

Time taken: 3.5 hours

NEXT IAS

MAINS TEST SERIES 2.0 - 2025 (SLT)

(To be filled by candidate)

TEST CODE : SLT2502

Test No. : 02

Name of Candidate: Chiranshu Taneja Mobile No.

Roll No. : Start Time End Time.....

Date of Examination: 18/8/2025 Medium : English Hindi

Q. No.	Maximum Marks	Marks Obtained
1.	10	
2.	10	
3.	10	
4.	10	
5.	10	
6.	10	
7.	10	
8.	10	
9.	10	
10.	10	
TOTAL MARKS - 100		

Q. No.	Maximum Marks	Marks Obtained
11.	15	
12.	15	
13.	15	
14.	15	
15.	15	
16.	15	
17.	15	
18.	15	
19.	15	
20.	15	
TOTAL MARKS - 150		

GRAND TOTAL -/ 250

EVAL CODE: EVAL DATE:

GENERAL INSTRUCTIONS

1. Immediately on receipt of the QCA 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.
2. Candidates must mention all relevant details like Name, Email, Roll No, Mobile, etc. in the space allocated.
3. Candidate is expected to attempt all 12 questions within the given timeline.
4. Answers must be written in the medium authorized at the time of admission.
5. Candidates must write answers for the specific question under the respective question itself. Any answer written outside the space allotted may not be given credit.
6. Please write neatly. Avoid illegible writing.
7. Do not write/mark irrelevant matters in the QCAB.

सामान्य निर्देश

1. QCA पुस्तिका प्राप्त होने पर कृपया तुरंत जांच लें कि इस QCA पुस्तिका में कोई पृष्ठ या सामग्री आदि गलत छपी हुई या फटी हुई या गायब तो नहीं है। यदि ऐसा है, तो इसे एक नई QCA पुस्तिका से बदल लें।
2. अभ्यर्थियों को सभी प्रासंगिक विवरण जैसे नाम, ईमेल, रोल नंबर, मोबाइल नंबर आदि का आवंटित स्थान पर उल्लेख करना होगा।
3. अभ्यर्थियों से अपेक्षा की जाती है कि वह आवंटित समय-सीमा के भीतर ही सभी 12 प्रश्नों के उत्तर-लेखन का प्रयास करें।
4. प्रत्येक उत्तर, प्रवेश के समय चुनी गयी भाषा के माध्यम में ही लिखे जाने चाहिए।
5. अभ्यर्थियों को विशिष्ट प्रश्न के उत्तर संबंधित प्रश्न के नीचे ही लिखने होंगे। आवंटित स्थान के बाहर लिखे गए किसी भी उत्तर को क्रेडिट नहीं दिया जाएगा।
6. कृपया साफ-सुथरा लिखें। अपठनीय लेखन से बचें।
7. QCAB में अप्रासंगिक तथ्यों को न लिखें / न ही चिह्नित करें।

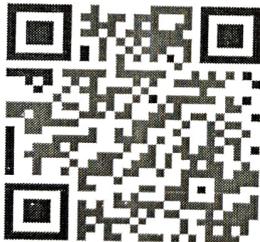
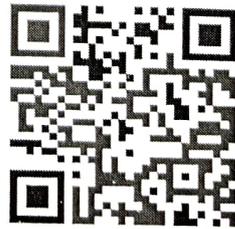
REMARKS:

<u>Student Concerns / Query</u>	<u>Evaluator's Feedback / Response</u>
1	1
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2	2
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3	3
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MARKING SCHEME *			
Marks Per Ques	Below Average	Average	Above Average
10 Marks	Below 3.00	3.00 - 3.75	4.00 and above
15 Marks	Below 4.50	4.50 - 5.75	6.00 and above

* Subject to change without prior notice.

IMPORTANT QR CODES

 <p style="margin-top: 10px;">Topper's Copy</p>	 <p style="margin-top: 10px;">Common mistake and Correct Filled QCAB</p>
 <p style="margin-top: 10px;">Copy Scanner App</p>	 <p style="margin-top: 10px;">Next IAS Test Centre Location</p>

MACRO COMMENTS

The Purpose of MTS 2.0 Score Improvement Program (SIP) is to provide constructive suggestions on 'How to improve Answer Writing and thereby score better marks.

Q1.

Introduction	Body	Conclusion

Q2.

Introduction	Body	Conclusion

Q3.

Introduction	Body	Conclusion

Q4.

Introduction	Body	Conclusion

Q5.

Introduction	Body	Conclusion

Q6.

Introduction	Body	Conclusion

Q7.

Introduction	Body	Conclusion

Q8.

Introduction	Body	Conclusion

Q9.

Introduction	Body	Conclusion

Q10.

Introduction	Body	Conclusion

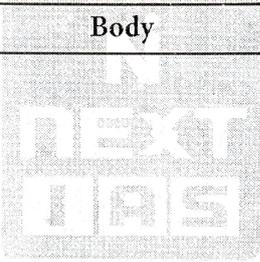
Q11.

Introduction	Body	Conclusion

Q12.

Introduction	Body	Conclusion

Q13.

Introduction	Body	Conclusion
		

Q14.

Introduction	Body	Conclusion

Q15.

Introduction	Body	Conclusion

Q16.

Introduction	Body	Conclusion

Q17.

Introduction	Body	Conclusion

Q18.

Introduction	Body	Conclusion

Q19.

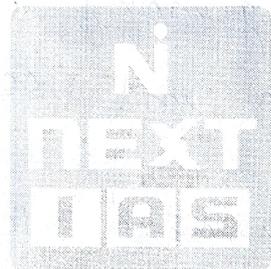
Introduction	Body	Conclusion

Q20.

Introduction	Body	Conclusion

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Handwritten text in the middle section, possibly starting with "The".



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NEXT IAS

Candidates must
write on this margin

1. "शीत युद्ध एक सैन्य टकराव की अपेक्षा अधिक एक विचारधारात्मक संघर्ष था।" विश्लेषण कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक
- "The Cold War was less a military confrontation and more a battle of ideologies." Analyse.
(Answer in 150 words) 10 Marks

Cold War was an era of global bipolarity that started post world war-II and culminated with dissolution of USSR in 1991.

Ideological battle

- ① Battle for hegemony between US' Capitalism and USSR's Communism
- ② Both sides wanted to expand their spheres of influence
- ③ US supported democratic forces while USSR allied with authoritarian regimes.
- ④ It was also a cultural war of dominance between West's modern liberalism and East's conservatism

⑤ Both superpowers used propaganda to influence global populace.

Nonetheless, it still saw the two sides engaging in military conflicts.

① Proxy wars \rightarrow South Korea support -ed by US & North Korea by USSR

② Alliances and treaties

\rightarrow NATO vs Warsaw Pact

③ Arms Race with nuclear stockpiling

④ Almost reached brink of a war during Cuban Missile Crisis 1962

Thus, Cold war was a period of ideological battle which saw few episodes of military confrontations (like Vietnam) but otherwise remained off the battlefield.

2.

आपातकाल (1975-77) के भारतीय लोकतंत्र एवं नागरिक स्वतंत्रताओं पर प्रभाव का समालोचनात्मक परीक्षण कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक
Critically examine the impact of the Emergency (1975-77) on Indian democracy and civil liberties.
(Answer in 150 words) 10 Marks

A National Emergency was imposed in 1975 by the President's Proclamation (Art 352) Owing "internal disturbances".

Impact of Indian democracy

- 1) Era of darkness after being a lighthouse for decolonised world for three decades.
- 2) Brought forth lacunae in constitutional provisions to protect democracy.
- 3) Led to widespread public awakening and realization of importance of democracy
- 4) Trust in judiciary was at an all-time low post ADM Jabalpur judgement.
- 5) Subsequent to its removal in 1977 and

loss of then-govt in the elections, political class never tried to use these provisions again.

Impact on civil liberties

- 1) Widespread arrests of opposition leaders
- 2) Chilling effect on voice of critics.
- 3) Freedom of press disappeared overnight
- 4) Forced sterilizations without consent
- 5) Subsequent to its removal, 44th Constitutional amendment brought in to safeguard fundamental rights.

We must remain cautious to never allow misuse of Emergency provisions and violation of liberties ever again.

3. पूर्वी घाट की भूगर्भीय विशेषताओं एवं पारिस्थितिकीय महत्व की व्याख्या कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक
Explain the geological features and ecological importance of the Eastern Ghats.
(Answer in 150 words) 10 Marks

Eastern Ghats is a loose chain of mountains and hills ^{along} ~~across~~ India's eastern coast in Bay of Bengal from Tamil Nadu to Odisha.

Geological features

- ① Chain of mountains
- ② Broken at several places by rivers eg Krishna, Godavari
- ③ Wide coastal plains which experience orographic rainfall during North-east monsoon.
- ④ The height of mountains varies from 1km to 3km above sea level.
- ⑤ Mountain slopes are covered with laterite soil providing optimal

Conditions for plantation agriculture.

eg → Coffee, tea, rubber, spices.

Ecological importance

- ① Rich biodiversity and presence of multiple national parks and wildlife sanctuaries
- ② Protect the peninsular India from cyclones emerging in Bay of Bengal
- ③ Ecological services through forests and grasslands on their foothills.
- ④ Regulate the coastal climate by causing orographic rainfall
eg → Kaveri basin

Thus, Eastern Ghats play a crucial role in ecosystems of coastal areas.

4.

विशाल नदी प्रणालियों के बावजूद भारत एक गंभीर मीठे जल संकट का सामना कर रहा है। इसके कारणों की चर्चा कीजिए तथा स्थायित्व हेतु एकीकृत जल संसाधन प्रबंधन रणनीतियों का मूल्यांकन कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

India faces a looming freshwater crisis despite its vast river systems. Discuss the causes and evaluate integrated water resource management strategies for sustainability.

(Answer in 150 words) 10 Marks

Water availability in India has come down drastically from over 5000 m³ per capita in 1951 to 1500 m³ in 2021.

Causes of freshwater crisis

- ① Lack of rain^{water} harvesting: Out of the 4000 billion m³ of rainfall, India collects only 250 billion m³ i.e. < 6%.
- ② Discharge of industrial effluent into rivers makes them polluted.
- ③ Surface run-off from agricultural fields with excessive fertilizers causes eutrophication, deteriorating water quality.
- ④ Water-guzzling crops being sown even

Candidates must
write on this margin



in water-scarce areas of Rajasthan.

- ⑤ Negligent civic attitude towards water wastage due to free access.

Integrated Water Resource Management

- ① IWRM strategies involve a holistic approach to ensure sustainable use.
- ② Water conservation measures are implemented across the whole of the watershed area.
- ③ Communities are engaged through Capacity building programmes.
- ④ Efforts are made to treat ^{waste-}water locally before its discharge to rivers or lakes.
- ⑤ Overexploitation is avoided through recycling and reuse.

IWRM strategies like Jal Shakti Abhiyan is a step in the right direction.

5. दक्कन और छोटा नागपुर पठार की भौतिक विशेषताओं एवं संसाधन संभावनाओं में क्या भिन्नताएँ हैं? स्पष्ट कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक

How do the Deccan and Chotanagpur plateaus differ in their physical characteristics and resource potential?
(Answer in 150 words) 10 Marks

India's rich mineral deposits
are primarily concentrated in two
plateaus - Chotanagpur and Deccan



Fig. The
Deccan &
Chotanagpur
Plateau

Physical Characteristics

- Deccan :
- 1) Height of over 800m
 - 2) Hard rock structure
 - 3) Formed of magma - flood basalt province

- Chotanagpur :
- 1) Igneous as well sedimentary rocks
 - 2) Taller than Deccan

Resource Potential

Deccan

- 1) Known for iron: magnetite & haemetite
- 2) Covered with black soil which supports cotton cultivation
- 3) Metallic mines present in abundance because formed of basic lava
- 4) Supports huge populations through agriculture and rivers.

Chotanagpur

- 1) Known for coal as well as iron
- 2) Covered with extensive forests, supports tribals.
- 3) Aluminium, Copper, Manganese etc mines are abundant
- 4) Origin of several rivers: hydroelectric potential

Both the regions have huge potential for development. Need to invest to increase mining contribution to GDP.



6.

पूर्ववाहिनी एवं पश्चिमवाहिनी नदियों की विशेषताओं की उपयुक्त उदाहरणों सहित तुलना कीजिए। भारत में अधिकांश नदियाँ पूर्व की ओर क्यों बहती हैं? स्पष्ट कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक

Compare the characteristics of east-flowing and west-flowing rivers with suitable examples.
(Answer in 150 words) 10 Marks

Why do most rivers in India flow eastward?

Peninsular India is overlain with several rivers which flow either into Arabian sea or Bay of Bengal

East-flowing rivers

① Longer lengths

eg Godavari

② Form deltas

eg Krishna

③ Flow through eastern coastal plains

eg Kaveri

④ Waterfalls in youth stage

eg ~~Teg falls~~ Kaveri

West-flowing rivers

① Shorter stretches

eg Mandavi (Goa)

② Usually estuarine in nature

eg Narmada

③ Flow along the steep slopes of Western Ghats

eg Daman Ganga

④ Waterfalls and Cataracts in most of them eg Sharvathi

Most rivers flow eastward

- ① The peninsular India is tilted with Western side at a higher level.
- ② Western Ghats are taller than eastern Ghats
- ③ Eastern Ghats have a broken chain, providing multiple exit points for rivers.
- ④ ^{Most} Some west flowing originate in Western ghats, thereby having shorter lengths and hence are less prominent.

The characteristics of these rivers provides us a deep insight into the geological history of Indian subcontinent and its formation.

7.

आर्कटिक क्षेत्र संसाधन अन्वेषण की एक नवीन सीमांत भूमि के रूप में उभर रहा है। इस संदर्भ में भारत के लिए संभावनाओं एवं चुनौतियों पर चर्चा कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक

The Arctic region is emerging as a new frontier for resource exploration. Discuss the opportunities and challenges for India in this regard. (Answer in 150 words) 10 Marks

With the melting of Arctic ice speeding up, global powers are vying to claim its resources.

Opportunities for India

- ① Energy Security: Arctic oil reserves can diversify our energy basket.
- ② Alternate trade route: Northern Sea Route may become a reality in few years.
- ③ Study Arctic environment to predict climate change's impacts on himalayas.
- ④ Form strong diplomatic relationships with Nordic countries by assisting them in exploration.



Challenges for India

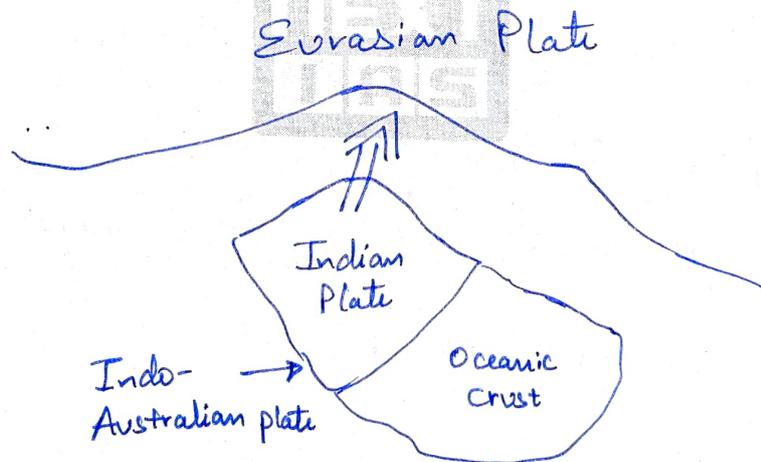
- ① Arctic exploitation will fasten up its melting, exacerbating climate change which adversely affects India.
- ② Arctic amplification will affect AMOC circulation, which can disturb monsoon pattern (study in Science journal)
- ③ India only has a observer status in the Arctic council, preventing its deep engagement.
- ④ India still lacks the laboratories and manpower for polar research.

Despite the challenges, the setting up of Ind Arc observatory and the recent Arctic Policy of the govt. highlight India's keen interest in the Arctic.

8. बंगाल की खाड़ी एवं हिंद महासागर में स्थित भारतीय द्वीपों की उत्पत्ति की व्याख्या कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक
- Explain the origin of the Indian islands in the Bay of Bengal and the Indian Ocean.
(Answer in 150 words) 10 Marks

India is flanked by two major island chains in the Indian Ocean - Andaman & Nicobar Islands and the Lakshadweep.

Origin of islands in Bay of Bengal



About 55 million years ago, when Indian Plate moving northwards, hit the Eurasian plate, the Himalayas began to rise up. The "door-shutting" mechanism led to collision of oceanic part of

Indo-australian plate with oceanic crust of Eurasian plate. The ocean-ocean convergence gave rise to volcanic eruptions which formed a chain of seamounts resulting in present-day Andaman & Nicobar.

Origin of islands in Arabian Sea

Lakshadweep was formed as the Indo-Australian plate moved over the Reunion hotspot. The rising mantle plume from the volcano gave rise to this island chain.

The origin of these island chains is deeply intertwined with the geological history of the earth.

9. अंतर्देशीय जल परिवहन किस प्रकार पूर्वी भारत की अर्थव्यवस्था को परिवर्तित कर सकता है, चर्चा कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक
- Discuss how inland water transport can alter the economy of eastern India.
(Answer in 150 words) 10 Marks

Inland Water Transport (IWT)

is considered the cheapest and cleanest mode of transport for bulk cargo.

IWT can alter economy of eastern India:

- ① Lack of road connectivity in the forest-ed parts of Andhra Pradesh, Odisha and West Bengal will find a solution in IWT
- ② It can provide huge unskilled and semi-skilled employment at the logistic nodes, preventing outward migration.
- ③ The local farmers will be able to export their produce and earn better.
eg) Makhana farmers aren't paid well



because they ^{don't} have means to export

④ Strengthen the supply chains for the mines in Chotanagpur by providing alternate routes.

⑤ Multiplier effect on the economy as ancillary industries will come up

eg → MRO operations

Challenges in realizing true potential

① Lack of uniform policies across states prevents optimal utilization

② Annual flooding of several rivers will cause temporary closures of IWT

③ Naxal^{ism}-affected districts may experience opposition to construction

⊗ Need to streamline regulatory clearances

Way forward

→ Fasten up completion of national waterways

→ Cooperative federalism

10. मरुस्थलीकरण मात्र भूमि क्षरण की समस्या नहीं है, यह वैश्विक पारिस्थितिकीय स्थिरता एवं खाद्य सुरक्षा के लिए एक मौन संकट है। चर्चा कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक
Desertification is not merely a land degradation issue; it is a silent threat to global ecological stability and food security. Discuss
(Answer in 150 words) 10 Marks

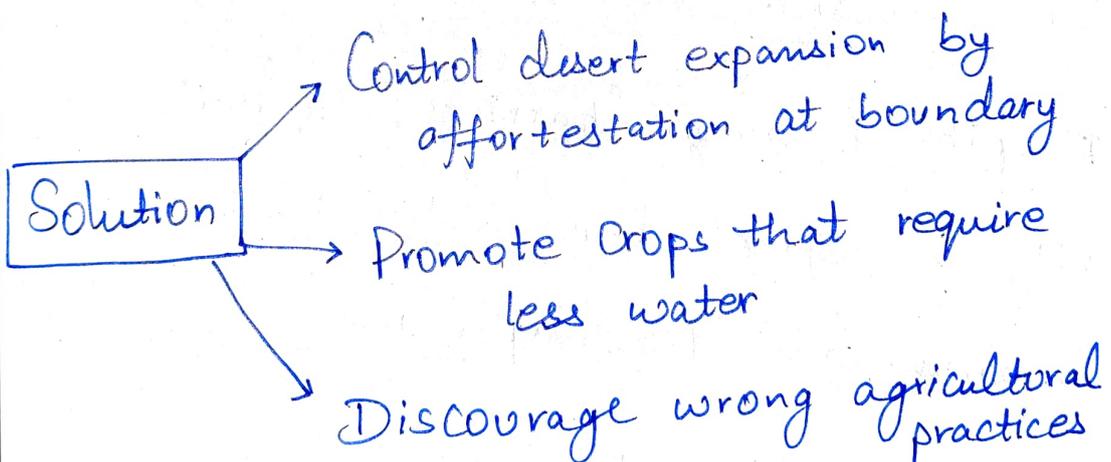
UNCCD defines desertification as land degradation in arid and semi-arid areas and the subsequent expansion of deserts due to natural and anthropogenic factors.

Threat to ecological stability

- ① Biodiversity loss as deserts expands
- ② Entire foodchain is affected as land degrades and plants die.
- ③ Surrounding climatic conditions change leading to water stress for plants and animals.
- ④ Migration of ^{mobile} species to other areas may cause 'invasion' and threat to local populations there.

Threat to food security

- ① Crops unable to survive in new temperature variations
- ② Soil loses fertility as moisture evaporates
- ③ Erosion rates increase, leaving barren land.
- ④ As plants die, herbivores dependent on them die or migrate. This affects availability of animal meat.



Need a whole-of-govt approach and community engagement in line with Abidjan declaration to combat this issue

NEXT IAS

11. "भारत की भाषायी विविधता राष्ट्रीय एकता के लिए कोई चुनौती नहीं, बल्कि इसकी सांस्कृतिक दृढ़ता का प्रमाण है।" भारत में समकालीन भाषा नीति एवं पहचान की राजनीति की बहसों के संदर्भ में चर्चा कीजिए।
(250 शब्दों में उत्तर दीजिए) 15 अंक

India's linguistic diversity is not a challenge to national integration but a testament to its cultural resilience.' Discuss in the context of contemporary debates on language policy and identity politics in India.
(Answer in 250 words) 15 Marks

Indian society is multi-linguistic with 22 official languages and over 1600+ other languages being spoken across its length and breadth

Testament to cultural resilience

- ① Presence of millenia-old languages like Sanskrit and Tamil
- ② Despite language barriers, historical unity is reflected in Kashi-Tamil Sangamam and Madhavpur Mela
- ③ Language is tied to local cultures which are now being celebrated across the nation eg Garba dance, Lohri festival

- ④ Folk-literature has ensured that history and culture of all regions are preserved
- ⑤ Language became a tool to unite people during the national movement
- eg) Congress' Provincial Committees on linguistic lines.
- ⑥ Sub-nationalism due to linguistic pride can strengthen national unity by providing a vent to separatist voices.

Threat to national integration

Debates on language policy

- 1) Some states are fiercely opposing three-language formula of NEP 2020
- 2) They perceive it as 'Hindi Imposition'
- 3) If unchecked, these opposing demands might strengthen voices for more autonomy, like 1960s

Identity politics

- 1) Using language to create insider-
outsider identity risks threatening
the national unity.
- 2) It will lead to violence against
migrants eg Recent attacks in Mumbai
- 3) It can also derail our economic progress
by threatening multi-national companies
eg Karnataka: Kannada activists forcing
MNC outlets to have Kannada nameplates

India had witnessed the
dangerous threats of politicisation of
language in 1960s. We need to address
legitimate demands and take strict
action against politicisation of this
debate to safeguard our integrity.



12.

नेतृत्व, विचारधारा एवं परिणामों के संदर्भ में रूस और चीन की साम्यवादी क्रांतियों की तुलना एवं विवेचना कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

Compare and contrast the Communist revolutions in Russia and China with respect to leadership, ideology, and outcomes.

(Answer in 250 words) 15 Marks

Russia and China, both witnessed Communist revolutions but they were marked by significant ideological differences.

Leadership

Russian Revolution	Chinese Revolution
① Started in <u>1917</u> by <u>Bolsheviks</u> led by <u>Vladimir Lenin</u>	① Started in <u>1927</u> with Chinese <u>Red Army</u> led by <u>Mao Zedong</u>
② They fought against <u>Russian Czar Nicholas II</u> and the <u>Mensheviks</u>	② They fought the <u>democratic forces</u> (<u>Kuomintang</u>)

Outcomes

① It culminated

① It ended with

in establishment of
USSR in 1922

- ② It was the
first Communist
State in the world

the establishment
of People's Republic
of China (PRC) in 1949

- ② Its creation
coincided with
beginning of Cold
War.

Ideology

Russian Revolution

- ① Leninism
- ② Urban workers
joined hands to
form a political
party to remove
monarchy.

- ③ Means of production
to be owned by the
State for sometime
before transitioning
to Stateless society.

Chinese Revolution

- ① Maoism
- ② Rural peasants
came together to
form an army to
fight democratic
forces who had
deposed Qings in 1911

- ③ Political Party
(CPC) will remain
in power and
control all the
resources

④ Reflected in
Lenin's New Economic
Policy of 1921

④ Mao's cultural
revolution indicated
the ideological
leanings of the
revolution.

Post - revolution

Russia

Stalin centralised
the power through
the Great Purge.
Eventually economy
stagnated due to
lack of reforms resul-
-ting in USSR dissoluti-
-on in 1991

China

Deng Xiaoping
Came to power
after Mao and
opened the Chinese
economy. It led
to creation of the
manufacturing behemoth that we see
today.

Both the revolutions, ^{while} ~~with~~ trying
to implement Marxist ideology in
practice, varied significantly in their
leadership and outcomes.

13.

चाय की खेती के लिए आवश्यक कृषि-जलवायवीय कारकों पर चर्चा कीजिए। इसकी उत्पादकता पूर्वी एवं दक्षिणी भारत के विशिष्ट क्षेत्रों में ही क्यों केंद्रित है? स्पष्ट कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Discuss the agro-climatic factors necessary for tea cultivation. Why is its production concentrated in specific pockets of Eastern and Southern India?

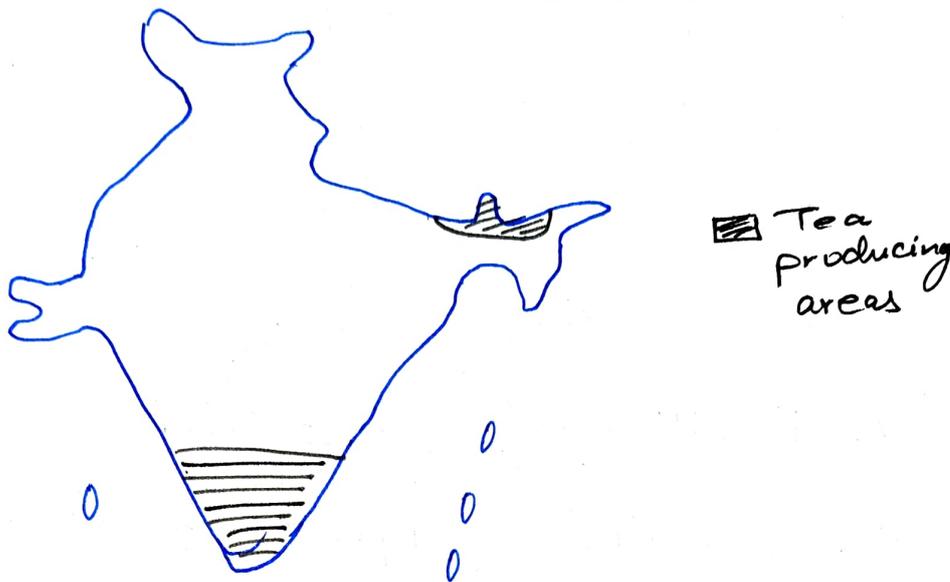
(Answer in 250 words) 15 Marks

Tea cultivation began in Eastern Himalayas in 1830s by the British and was later expanded to plantations in the Southern states.

Essential agro-climatic conditions

- ① Tea requires a hot-humid climate with heavy rainfall.
- ② There should be no waterlogging during the entire cycle.
- ③ It grows well on the laterite soil
- ④ Rainfall ≥ 150 cm
- ⑤ Temperature: $15-30^{\circ}\text{C}$

Production is concentrated in specific pockets



- ① Mountains in the Eastern and Southern states provide optimal temperature.
- ② These mountain slopes prevent waterlogging.
- ③ Laterite soil is present on the hill slopes.
- ④ Northern Himalayas witness periods of freezing ice, which tea cannot survive.
- ⑤ These regions are close to ports for exports eg Kolkata, Chennai, Kochi.

- ⑥ Historically, British started plantations here leading to creation of brand name
eg → Darjeeling tea
- ⑦ Availability of cheap labour near these regions supported setting up of plantations here.
- ⑧ Govt policies supported these existing plantations eg → GI tag

Therefore, various climatic, geographical, historical and economical factors have played a role in concentration of tea gardens in Southern and Eastern States



14. रिफ्ट घाटियाँ क्या होती हैं तथा इनका निर्माण किस प्रकार होता है? इनके भू-आकृतिक एवं आर्थिक महत्व की व्याख्या कीजिए।
 What are rift valleys, and how are they formed? Explain their geomorphological and economic significance.
 (250 शब्दों में उत्तर दीजिए) 15 अंक
 (Answer in 250 words) 15 Marks

Rift valleys are those valleys

which are found in the widening rift of the earth's crust.

Types

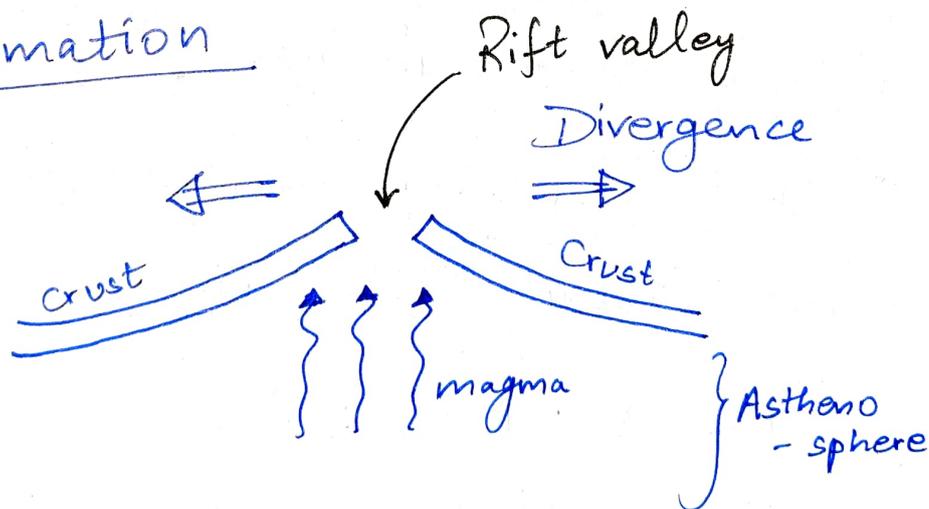
1) Continental rift valleys

eg Africa's Great Rift Valley

2) Mid oceanic rift valley

eg Atlantic ocean

Formation



Rift valleys are formed at divergent plate boundaries. It

Could be continent - continent (C-C)
or ocean - ocean (O-O) divergence.
They are accompanied by formation
of block mountains.

Geomorphological significance

- ① Their existence is a testament to
the drift of continents.
- ② Location of rift valleys tells
us plate boundaries
- ③ Their rock composition gives
insights about magma
- ④ They are usually accompanied
by rift valley lakes or rivers
eg Lake ~~Vit~~ Malawi, Africa
Narmada river, India
- ⑤ The ridges flanking them usually
forms a watershed divide

Economic Significance

① Minerals are found in these rift valleys and the nearby regions as they are formed by lava (igneous rocks)

eg → Copper mines in MP
Cement industry in MP

② They also provide natural pathways for transport through rift valley rivers eg → Tapi

Therefore, rift valley provide a deep insight into the complex working of Earth's interior.



15. 'नीली क्रांति' क्या है? भारत में जलीय कृषि के विकास से संबंधित प्रमुख चुनौतियों पर चर्चा कीजिए। इन चुनौतियों को दूर करने हेतु एक समग्र रणनीति का सुझाव दीजिए।
(250 शब्दों में उत्तर दीजिए) 15 अंक
- What is 'Blue Revolution'? Discuss the major challenges faced in the development of aquaculture in India. Suggest a set of comprehensive strategies to overcome these challenges.
(Answer in 250 words) 15 Marks

Blue Revolution refers to the intensification of aquaculture activities and the resulting increase in the produce.

India has a coastline of 7500+ km with thousands of kilometers long rivers and abundant lakes and ponds.

Still, aquaculture faces significant

challenges in its development:

- ① Outdated techniques are still being employed in rural lakes and ponds
- ② Lack of diversity in the fish species being grown by fish farmers
- ③ Poor cold storage infrastructure which is essential for perishable items

- ④ Costly feed : 70% of the money is spent on procuring feed for aquaculture.
- ⑤ Export barriers in form of SPS (sanitary & phytosanitary) measures.
- ⑥ Dearth of entrepreneurship in this sector, preventing innovation and technological advancement.
- ⑦ Lack of credit facilities to poor farmers

Strategies to overcome challenges

- ① Promote diversification
eg seaweed cultivation
- ② Assist in modernisation through schemes like PM Matsya Sampada Yojana.
- ③ Help in export clearances through Shaphari certificates

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Candidates must
write on this page

- ④ Promote climate change resilient alternatives \rightarrow Sponge farming
- ⑤ Capacity building and training
- ⑥ Provide support to new techniques like Biofloc farming (kochi)
- ⑦ Build cold storage facilities
- ⑧ e-NAM like online market for marine products
- ⑨ Provide quality feed through Kisan Samridhi Kendras
- ⑩ Encourage mariculture or sea farming in enclosures.

These measures will help strengthen the foundation for a successful Blue Revolution.



16.

हिमालय क्षेत्र में तीव्र होती हिमनद पिघलन की प्रक्रिया के साथ-साथ, हिमनदीय झील विस्फोट बाढ़ (GLOFs) नीचे की ओर गंभीर संकट उत्पन्न करती है। भारत में GLOFs से संबंधित कारणों, प्रभावों एवं निवारण रणनीतियों का विश्लेषण कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

With accelerating glacial melt in the Himalayas, GLOFs pose a severe hazard downstream. Analyse the causes, impacts, and mitigation strategies related to GLOFs in India.

(Answer in 250 words) 15 Marks

Glacial lake outburst floods

GLOFs refers to sudden flooding caused by breaching of glacial lakes which are usually dammed by unstable ice or moraine.

Recent GLOFs in India:

- 1) 2013 Chorabari (Uttarakhand)
- 2) 2021 Chamoli (Uttarakhand)
- 3) 2014 Gya (Ladakh)
- 4) 2023 South Lhonak (Sikkim)

Causes of GLOFs

- (i) Glacial lakes are formed by glacial melt that gets surrounded by moraine or ice.

- ② The boundary is often unstable and can breach due to tremors or landslides.
- ③ Warming temperatures can melt the ice leading to breach.
- ④ Avalanche too can trigger GLOF

Impacts of GLOF

- ① Widespread destruction and loss of lives downstream
- ② Unexpected flooding causes huge economic loss
- ③ Biodiversity loss as the entire ecosystem gets washed away
- ④ Can trigger land slides leading to further devastation

- ⑤ Often leads to infrastructure damage leading to loss of connectivity (roads / telecommunication)

Mitigation Strategies

- ① Artificial controlled breaching to reduce amount of water
- ② Early Warning Systems
- ③ Strict building codes in the region prone to GLOFs
- ④ Training and capacity building of communities
- ⑤ Emergency shelters should be identified in advance.
- ⑥ Mock drills of disaster response force
- ⑦ Doppler weather radar to track and detect

These measures can help reduce vulnerability to the hazard of GLOF.



17.

उपयुक्त उदाहरणों सहित भारत में लवण-कटोरियों एवं मैंग्रोव वनों के निर्माण हेतु आवश्यक परिस्थितियों की चर्चा कीजिए। ये पारिस्थितिक तंत्र तटीय सुदृढ़ता में किस प्रकार सहायक हैं, स्पष्ट कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक
Using suitable examples, discuss the conditions required for the formation of salt pans and mangroves in India. How do these ecosystems support coastal resilience?
(Answer in 250 words) 15 Marks

India's coastline has diverse ecosystems, with the notable ones being mangroves, and salt marshes, salt pans along with many other wetlands.

Formation of mangroves

eg Sundarban in West Bengal
Pichavaram in Tamil Nadu

Mangroves are formed in the inter-tidal region as these species are euveryhaline and can tolerate a ^{wide} range of salinity. They reproduce through viviparous methods and breathe through aerial roots (eg Sundari tree)

Formation of salt pans

eg Kutch (Gujarat)

Salt pans are formed in the coastal region when sea level declines and the remaining sea water evapo-rates leaving behind barren lands covered with salt.

Minerals found in salt pans: Calcium, Magnesium etc.

Support to Coastal resilience

- ① Mangroves act as a line of defence against tidal waves and cyclones
- ② Mangroves also prevent salt-water intrusion as they act as 'kidneys of the earth'

- ③ Mangroves support an entire diverse ecosystem of birds, fishes etc and also support livelihoods.
- ④ Salt pans provide vast lands which prevent waves from reaching hinterlands.
- ⑤ Salt pans support livelihoods of coastal communities through salt manufacturing and tourism.

Both these coastal ecosystems are crucial for coastal resilience