paris is necessary to
mitigate & bringst back the
'normal' monsoon pattern of
India

6/2

14. India's dairy industry has become one of the fastest growing areas of the countries agricultural sector. Examine its opportunities and challenges? (15 marks. 250 words)

Candidates must not write on this margin

India's dairy sector stands first in milk production in world and contribute to 5% of India's GDP



Opportunities of India in dairy
Export opportunity

① Being high in production, processed milk export can improve trade balance
farmers'

① A way to double income

through mixed farming opportunity

② fallow grassland can be converted to grazing fields which reduce cost of dairy farm

③ Cowdung as a manure.

Supply chain

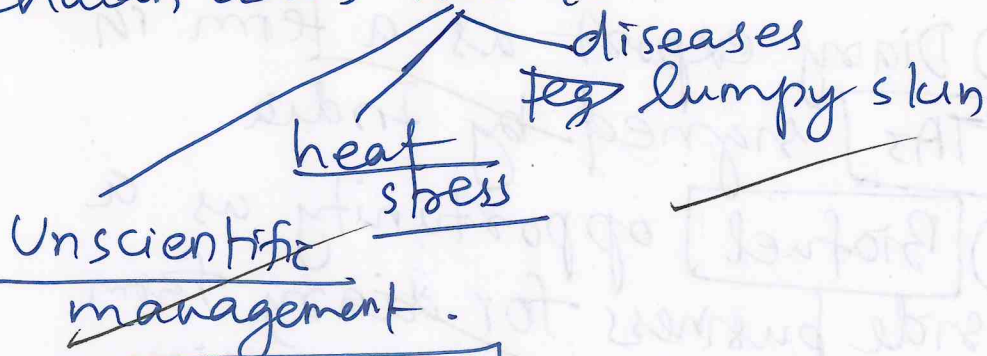
① chain of FPOs, Cooperatives like Amul can support farmers in scientific livestock management.

Challenges of dairy farm.

Productivity

① Reduced productivity of

Indian cows due to



② Decentralized production and distribution³³ disrupt the export like opportunity of milk

Other

- ① Loss of grazing field due to urbanization and population pressure
- ② Loss of genepool of indigenous cows like Gir replaced by foreign breed like Jersey.

Way Forward

- ① Scientific training of farmers through FPOs in Artificial Insemination, hygiene practice
- ② Connect APEDA like export promotion bodies to farmers
- ③ Dairy export as a term in FTAs signed by India
- ④ Biofuel opportunity as a side business for dairy farm
eg. GoBARdhan mission

Dairy farm promotion help achieve aim of doubling farm income aimed by dalwai committee

15.

What are the factors affecting ocean currents and what are the impacts of ocean currents on coastal ecosystem? How is climate changing affecting the ocean currents? (15 marks, 250 words)

Candidates must not write on this margin

Ocean currents are thermohaline circulations in ocean that help in heat budget of planet

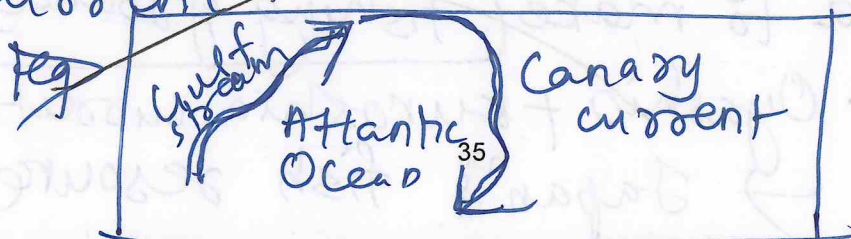
Factors affecting Ocean current

① Temperature of Ocean water
eg High temperature in tropics cause North Equatorial current

② Salinity difference of water creating a current

③ Wind system carry ocean current to distant frontiers
eg trade wind carry south Equatorial current

④ Coriolis force lead to change in direction of ocean current



⑤ Modifying factors like shape
of coast $\rightarrow$ Cape of Sao roge
modify Brazilian current

Impact of Ocean current
on climate on coastal ecosystem

① Modify temperature of
the destination region

$\rightarrow$ Gulf stream keeps norwegian
countries warm

② Form Fog creation due to mixing
of warm and cold current

$\rightarrow$ Newfoundland fog

③ Balance thermohaline budget
of planet

On Economy

① Mixing cold and warm current
lead to make fishing grounds

$\rightarrow$ Oyashio + kuroshio current
 $\rightarrow$ Japan's ¹³⁶ fish resource

② Port access due to ocean current brought warm water from tropics eg Murmansk port of Russia kept ice free.

Climate change affect Ocean current

① Marine heatwave due to increased temperature collapse the thermal balance

② Arctic ice melt increasing fresh water availability disrupting ocean current circulation

③ Salinity pattern affect the circulation of ocean current as a result of temperature change

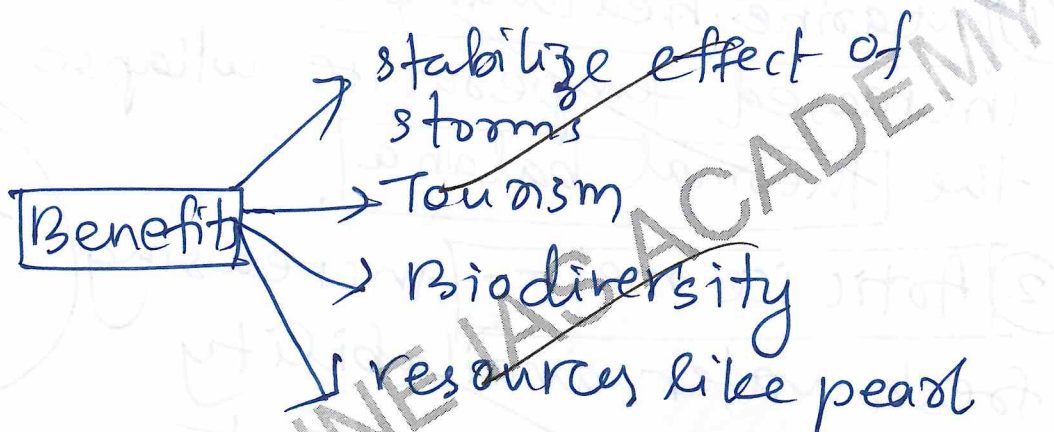
④ Increased El Nino & cyclone like features disrupting circulation

COP 28 has recognized the importance of protecting natural circulations' impact on climate change & called for mitigation

16. Comment on the threats that jeopardizes the existence of Coral reefs worldwide. Enumerate the initiatives taken at national and international levels to protect coral reefs. (15 marks, 250 words)

Candidates must not write on this margin

Coral reefs are symbiosis of coral polyp & zooxanthellae occupy 0.5% of sea land with 25% of marine species habitat



Threats that jeopardize coral existence

Natural threats

① Parasitic, predator organism
eg Jelly fish

② Natural storms, impacts
etc which bleach corals

③ Diseases eg Yellow band disease.

Anthropogenic threat

due to climate change

① Marine heatwaves that lead to expulsion of zooxanthellae

② Ocean acidification which reduce calcium for corals.

③ Sea level rise that cut sunlight to corals.
due to development activities

① dredging sedimentation for ports
eg 116 hectre coral reef destruction
in Galathea bay project

② Indiscriminate fishing using trawlers leading to destruction.

other

① Irresponsible tourism that destruct coral reefs.

Candidates
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write on
this margin

Initiatives

National

- ① National action plan for coastal ecosystem protection include corals
- ② corals added to Schedule I of wild life protection act giving high protection
- ③ Bio rock technology in kutch coast for rejuvenation
- ④ CRZ zone demarcation

International

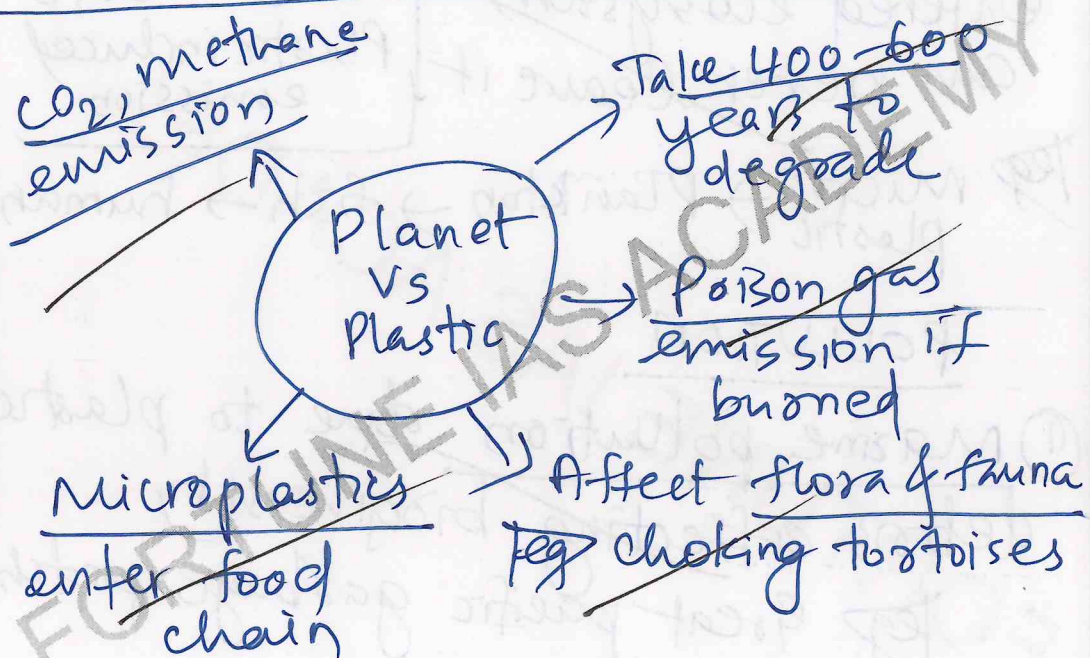
- ① 23 targets of Kunming montreal CBD include coral protection
- ② coral area like Great Barrier reef as UNESCO world heritage
- ③ Coral reef resilience initiative by UNEP

6/12 30 x 30 target to protect marine biodiversity in Kunming CBD is a stepping stone for coral protection

17. The theme for the Earth Day 2024, "Planets vs plastics" addresses one of the most pressing environment issues of our time - Plastic Pollution. In this context, discuss the need for a Global Plastic Treaty. (15 marks, 250 words)

Candidates must not write on this margin

As per FICCI, 11 kg of plastics are used, per year by Indians and thrown away emphasize the threat of plastic pollution



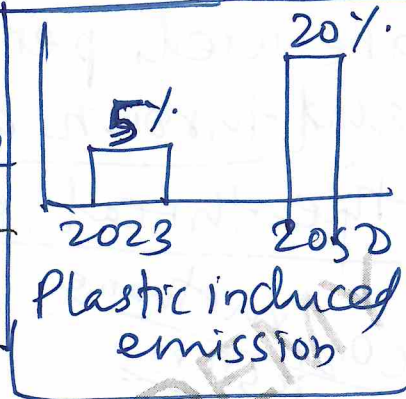
Need for plastic treaty

Plastic treaty is being negotiated at Ottawa negotiation and aim to establish legally binding target to eliminate plastic use in future

Need for plastic beauty

ECOLOGY
① Plastic induced emission lead to climate change

② Microplastics once entered ecosystems can never leave it.



eg Micro plastic → Plankton → fish → human

POLLUTION

① Marine pollution due to plastic debris affecting biodiversity

eg Great Pacific garbage patch

② Organism mistakenly choking thinking it as food

eg Hermit Crab using plastic cups as exoskeleton.

International

① Consensus oriented international effort as the only way to eliminate the menace.

Candidates
must not
write on
this margin

Issues of plastic treaty negotiation

- ① like minded countries ~~eg china, Saudi,~~
producing plastic & opposing ban

No consensus

- ② legally binding plastic treaty
not easy to implement

- ③ Opposition of corporates,
~~eg~~ Pepsico, Unilever and
petrochemical producers as it is
against their business interest

- ④ Lack of alternative for plastic
Bioplastic - just 1% production

way forward

- Increase micron limit
of plastic rather than
complete ban
→ Phase wise ban through
negotiation

Reducing plastic
pollution is ⁴³crucial in
combating climate change &
achieve SDG 13, 14, 15

6/2

18. Highlight a few solid waste management techniques. State provisions of Solid Waste Management Rules 2016 which aims to address India's growing solid waste crisis? (15 marks, 250 words)

Candidates must not write on this margin

India processes only 20% of its solid waste and rest of them end up in landfill or go uncollected

Solid waste Management techniques

POSITIVE

- ① [Waste to energy plants]
eg. Okhla plant
which act as source of renewable
- ② [Aerobic or anaerobic incineration] of solid waste
- ③ [Composting] to manage bio waste
- ④ Use of organism like [Soldier flies] to convert waste to productive things.

NEGATIVE

- ① Landfills eg. Brahmapuram
- ② Open dumpyards

Solid waste management rules 2016

Candidates
must not
write on
this margin

- ① Extended producer responsibility to companies
- ② Responsibility of local bodies to collect & segregate waste
- ③ Residence associations in urban area to use 5% of land for solid waste processing
- ④ Behaviour change in consumers to segregate waste into Biodegradable, non biodegradable and toxic.
- ⑤ Biomedical waste to be handled carefully as per WHO protocol.

India's growing solid waste crisis
mainly due to increased

population & urbanization

Challenges

- ① Lack of enough solid waste processing plants
- ② consumer behaviour not to segregate waste
- ③ Lack of fund to municipalities to proper collection & disposal of waste.

Way Forward

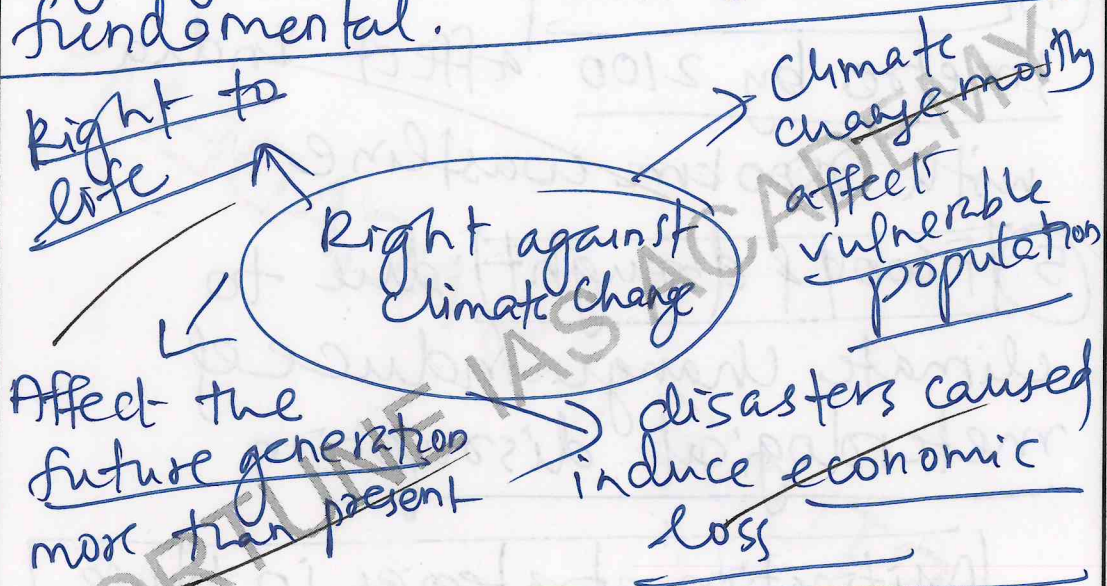
- ① Segregated collection at source
eg kakinada using RFID tag for collection
- ② Improved number of WTE plants
through viability gap fund
- ③ Incentivise consumer for behaviour change eg Germany deposit-refund scheme

managing solid waste
is crucial as 50% of India's population is expected to live in cities by 2050

19. Supreme court has recently declared 'right to be protected against climate change' as important for rightful exercise of Article 14 and Article 21 of the constitution. In this regard, identify the vulnerability of India to various climate linked disasters and evaluate the mitigation strategies in place. (15 marks, 250 words)

Candidates must not write on this margin

Supreme court's judgements since Godavarman case has highlighted climate rights as fundamental.



Vulnerability of India to climate linked disasters

① Landslide - 12% of India vulnerable aggravated by deforestation

② Forest fire - 36% of forest vulnerable - aggravated by

heatwave

③ Earthquake as positioned
in midst of Indo-European
plate

④ Sea level rise - to increase
1 metre by 2100 affect India
with 7500 km coastline

⑤ Flood & drought due to
climate change induced
meteorological disruption

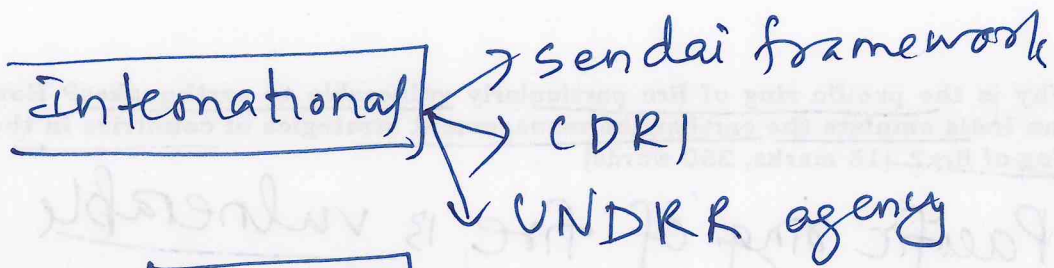
Mitigation strategies in place

① NATIONAL
NDMA Act provides guideline
for each disaster mitigation

② NDRF to assist & make use
of golden hour of disaster
reduction

③ Govt agency regulations
to prevent disasters

eg BIS code for building



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write on
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Yet, Issues

- ① Reactive rather than proactive
- ② Lack of fund and manpower faced by NDRF like agencies.
- ③ Media pressure on disaster mitigating agencies to make visible results rather than working on adaptation

Way forward

- ① More autonomy & fund to disaster managing agencies
- ② Training community as they are first responders ~~eg~~ Apadarmita scheme
- ③ Global collaboration to help disaster facing countries
~~eg~~ Operation Dosth in Turkey

49
Climate change being a global issue needs everyone's efforts to mitigate & adapt new realities

20. Why is the Pacific ring of fire particularly vulnerable to earthquakes? How can India emulate the earthquake management strategies of countries in the ring of fire? (15 marks, 250 words)

Candidates must not write on this margin

Pacific ring of fire is vulnerable to earthquakes due to the constant interaction of plate boundaries

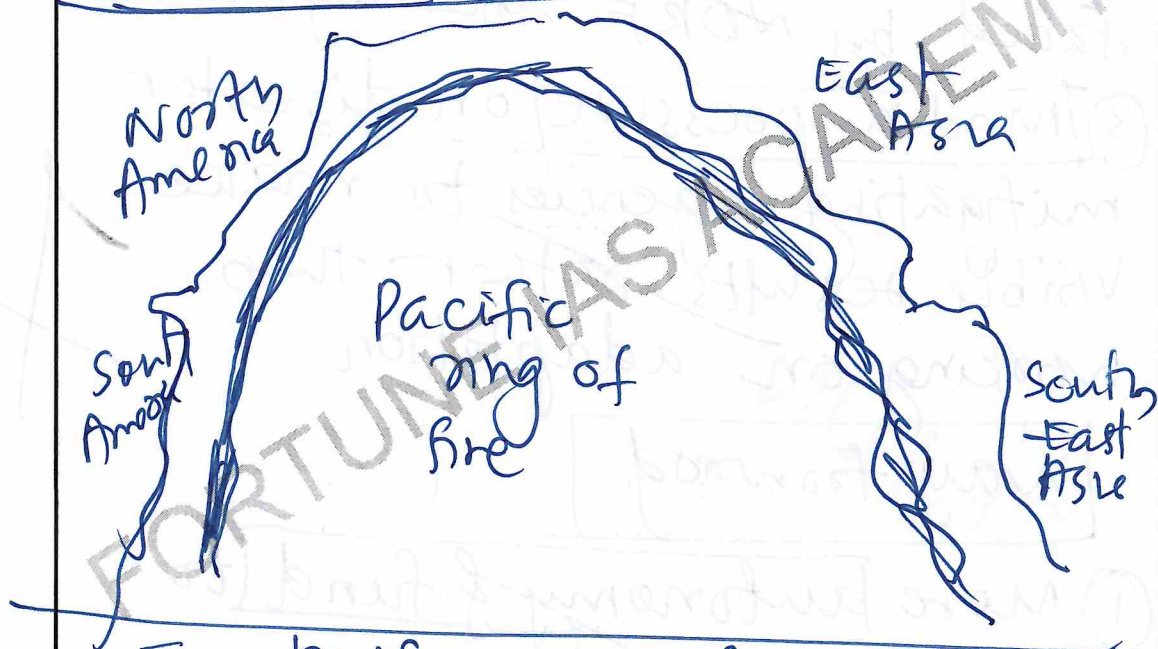


Fig- Pacific ring of fire.

Vulnerability of ring of fire to earthquakes.

- ① Divergent Boundaries
eg Mid Oceanic ridge
where plates ⁵⁰ move past each other to

cause earthquake

② Convergent boundaries

cause plate collision
which cause earthquake



Divergent boundaries

~~Continental plate~~
Ocean plate
convergent boundaries

③ Other earthquake reason

↳ Volcanic eruption induced
eruption due to huge number
of volcanoes there

eg ~~Tonga volcano eruption~~ → Tonga
Earthquake

④ Explosion induced anthro
pogenic earthquakes.

Emulating earthquake
management
of Pacific countries

① Training community on
best practices and what to
do in earthquake.

eg Japan training from school
onward

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write on
this margin

② Earthquake resilient infrastructure
for mitigation

eg Bamboo huts of Cambodia

③ Buildings correctly following
building code

④ Retrofitting weakened
building

⑤ Not allowing construction
in Earthquake hotspots

⑥ Mapping and identifying
earthquake hotspots through
GIS, technology

Yet, India face challenges like
Population pressure & tech
deficit.

But, India have to emulate
best practices - A 7 scale earth
quake in Turkey caused 50000
injured whereas same 7 scale
in Japan caused zero casualties
which exemplify the need to emulate