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GENERAL STUDIES (TEST CODE : 1242)

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Medium Eng./Hindi	ENGLISH	Registration Number	578108
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Q. No.	Maximum Marks	Marks Obtained
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Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are **TWENTY** questions printed in **ENGLISH & HINDI**
इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- 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 medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

1. Tribal art in India generally reflects the creative energy found in rural areas that acts as an undercurrent to the craftsmanship. Explain with reference to the Worli and Gond paintings. (150 words) 10

भारत में जनजातीय कला सामान्यतः ग्रामीण क्षेत्रों में पाई जाने वाली उस सृजनात्मक ऊर्जा को प्रतिबिम्बित करती है जो जनजातीय लोगों को शिल्पकारिता के लिए प्रेरित करती है। वार्ली और गोंड चित्रकलाओं के संदर्भ में स्पष्ट कीजिए।

Tribal art in India has evolved a distinctive style based upon their culture, relationship with nature and traditional knowledge.

Worli and Gond paintings

- Famous among tribals living in MH, MP, CH, OR.
- They used distinctive materials creatively selected from nature for these paintings
- Nature was depicted along with human figures in a creative manner
- Natural dyes from Nature (such as red, grey, brown, green colours) were

used

- Geometrical shapes were used to depict the human figures
- Intricacies were shown very creatively.

Due to these features they are acclaimed even today for their beauty and form part of rich tradition of India.

2. Though it had its achievements, the exclusion of Indians from the system was a key feature of judicial reforms introduced by Cornwallis. Analyze.

(150 words) 10

यद्यपि कॉर्नवॉलिस द्वारा आरंभ किए गए न्यायिक सुधारों की अपनी उपलब्धियां थीं, तथापि इस व्यवस्था से भारतीयों का बाहर रखा जाना इसकी एक मुख्य विशेषता थी। विश्लेषण कीजिए।

Cornwallis is acclaimed for several reforms and also been criticised for the same.

Important achievements

- He is known as father of civil services
- He is known for Cornwallis code;
 - Rule of law and Equality before law.
- He has brought many ^{Judicial} ~~police~~ reforms such as separation of Judicial powers from District magistrate.
- He is also known for police reforms.

Exclusion of Indians from Judicial system:

- Jury was filled entirely by Europeans.

- Indian Judges were not appointed in the jury to try Europeans.
- lack of uniform laws for Hindus and Muslims
- All the Judges in Supreme court were Europeans.

3. Outline the course of the revolutionary movement in the Indian freedom struggle during the 1920s and 1930s, paying special attention to the contributions of Bhagat Singh. **(150 words) 10**

भगत सिंह के योगदान पर विशेष बल देते हुए, 1920 और 1930 के दशक के दौरान भारतीय स्वतंत्रता संग्राम में क्रांतिकारी आंदोलन की कार्यप्रणाली को रेखांकित कीजिए।

Revolutionary movement was a distinctive phase in the Indian freedom struggle marked by armed rebellion, underground activities, secular ideology; thus keeping Britishers always on check.

Reasons for Revolutionary movement

- Failure of Swadeshi and Non-cooperation movement
- Economic distress due to war, unemployment, discontent among Youth.
- Moderate and Extremist way of working didn't proved effective, as seen in failure of Montagu-Chelmsford reforms.

Revolutionary movements in 1920s
and 1930s :-

- Dhaka Anushilan Samiti by Pulin Das
- Surya Sen's Hindustan Republican Army
- Anushilan Samiti by Bhupendra Nath Dutta and Barindra Kumar Ghosh
- Chittagong Armoury raid.

Contribution of Bhagat Singh :-

- Hindustan Republican Association was changed to Hindustan Socialist Republican Association
- Attempt to kill Sanders; who order lathi-charge on Lala Lajpat Rai
- Smoke bombing in Parliament to show opposition for Public Safety and Trade Disputes Bill.

Revolutionary movements also spread abroad thus rising the National consciousness.

4. The Marshall Plan was important in the recovery of the European states from the aftermath of the Second World War. However, it also became a crucial factor in the creation of two Europes i.e. East and West. Discuss.

(150 words) 10

द्वितीय विश्व युद्ध के उपरांत यूरोपीय राष्ट्रों को पुनर्जीवित करने में मार्शल योजना महत्वपूर्ण थी। हालांकि, यह दो यूरोप (अर्थात् पूर्वी और पश्चिमी यूरोप) के सृजन में एक महत्वपूर्ण कारक बन गया। चर्चा कीजिए।

Second world war has brought severe destruction of Economies, lives especially in European states like France, Poland, Germany, Austria etc.

Marshall plan played a crucial role in recovery of these European States

- It paved way for peace among States
- It put forward the Economic blueprint for these European States
- It had led to coming closer of these European states in reconstruction.

Two Europes i.e East and west

→ west was more democratic, progressive.

- East was economically backward, more associated with USSR.
- The plan has arised the nation-state consciousness among them leading to division into East and west.

5. Examine the causes behind the existence of bonded labour in contemporary India. Also, discuss the steps that should be taken for its redress. (150 words) 10

समकालीन भारत में बंधुआ मजदूरी की विद्यमानता के अंतर्निहित कारणों की जांच कीजिए। साथ ही, इसके निवारण हेतु उठाए जाने वाले कदमों की विवेचना कीजिए।

Bonded labour is modern day slavery which involves utilisation of labour without minimum wages, Social Security benefits and safety measures.

Causes for Existence of Bonded labour

- caste plays an important role and acceptance by lower caste people
- Illiteracy and Poverty forcing them into bonded labour
- lack of awareness about legal and constitutional provisions (Art 23, 24)
- women and child are more vulnerable as they don't form a pressure group in society.

→ Lack of implementation of laws in letter and spirit, and lack of proactiveness in administration.

→ Social tolerance

Steps that should be taken:

→ Improve the conditions of poor by better targeting of schemes like MGNREGA, NRLM.

→ Role of Panchayats:-

- └ Educate the masses about legal rights, penalties
- └ Identify beneficiaries in objective and impartial manner

→ Role of NGOs and CSOs:-

- └ Generate awareness among the people
- └ provide technical support to SHGs.

→ Street plays, community kitchens should be encouraged to reduce caste consciousness.

6. State the factors that enhance the risk for initiation or continuation of abuse of drugs by the youth. What measures can be taken to address this issue? (150 words) 10

युवाओं द्वारा मादक द्रव्यों का सेवन आरम्भ करने अथवा उसे जारी रखने के जोखिम को बढ़ाने वाले कारकों का उल्लेख कीजिए। इस समस्या के समाधान के लिए क्या उपाय किए जा सकते हैं?

Factors that enhance risk for initiation or continuation of abuse of drugs:-

- Proximity to two of the world illicit drug regions i.e. Golden ~~land~~ triangle and golden crescent.
- 
- unemployment among youth.
 - Breakdown of Joint families which used to act as social control
 - Increasing westernisation, Individualism leading to decline of some values
 - Drug addiction
 - Lack of role models in the society to persuade youth away from drugs.

Measures to be taken

- At Supply side; Stringent enforcement of law, Enhanced Surveillance at Borders, actionable intelligence about drug Rackets.
- Counselling by psychologists to youth and increasing Rehab centres
- Focus on Reintegration of Youth into the society and reintegrated youth should act as agents of change.

→ lack of implementation of laws in letter and spirit, and lack of pro-activeness in administration.

→ Social tolerance

Steps that should be taken:

→ Improve the conditions of poor by better targeting of schemes like MGNREGA, NRLM, NRHM.

→ Role of Panchayats:

- └ Educate the masses about legal penalties
- └ Identify beneficiaries for various schemes

→ Role of NGOs and CSOs:

- generate awareness among the people.
- Provide help to SHGs.

→ Street plays and community kitchens should be encouraged to reduce caste consciousness.

7. Critically analyze the impact of globalization on culture in the context of India. (150 words) 10

भारत के संदर्भ में संस्कृति पर वैश्वीकरण के प्रभाव का समालोचनात्मक विश्लेषण कीजिए।

Globalisation means increasing interconnectedness, interdependence between societies, people, economies and Nations as a whole.

Globalisation led to Homogenisation of culture :-

- English has been widely used now, decreasing relevance of vernaculars
- Dressing and food style has been westernised losing traditional touch
- Decline in traditional artisans eg:-
Bihar handweavers lost relevance after globalisation
- Breakdown of Joint families to Nuclear families.

- Emergence of class consciousness
- work culture has improved.

Globalisation led to Heterogisation of culture :

- Emergence of glocalisation :- Ex:-
McDonald selling Paneer Tikka burgers
- More vigor in celebration of festivals
- Emergence of single parent families, Dual career families, live-in relationships.
- Increasing soft power. Ex:- Yoga has gained worldwide fame
- Greater awareness about Indian culture globally.

Thus, globalisation had mixed impacts on culture and for sustained globalisation it should be guided by Equality, Equity, Justice.

8. Giving a brief account of distribution of cotton textile industry in India, identify the factors responsible for localization of this industry in Ahmedabad-Mumbai-Pune region. (150 words) 10

भारत में सूती वस्त्र उद्योग के वितरण का संक्षिप्त विवरण प्रस्तुत करते हुए, अहमदाबाद-मुंबई-पुणे क्षेत्र में इस उद्योग के स्थानीयकरण हेतु उत्तरदायी कारकों की पहचान कीजिए।

Cotton is weight losing raw material and thus cotton textile industries tend to be concentrated near cotton growing areas.



Distribution of cotton textile Industry:

→ Mumbai - Pune region

- cotton is widely grown due to favourable climate and black soil.

→ Ahmedabad - Vadodara belt

→ Hooghly region

- Coimbatore - Madurai region

Factors responsible for localisation of industry in Ahmadabad - Mumbai -

Pune region :-

- Availability of raw material (cotton) in abundance and as cotton is weight losing one.
- cheap unskilled and skilled labours from surrounding areas
- Gujarati, Marwadi, and Parsi money-lenders to infuse capital and marketing expertise
- Mumbai and Kandla port; better road and rail connectivity
- Infused capital by Britishers
- favourable climate (Humid)

Due to these reasons Mumbai is called cottonopolis of India.

9. How do increasing greenhouse gas (GHG) emissions impact coastal and marine ecosystems? Highlight various measures that can be taken for protection and restoration of such vulnerable ecosystems. (150 words) 10

ग्रीन हाउस गैसों (GHG) के उत्सर्जन में वृद्धि, तटीय एवं समुद्री पारितंत्र को कैसे प्रभावित करती है? ऐसे सुभेद्य पारितंत्रों के संरक्षण तथा पुनरुद्धार के लिए अपनाए जा सकने वाले विभिन्न उपायों पर प्रकाश डालिए।

Greenhouse gas Emissions have increased enormously in last century, due to which average temperature on Earth increased by $\sim 1.2^\circ\text{C}$, which has

Various implications on coastal and marine Ecosystem:-

- Increasing instances of drought leading to decreased fresh water discharge into oceans affecting salinity, productivity of coasts.
- Increase in CO_2 concentrations in oceans leading to acidification, thus affecting shell formations of various marine organisms including coral reefs.

→ Increasing average temperature of oceans affects primary productivity of marine Ecosystem thus affecting entire food web.

Measures to be taken:

- watershed management near coastal areas
- coastal Regulation zone rules should be strictly followed.
- coastal plain zoning, along with treatment of Sewage before discharge
- Increasing mangrove cover near the coasts, increasing plantations along coastline.
- construction of major dams should take into consideration minimum river water flow into oceans.

These measures will help India in achieving SDG 13. (life below water),

10. Explain the phenomenon of a Polar Vortex. Also, comment on the reasons as to why tropical areas as south as Florida have been witnessing sub-zero temperatures in recent years. (150 words) 10

ध्रुवीय भंवर (पोलर वॉर्टेक्स) की परिघटना की व्याख्या कीजिए। साथ ही, उन कारणों की भी विवेचना कीजिए कि क्यों फ्लोरिडा जैसे दक्षिणवर्ती उष्णकटिबंधीय क्षेत्रों तक में हाल के वर्षों में शून्य से भी कम तापमान देखने को मिल रहा है।

Polar vortex :-

It is upper air circulation near the poles, which is seen predominantly during winters and that too over Antarctica, it is less strong over Arctic.

→ It is formed due to continuous circulation of jet streams over poles, which create conditions of cyclone.



→ Jet streams over poles.

→ low pressure created due to jet streams

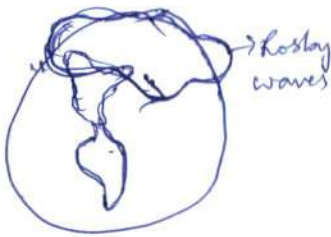
→ This acts like a shield and prevents from weakening of low pressure

→ It is the reason for creation of

Stratospheric clouds, which further create chlorine reservoirs.

Tropical areas such as Florida witnessed sub-zero temperature:-

→ Rossby waves are present all over the time near the poles. They act as shield containing cold waves.



→ But due to global warming, these waves are getting weakened and extending southwards, thus burst of cold waves into tropical areas such as Florida.

11. The most powerful trend of medieval Indian literature is devotional poetry which dominates almost all the major languages of the country. Elucidate. (250 words) 15

मध्यकालीन भारतीय साहित्य की सबसे सशक्त प्रवृत्ति भक्ति काव्य है, जो देश की लगभग सभी प्रमुख भाषाओं पर हावी रही। स्पष्ट कीजिए।

Medieval Indian literature is marked by various aspects in poetry especially devotional poetry;

- Bhakti and Sufi movements were started during this era
- There were confluence of ideas between Natives and Mughal rulers,
- There were many reforms seen in Hinduism and also in Islam.
- Kabir's panths are also reflected in Gurmukhi script of Punjabi and Guru Granth Sahib.
- Major works of Amir Khusrau have been reflected in Hindustani music.
- Carnatic music also came under

influence of Several ragas invented
during medieval time.

12. Discuss the major changes introduced by the Government of India Act, 1919 and its significance as a historical landmark in the Indian freedom struggle. (250 words) 15

भारत सरकार अधिनियम, 1919 द्वारा आरम्भ किए गए प्रमुख परिवर्तनों और भारतीय स्वतंत्रता संघर्ष में एक ऐतिहासिक घटना के रूप में इसके महत्व पर चर्चा कीजिए।

Home rule league movement,
Swadeshi movement, world war I,
Emergence of Gandhi in Indian
Nationalism, revolutionary movements
all paved way for the Britishers to
introduce Montagu - chelmsford reforms
(a) known as Government of India
act, 1919.

Major changes introduced:

→ Introduction of Dyarchy in provinces;

- Provincial subjects were divided into transferred and reserved subjects.

Transferred subjects are to be exercised by Governor general and

his council of ministers collectively responsible to legislature, whereas reserved subjects by Governor general and his Executive council.

Thus an Element of responsible government introduced in provinces

- Budget could be discussed and voted upon. (But still 80% of budget was not votable).
- Seperate Electorate for women, Sc/STs, Anglo-Indians.
- limited franchise was granted based on Education, property etc.
- Indian Council of Secretary of State was abolished and office of high commissioner was established.
- Provision of Federal public Service commission.

Significance as historical landmark

- For the first time women got voting rights.
 - Federal Public Service Commission paved way for conduct of civil services exam in India.
 - Responsible government introduced in provinces and element of provincial autonomy provided.
 - Paved way for direct elections, due to which congress Swarajist party could enter legislature and Vittalbai Patel became 1st elected Speaker.
 - Strengthened the National consciousness
- Though it has made a progress but still it disappointed many as it didn't fulfil the promise of Self-government and thus rightly said as "unworthy for England to offer and India to accept" - Annie Besant.

13. Multiple factors allowed the British to gain control over India. In this context, highlighting the main developments, trace the course of British conquest of India from 1757 to 1856. (250 words) 15

विविध कारकों ने अंग्रेजों को भारत पर नियंत्रण प्राप्त करने में सफलता प्रदान की। इस संदर्भ में, प्रमुख घटनाक्रमों पर प्रकाश डालते हुए, 1757 से 1856 तक अंग्रेजों के भारत विजय की कार्यवाही की रूप रेखा प्रस्तुत कीजिए।

Britishers wouldn't have gained control over India if various political, social, cultural, Economic, Military factors didn't help them.

Factors that allowed Britishers to gain control over India:-

→ Disintegration of Mughal rule

- No powerful Mughal ruler after Aurangazeb. Governors or wajids of Mughal Empire formed their own States such as Hyderabad, Kolkata, Awadh etc.

→ Marathas, though powerful, were fighting against each other, and

Britishers could easily use it for their advantage.

→ British company; East India company

- private company
- well organised
- Disciplined army
- Stable political regime in Britain along with Industrial revolution
- Naval might.

This helped them to curtail threats of France, Dutch, portuguese in India against their hegemony.

→ clever governor generals like Robert clive, warren Hasting, cornwallis, wellbsey who came up with ideas like Subsidiary alliance etc to break the alliances and conquer.

→ lack of unity among the rulers.

→ course of British ~~conquest~~ conquest from 1757 to 1856.

→ 1757:- with Battle of Plassey, plunder of Britishers started

→ 1764:- Battle of Buxar; Treaty of Allahabad - Britishers got Revenue rights over Bengal, Bihar, Orissa

→ Battle of Wandiwash against French, got Madras back.

→ ~~Four~~ Anglo-Mysore wars and Three Anglo-Maratha wars;

→ Subsidiary Alliance; Maintenance of army at the Expenses of Nawab. Most of the princely states signed alliance.

→ Doctrine of lapse by Dalhousie;

Thansi, Satara, Jaitpur, Udaipur, Nagpur etc came under Britishers.

→ Awadh captured on account of maladministration.

14. Give a brief account of the circumstances under which Indo-Sri Lanka Peace Accord was signed in 1987. Mentioning its important provisions, provide a critical assessment of this accord. (250 words) 15

उन परिस्थितियों का संक्षिप्त विवरण दीजिए, जिसके तहत 1987 में भारत-श्रीलंका शांति समझौते पर हस्ताक्षर किए गए थे। इसके महत्वपूर्ण प्रावधानों का उल्लेख करते हुए, इस समझौते का आलोचनात्मक मूल्यांकन प्रस्तुत कीजिए।

Circumstances under which Indo-Sri Lanka peace accord was signed:-

- passage of official Sinhalese act by Sri Lanka ; barring Tamilians from participation in administration etc,
- Citizenship act ; Denied citizenship to Tamilians in Sri Lanka .
- Repression by Sri Lankan state over Tamilians; trying to destroy their identity and culture thus leading to homogenisation
- Several deprivations led to the formation of LTTE ; militant organisation by Tamilians to ascertain

their identity and demand for separate nation.

→ Emergence of civil war in Sri Lanka.

During this situation India sent military aid to Sri Lanka to control the situation and end the war.

Important provisions:-

- ceasefire was agreed upon
- Tamilians rights would be taken into consideration.
- Peace would be restored in all affected areas

critical assessment:-

- It didn't solve the problem of Ethno-Nationalism
- constitutional rights to Tamilians were not provided.

→ It breded resentment among Tamilians
creating a rift.

→ It was a piecemeal approach rather
than a comprehensive one.

Due to the ~~the~~ situations prevailing
at that time, it led to the
assassination of PM Rajiv Gandhi in
TN.

15. With India becoming increasingly urban and the urban poor increasing in number, it is imperative that the challenges they face be addressed urgently. Discuss. (250 words) 15

भारत में हो रहे द्रुत शहरीकरण और शहरी गरीबों की बढ़ती संख्या के साथ ही, यह अत्यावश्यक हो गया है कि इनके द्वारा सामना की जाने वाली चुनौतियों का तत्काल समाधान किया जाए। चर्चा कीजिए।

In India, 30% population lives in urban areas, and contribute 60% of India's GDP.

Challenges faced by urban and urban poor :-

- Lack of Employment opportunities to provide Employment to migrants
- Increasing congestion, vehicular traffic causing enormous air pollution. out of 20 most polluted cities 14 are from India.
- low per capita availability of water. Depletion of ground water, water scarcity.

- Haphazard planning and constructions which are not disaster resilient
- Absence of urban way of life
- Increasing slums, ghettoisation of poor. Slums represent one of the worst Socio-Economic indicators
- Poor Solid waste management practices.
- Urban local bodies are not proactive. corruption, poor quality of service delivery mars them.
- Huge burden on Existing Infrastructure - both Social (health, Education) and physical (affordable housing).
- Increasing crime and Juvenile delinquency.

Steps to address these challenges :-

- fasttrack PMAY-U to construct affordable housing to poor
- Extend MGNREGA to urban poor.
- Experts should be involved in urban planning and proper drainage networks to prevent water logging during monsoons.
- Devolve more finances to urban local bodies and Empower them to collect more taxes.
- E-governance mechanisms like "Friends of people" in Kerala and e-SEWA in Andhra Pradesh should be used for better service delivery.
- Migrants should be allowed to access food grains through PDS anywhere in country.

It is estimated that by 2050, 50% of population will be urban. Thus it is needed to take steps to fulfil SDG goals.

16. Violations of women's sexual and reproductive health rights are often deeply engrained in societal values and traditions. Comment.

(250 words) 15

महिलाओं के यौन और प्रजनन स्वास्थ्य अधिकारों का उल्लंघन प्रायः सामाजिक मूल्यों और परंपराओं में गंभीरतापूर्वक अंतर्निविष्ट हैं। टिप्पणी कीजिए।

Gender is a socially constructed distinction between male and female.

- As per Jati system, women is associated with concept of purity and pollution. Thus, it has become imperative to control their sexual and reproductive health rights.
- Laws of Manu? says that men can attain salvation by protecting the honour and chastity of women. Role of women is to beget son, perpetuate male descent and support men in performing rituals.

→ ~~Relig~~ Religious texts and organisations also sanction control over women's sexual health rights.

Ex:- Menstruating women are not allowed to enter temples.

→ As women is associated with concept of purity and ~~pollution~~, they are more subjugated in upper castes and are confined to domestic sphere

→ Through disallowing inter-caste marriages, practicing endogamy within castes women sexual rights are controlled by society.

→ Patriarchal constructions in the society also reiterate violation of their sexual rights.

Ex:- Marital rape is still not considered crime.

→ Even in Joint families, filial and fraternal relations are given precedence over maternal relations.

India, has taken several steps to empower women and break their shackles. Such as 73rd and 74th constitutional amendment act, promotion of SHGs etc, but still there's long way ahead to fulfil goal 5 (gender equality) of SDG.

17. What do you understand by the term Land Degradation Neutrality? Highlight its significance and the steps required to achieve it.

(250 words) 15

भू-निम्नीकरण तटस्थता पद से आप क्या समझते हैं? इसके महत्व पर प्रकाश डालिए एवं इसे प्राप्त करने हेतु आवश्यक कदमों का उल्लेख कीजिए।

Desertification is a concept of land degradation which can occur naturally (&) man-made.

[It occurs mainly due to :-]

→ faulty agricultural practices like excessive irrigation leading to water logging, excessive usage of fertilizers.

→ It also occurs due to activities of wind which bring desert sand with it and spread it over nearby fertile lands, thus degrading it.

Land degradation Neutrality means stopping the process of desertification and also involves reversing it by sustainable

practices .

Significance :-

- Increasing climate change risks had put pressure on fertile lands .
- It enables increase in productivity and thus meeting needs of increasing population .
- It is imperative as expansion of net cropped area is becoming difficult due to urbanisation, Industrialisation
- It boosts the income of the farmers on account of increased soil fertility leading to increased productivity and decreasing usage of inputs .
- It will be in line with International commitments under UNFCCC and UNFCCC to achieve land degradation neutrality by 2030 .

Steps required to achieve it

- covering land by mulch to prevent erosion
- growing early maturing nitrogenous plants in between cropping seasons
- usage of micro irrigation to prevent water logging and for efficient utilisation of fertilisers
- Integrated organic and Inorganic fertiliser usage
- zero Budget Natural farming
- Planting trees ~~per~~ surrounding crops to prevent Desert sand.
- Agriculture practices according to agro-climatic zones.

These measures will help India to achieve its goal of land degradation neutrality by 2030 and ensure food security to its population.

18. State the geographical and economic importance of Hindukush-Himalayan region. How are the critical geographical features of this region changing and what possible consequences will it have? (250 words) 15

हिंदुकुश-हिमालय क्षेत्र के भौगोलिक एवं आर्थिक महत्व को स्पष्ट कीजिए। इस क्षेत्र की महत्वपूर्ण भौगोलिक विशेषताएं किस प्रकार परिवर्तित हो रही हैं और इनके संभावित परिणाम क्या हो सकते हैं?



Geographical Importance of Hindukush-Himalayan region :-

→ It blocks the cold Siberian waves from Siberia thus creating hospitable climate in Northern India during winters.

→ It is due to this region that Tibet is called Rooftop of the world and which plays significant role in onset of monsoon.

→ Himalayas cut the westerlies into two branches thus providing much needed ^{winter} ~~wester~~ rainfall and Snowfall in India.

→ It is in Earthquake zone II; which is more prone to Earthquakes

Economic importance

→ various Pastoral tribes like Gaddis, Gujjars, Bakarwals make a living over Himalayas

→ Southern slopes of Himalayas, especially Shiwaliks near Darjeeling are well

Known for tea plantations

→ Most of the northern rivers have their origins in Himalayan region.

These rivers are lifeline for our agriculture, Industries. Thus ensuring food, water security of India.

→ various hillstations in Himalayan region are major tourist destination spots which generate huge revenue and employment in surrounding regions.

changes

- Melting of glaciers
- construction of dams, obstructing flow of rivers
- Urbanisation, tunnels are dug

Consequences

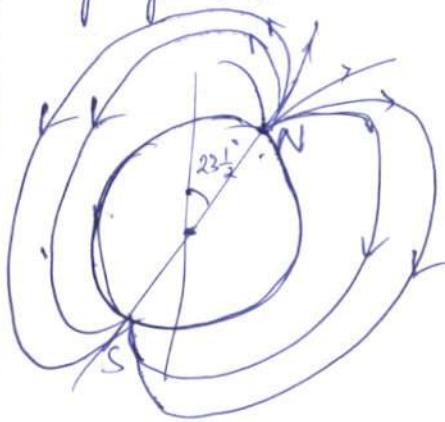
- glacial lake outbursts causing flash floods.
- Reservoir induced seismicity.
- landslides, cloudbursts.

Thus, due to its vast significance it is rightly called as third pole of the world.

19. What is the most accepted reasoning behind occurrence of earth's magnetism? Discuss the factors behind its variation temporally and spatially. (250 words) 15

पृथ्वी के चुंबकत्व की घटना के पीछे सर्वाधिक स्वीकृत कारण क्या है? कालिक और स्थानिक रूप से इसके परिवर्तन हेतु उत्तरदायी कारकों पर चर्चा कीजिए।

Earth's Magnetism is due to the creation of North and South pole on Earth leading to behaviour of magnetic properties.



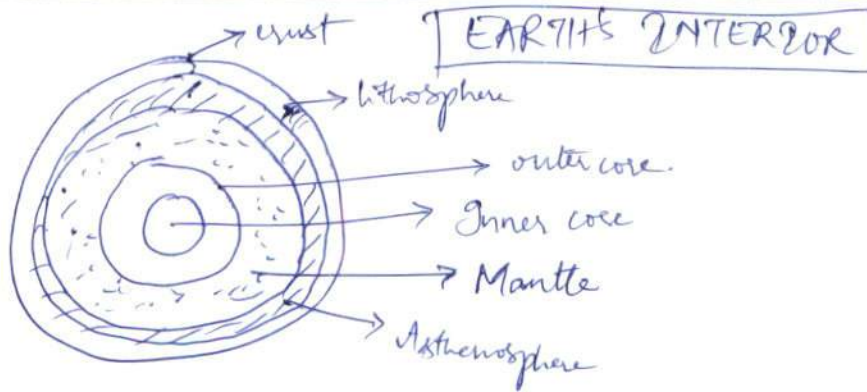
There are 2 types of magnetism exhibited:-

- geometrical poles
- Magnetic poles

- Geometric poles are always fixed.
- Magnetic poles keep changing ^{after} every thousands of years.

Reasoning behind occurrence of Earth's magnetism:-

- Earth's interior plays a major role



- Inner core is solid made up of Iron, Nickel. Due to the rotation of inner core it generates paleo-magnetism.
- Also circulation of mantle in convection cells play a role in Earth's magnetism.
- Rotation of Earth tilted along $23\frac{1}{2}^\circ$ to its axis also causes magnetism.

Factors behind its variation temporally and spatially :-

- Unequal distribution of mass of Earth at various places.
- Tectonic plates; oceanic and continental plates. oceanic plates are denser than continental plates.

- Geoid shape of Earth.
- Solar winds.
- Mid oceanic ridges.

Earth's magnetism prevents Earth from gamma rays, cosmic dust, Solar winds.

Reversal of Earth's magnetism is understood by studying paleo-magnetism near mid-oceanic ridges. Thus Earth's magnetism plays an important role in protecting species on Earth.

20. Explain Walker Circulation. Discuss how it influences Indian Monsoon.

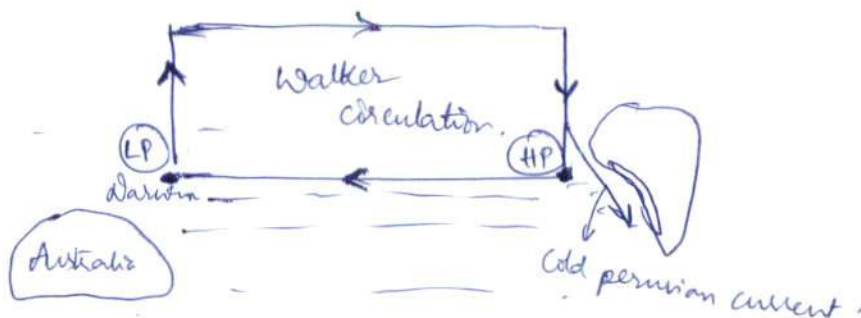
(250 words) 15

वॉकर परिसंचरण की व्याख्या कीजिए। चर्चा कीजिए कि यह भारतीय मानसून को कैसे प्रभावित करता है।

Walker circulation is atmospheric circulation over pacific ocean between west pacific ocean and East pacific ocean.

- It is circulation between Darwin; North East of Australia and Tahiti; west of peru.

- It is due to the high pressure created near coast of peru due to cold peruvian current and low pressure near Darwin.



- Due to the high pressure near peruvian coast, it experiences stable conditions and clear skies, due to low pressure near Australian coast it experiences rainfall.

Influence on monsoon.

- walker circulation is associated with Southern Ocean oscillation, El-Nino and La-Nina which are seen to be affecting Indian monsoon
- weak walker cell is associated with drought in India.
- El-Nino:- Reversal of pressure near peru and Australian coast severely affects monsoon. As it seems to weaken Mascarene high near Madagascar, whose strength reflects intensity of monsoon.

→ During La-Nina years, there is intensification of Walker cell and intensification of Mascarene high thus causing good monsoon in India.

Indian monsoon is a very complex phenomenon and it is still not exactly understood ~~for~~ reasons for its occurrence, breaks etc. Though Walker circulation has an influence on monsoon there are various phenomenon like Indian Ocean Dipole, Jetstreams which also play major role.