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GENERAL STUDIES (TEST CODE : 1242)

Name of Candidate	Karishma Nair		
Medium Eng./Hindi	English	Registration Number	514134
Center	ORN	Date	18/06/19

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Q. No.	Maximum Marks	Marks Obtained
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Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
2. There are **TWENTY** questions printed in **ENGLISH**
3. **All questions are compulsory.**
4. The number of marks carried by a question/part is indicated against it.
5. 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.
6. Word limit in questions, if specified, should be adhered to.
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.

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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.

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

Tribal art in India is rich in its composition, diverse in its forms, simple in its conceptions.

Craftsmanship is the more formal aspect of rural art, whereas tribal art is done in specific rural areas by almost every member of the tribe as part of recreation.

This is true in case of Worli Painting originating from Thane district, Maharashtra.

It includes scenes of daily life showcased by stick figure humans who are seen dancing, playing, doing economic activity, in groups more often showing rural life.



The paintings are made on dung paper, ^{using rice paste} thus making use of rurally available raw material.

The Gond paintings by Gond tribes of Jharkhand - Chattisgarh - Odisha ~~to~~ belt also show ~~cases~~ the diverse culture of these tribes.

This tribal art is a productive way to channelise creative energy which also brightens economic prospects.

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

Cornwallis brought about 4 tier judicial system in India in 1793 as part of his judicial reforms.

This included an extra ~~to~~ provincial court of appeal in

- ↳ Calcutta
- ↳ Dhaka
- ↳ Patna
- ↳ Murshidabad.

It had many achievements:

- ① Long jail terms and harsh punishments reduced.
- ② A layer of appeal improved judicial caution.
- ③ Indians could file cases against Europeans

Cornwallis however* was extremely 'racial' and thus excluded Indians from the system wherein they could only be a judge in lower courts and not in higher courts.

Further, Indians could not try Europeans as well.

The expensive court system excluded the Indian masses from justice.

Further, court cases were long drawn, thus many poor Indians did not find merit in fighting the cases.

→ Thus, the judicial reforms though ~~were~~ needed were not holistic as it was biased against Indians

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**

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

Marshall Plan was the reconstruction and rehabilitation grants provided by USA to European states to recover from the consequences of second world war.

However, these grants were available only to those countries that chose a capitalistic model of development, as the USA wanted to spread capitalism ~~and~~ and contain communism.

Thus, the western part of Europe including France, Spain, Belgium, etc. were developing greatly due to assistance by Marshall Plan, whereas states like Poland, ~~Czech~~ Czech Republic, etc. were not provided this assistance and were seen under the influence of USSR.

Thus, Marshall Plan split Europe on the lines of the Cold War.

This is especially visible in Germany where the Marshall Plan was applicable on Western Germany which became far more developed than East Germany.

~~These~~ Marshall Plan hence invariably resulted in the creation of two Europes which lasted right till the end of the Cold War.

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

Bonded labour is modern-day slavery wherein labour is expected with any remuneration, respite or choice to leave the employment.

Recent instances in Karnataka has brought this reality into light.

Causes behind existence

- ① ↳ High indebtedness → provide labour when unable to *pay back.
- ② ↳ Lack of awareness of rights and laws.
- ③ ↳ Highly informal labour conditions even outside ~~labour~~ bonded labour
↳ at least has ~~some~~ certainty of labour.
- ④ ↳ Difficult to differentiate bonded labour, thus ~~just~~ policing system fails.
- ⑤ ↳ Familial pressure of loyalty to masters and creation of god like image.

Steps that should be taken

- ↳ Proper awareness drive among citizens, especially domestic help.
 - ↳ Efficient inspections.
 - ↳ Strict licensing policy against bonded labour.
 - ↳ Provide harsher punishments under IPC.
 - ↳ Create portal like that for Child Labour (PENCIL) for citizens to inform.
 - ↳ Create better prospects for employment, and better and affordable credit facilities eg. MUDRA)
- Bonded labour is the worst form of modern-day atrocity which has to be nipped by holistic action.

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

Drug abuse is a stark reality affecting especially the youth across socio-economic spectrum.

Factors that enhance Risk^① for Initiation

- ↳ Peer pressure : "Coolness" factor
- ↳ Increased stress in school and college life.
- ↳ Reduction in stigma associated with abuse → casualisation.
- ↳ Availability at cheaper prices.

Risk^② for continuation

- ↳ Continuous easy availability
- ↳ Poor guidance by peers, schools /counseling, parents, society.
- ↳ Inefficiency of policing
- ↳ Increasing stress in education and unemployment.
- ↳ Lack of proper infrastructure for affordable recreation for youth.

Measures to be taken

- ↳ Proper counselling and awareness.
- ↳ Catch them before initiation.
- ↳ Reduce stigma of de-addiction centres,
* increase availability and accessibility.
- ↳ Task force against illegal drug trafficking
should be made effective to curb supply.
- ↳ Improve avenues for recreational
activities of youth.
- ↳ Tackle larger issues of school stress,
unemployment, etc.

India which is proud of being the "youngest"
in terms of population should work effectively
in stopping this intoxicated menace.

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

Globalisation opened doors for culture which could be both for spreading out and being suffocated by new entrants.

Culture includes understanding and consensus of a group which has seen a paradigm shift as follows.

Positive Impact

- ① Indian culture got an international platform ~~at~~ ^{and} market.
eg. Celebration of International Yoga Day.
- ② Multitude of culture making people take conscious effort to protect and preserve dying culture.
eg. Know India scheme of Ministry of External Affairs
- ③ Incorporation of positives of other cultures into Indian culture. ~~eg. etc~~
- ④ More availability of raw material to safeguard culture.
- ⑤ More economic wherewithal to invest in cultural development -
- ⑥ Exposure of Indians to other diverse cultures and traditions.

which increases tolerance.

Negative Impact

- ① Stiff competition, thus losing local markets to international goods.
- ② Competition with other forms of digital entertainment eg. Tradition ^{puppetry} ~~theater~~ like Thollu Bomalatta dying with video games.
- ③ Pure culture getting diluted due to convenience. eg. Comfort clothing → leads to ^{uniformity}
- ④ language getting hybridised with English etc.
- ⑤ Poor awareness and attachment of new generation with Indian culture.

→ Thus, Indian culture needs to be hand held to face the threats of globalisation so as to reap benefits of globalisation.

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

Cotton textile industry is not highly localised as the raw-material is not heavy, neither is the final products (weight-neutral industry)

It is thus located throughout India both near raw material (Mumbai) and market (Agra)

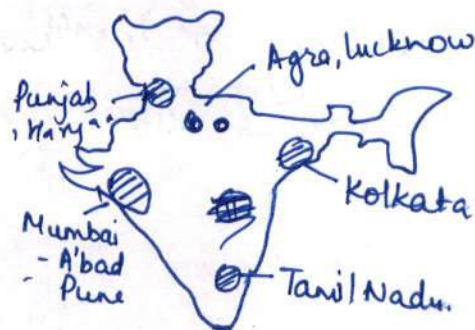


Fig. Cotton-Textile Industry

factors responsible for localization of ~~the~~ cotton industry in Ahmedabad-Mumbai-Pune region:

- ① Availability of raw cotton
 - ↳ Black soil belt of Maharashtra & Gujarat.
- ② Market Availability
 - ↳ Cities' population - high potential.
 - ↳ Film industry.
- ③ Accessibility to port
 - ↳ Mumbai port for exports.
- ④ Favourable Government policies in this region.

⑤ Benefit of agglomeration - as this was a well established hub beginning from 1853, it was easier for it to further develop.

⑥ Presence of labour ~~at~~ at cheaper price as many jobless immigrants arrive at this region.

→ Thus, though cotton ^{textile industry} need not be localized, it is still so due to various advantages accrued in the mentioned region.

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

Greenhouse Gas Emissions (GHG) impact global climate by increasing temperatures, the impact of which falls heavily on coastal and marine ecosystems.

- ① Increase in ocean acidification.
 - ↳ impacts marine flora and fauna
 - ↳ Coral reefs need optimum pH conditions.
- ② Rise in sea level
 - ↳ melting glaciers due to ↑ in temperatures.
 - ↳ Coastal ~~sea~~ land may submerge.
eg. Kiribati islands
- ③ Marine imbalances causes death of fish
 - ↳ Economic impact on coastal fishing
 - ↳ Increased migration of marine organisms.
- ④ Tourism impacted in coastal areas due to rising temperatures.
- ⑤ Changing salinity due to change in rainfall patterns, rising sea level, etc. may ~~also~~ impact ocean circulation.

Measures for Protection & Restoration

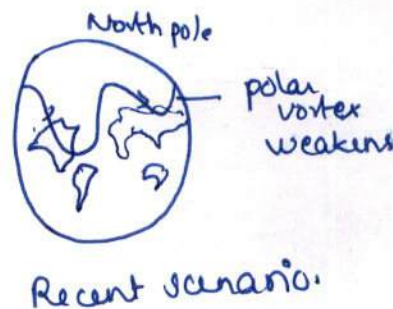
- Reduce the GHG so as to reduce impact.
- Promote healthy tourism so as to limit effects.
- Use bioremediation methods to reverse ocean acidification.
- Reduce pollution in ~~the~~ such ecosystems
eg. Sachitwa Mission of Kerala
- Promote healthy fishing practices respecting breeding patterns.

The SDG no. 14 : Life ~~in~~ under Sea deals with marine ecosystems and its goals must be achieved through global action.

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

→ Polar vortex is a low-pressure region of extreme cold winds formed over both the poles.

- It largely occurs due to temperature differences between temperate ~~and~~ polar region and the sub-tropics.
- When this temperature difference is high the vortex is stronger ^(summers) and does not expand to lower regions.
- During winters and due to intensification and changing global ^{climate} patterns, this vortex weakens, ^{meanders} and flows to lower latitudes causing sub-zero temperatures in ~~these~~ regions as low as tropics (Florida)



Such sub-zero temperatures have caused loss of life, economic activity, even in prosperous regions of the USA.

Such vortex deviancies should be viewed as a ~~an~~ effect of global warming, thus, global effort should be concentrated towards fulfilling Paris Agreement targets

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

Medieval Indian age was the peak of the Bhakti movement, thus it had an impact on the cultural events, architecture and literature of the time.

Bhakti movement also preponderated regional language promotion, thus literature in regional languages flourished.

Since Bhakti was pure devotion, it is no surprise that devotional poetry was the most powerful trend of medieval Indian literature. This is visible in many major languages.

① Tamil

- The Nayanars and ~~at~~ Alvars promoted devotional poetry.
eg. Nalayira Divyaprabandham.

② Kannada

- The Basavva followers Virashaivas wrote 'Vachanas' at this time ~~to~~ which was devotional.

③ Hindi

(Kabir, Suddas)

Ramdas and his disciples wrote devotional poetry and sangit in the Northern plains.
eg. Ramcharitmanas by Tulsidas.

④ Bengali

Chaitanya Mahaprabhu promoted 'sankirtanas' which were devotional in Bengal region

⑤ Braj Bhasa

Miraben wrote devotional poetry to Lord Krishna during this age.

⑥ Urdu

The Sufi saints wrote devotional songs and poetry to be sung including 'qawals' at this time.

→ Thus, the medieval period's richness in devotional poetry is still revisited in modern times by singing the same.

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

(Montague Chelmsford 240ms)
Government of India Act, 1919 was a watershed moment in Indian freedom struggle for the changes it brought about and the responses it garnered.

Major Changes Introduced

1. Concept of direct elections were introduced.
2. Separation of central and provincial governments with clear demarcations in the form of lists was introduced.
3. Bi-cameralism was introduced at the centre.
4. Dyarchy introduced in the provinces with:
 - Governor had emergency powers.
 - reserved list: Governor + Executive Council
 - transferred list: popular ministers + Governor.
5. Popular ministers were made responsible to the legislature at the centre.

6. Women were given right to vote
 7. ~~Common~~ ^{Separate} Electorates expanded to
 Sikhs, Europeans, Anglo Indians, etc.

Significance as a historical landmark

- It was rejected by majority of the leaders - Hindus and Muslims alike, thus united resistance.
- It was one of the reasons for Non-cooperat-ion movement as people were disappointed \Rightarrow that no mention of 'dominion status' was present that they thought they deserved after participation in 1st world war.
- It evoked strong condemnation even from 'moderate' leaders - eg. Annie Besant termed it as 'unworthy of Britishers to offer and Indians to accept'.
- The Central Government's lack of accountability disgruntled the Indians.

- It strengthened the national movement and Gandhi's popularity and agitation against the Government.

⇒ The ~~the~~ GoI Act, 1919 which had an aspect for checking its functioning by a Commission after 10 years was the cause for sending the infamous Simon Commission which gave an impetus to Civil Disobedience Movement and the GoI Act, 1935 as well.

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

British control over India ~~was~~^{is} a story of battles, diplomacy, treaties, and annexations.

British conquest: 1757 to 1856

with the Battle of Plassey ⁽¹⁷⁵⁷⁾ Britain ^(EIC) got hold of rich resources of Bengal which it could use to win supremacy over French in Carnatic War (in 1763)

1764: Battle of Buxar and Treaty of Allahabad (1765)

Britain ^(EIC) got Diwani Rights and soon Nizamat rights thus began the era of Dual Government in Bengal.

1773: End of Dual Government & Governor-General's reign.

• ~~Economic~~ Board of Control established to look after military and revenue aspects.

1789-99 - Era of ~~Wellesley's~~ ^{Wellesley's} Subsidiary alliance incorporates many princely states

1799: Fall of Mysore a formidable enemy

1803: British control over Delhi established.

1814-19: Battles with Nepal and Maratha completely under British control.

With course of time and developments in Britain and Europe, the EIC's ~~the~~ monopoly of trade was reduced beginning with 1813 and finally abolished in 1833.

A gradual takeover of ~~British~~ EIC's rule by British Government could be visualised.

1820's : Battles with Burma and its consequent annexation to India, thus further expanding British Empire.

1840's : Dalhousie's famous 'Doctrine of lapse' that further brought many princely states into British rule as adopted successors were no longer recognised.

1850's : Furthering of British Policy and in 1853 a well-established act for 'parliamentary style governance of India was undertaken.

Thus, in a nutshell the following reasons helped in British Conquest between 1757 - 1857:

- ① Acquiring revenue collection rights.
- ② Winning battles against competitors : French, Mysore, Marathas etc.
- ③ Subsidiary Alliance that transferred 'British Empire in India' to 'British Empire of India' eg. Mysore, Marathas, Awadh etc.
- ④ Expanding territories — Myanmar, Nepal, etc.
- ⑤ Finally, doctrine of lapse on many states : Satara, Awadh, Thansi, etc.
- ⑥ Comprehensive laws for governing eg. Acts of 1773, 1813, 1833, 1853 etc.

British Conquest till 1857 laid down the foundation for the empire for a century to come.

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**

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

Census 2011 estimates urban population to be 31% which is expected to rise to 50% by 2030.

This rise in urban population comes with challenges of urban poverty with India already being home to Asia's largest slum - Dharavi

The challenges urban poor face are multidimensional:

1. Social

- poor living conditions → Ghettoization
→ secluded from prosperity of urban areas
- Social discrimination as urban poor are associated as a separate class, caste, religion, etc.
- Poor access to health and education.

2. Economic

- Unable to afford amenities as cost of living is high.
- Stuck in vicious cycle of poverty, poor education, poor skills, poor employment.

3. Political

- Lack of political ~~pro~~ representation.
- Policy for urbanisation usually excludes this class. eg. Razing down of slums

4. Amenities provided are poor
- Transport is costly → can't be used. eg. Delhi Metro.
 - Water availability is scarce and not continuous.
 - Sewage problems → causes diseases.

Why imperative to address challenges urgently?

- ① Population burden continuously increasing, thus matters can get out of hand.
- ② Poor living conditions leading to health crisis.
- ③ Looming threats of climate change and disaster always impacts urban poor more. eg. Mumbai, Chennai floods.
- ④ Rise in crimes in cities as these challenges amplify.
- ⑤ ~~the~~ Right opportunity as schemes like Smart Cities are developing Tier-II & III cities, thus challenges can be tackled in the planning stage itself.

The Athluwalia Committee Report comprehensively covers challenges and solutions that need to be followed in letter and spirit.

Slum Rehabilitation programs that are holistically planned are just the first step.
eg. Recent Action Plan released by Maharashtra Govt. and BMC.

India's fight against poverty has historically been skewed towards rural poor and it is high time the priorities shift towards urban poor in mission mode.

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

(250 words) 15

Most Women Movements in contemporary India has tackled issues such as female infanticide, education and violence against women.

Women's sexual and reproductive health ^{rights} ~~is~~ ^{are} still viewed as a taboo in the 21st Century thus it is not talked about and easily violated.

What are these rights?

- ↳ right to decide when to conceive
- ↳ right to sexual autonomy
 - ↳ married women
 - ↳ unmarried women
- ↳ right to take treatment
 - ↳ abortions, contraceptive operations.
- ↳ Right to decide number of children to have
- ↳ ~~How~~ right against marital rape.

How are they are violated? • female Genital Mutilation

- Societal taboo against sexual activity before marriage
- Virginity tests in certain communities
- forced marriages
- Marital rape
- forced conception until male child is born.
- forced to not undergo abortion, against contraceptive
- Divorce if can't conceive

How are they engrained in societal values and traditions?

- Historically, women have been seen as child-bearer of the family.
- Societal pressure for male child due to economic concerns (property splits to other family if female)
- Women seen as man's property with no identity and autonomy.
- Certain scriptures like Manusmiti view women as secondary citizens.
- Religious sentiments which view women as impure due to menstrual cycle
eg. Sabrimala issue.
- Many festivals in Indian culture eg. kidnapping brides, etc. can be seen promoting the idea of women as substance.

Way forward

Gender rights need to be present in every domain including the bedroom and global consensus is already moving there with the United Nations Population fund Report for the first time including women's

Sexual and reproductive rights in country-wide assessment.

The SDG no. 5: Gender Equality talks about equality in all forms which needs to be spread through proper awareness.

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

(250 words) 15

Land Degradation Neutrality (LDN) means to develop degrading land in ways to combat degradation and desertification.

It has been promoted by UN Convention for Combating Desertification (UNCCD) with an aim to achieve LDN by 2030

Significance of Land Degradation Neutrality

• Land is degrading at a faster rate today due to many reasons:

- ① Climate change & Global warming
- ② Urbanisation.
- ③ Soil erosion.
- ④ Over-exploitation
- ⑤ Loss of bio-diversity.

• Land ^{degradation} thus needs to be curbed as land is a key resource that can't be regenerated on such an extent

- Uses of land :
- ① Agriculture
 - ② Bedrock for civilization
 - ③ forests and other ecosystems.
 - ④ Aesthetic value.

1. Sustaining wildlife and humans.
- The concept of land for life clearly underscores the crucial role land plays in sustaining life.

Steps required to achieve it

1. Proper survey, mapping, and data collection as each region is unique.
2. Tackling land pollution in many ways:
 - i) waste management
 - (ii) Bioremediation $\left\{ \begin{array}{l} \text{Bioventing} \\ \text{Biosparging} \end{array} \right.$
3. Enrichment of soil to sustain vegetation that can reverse land degradation.
4. Using invasive species that can grow in harsh conditions to bring in vegetation and wildlife.
5. Area-shed development approach and landscape development approach to be followed.
6. Stakeholder consultation and climate smart occupation to be followed in degraded land which promotes

reversal. eg. growing of pulses.

Land Degradation ~~the~~ Neutrality is a global challenge more so for Asia and Africa with a burgeoning load of population.

SDG no. 13 tackles Life on Land which envisages proper treatment and sustainable use of land which must be followed in letter and spirit.

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

Hindukush-Himalayan region rightly holds the title of "Third Pole" due to the ice cover in the region.

Its importance can be gauged on two dimensions:

(i) Geographical importance

- (i) Source of many rivers - Ganga, Yangtze, Yellow, Brahmaputra, etc.
- (ii) Acts as a barrier for cold winds of northern cold deserts, thus India's climate is not severe because of this region
- (iii) Acts as a barrier that splits western disturbances, bringing winter rains in India.
- (iv) Pressure difference caused by this region ^{drives} affects India's monsoons.
- (v) Home to highest peaks of the world



② Economic Importance

- (i) The rivers it sustains (Yangtze, Gange) are home to dense population, and economic activity - agriculture, industry.
- (ii) Acts as a source of tourism
eg. Himalayan trekking etc.
- (iii) The monsoon climate impacts entire Indian economy and other countries - Myanmar, Thailand.
- (iv) The barrier helps sustain agriculture in northern plains.
- (v) Many Himalayan products sourced
eg. medicinal plants etc.

Changes in critical geographical features

- ① Melting of glaciers more rampant than previous times.
- ② Glacial lake outburst due to natural and man-made reasons
- ③ Disappearance of springs
- ④ Land degradation - landslides, earthquakes, etc.
- ⑤ Increased erosion in valleys.

Consequence of changes

① Natural disasters

- Floods, cloudburst, landslides, are consequences of the changes.

② Economic Impact

- Livelihoods lost
- Loss of homes, life and property.
- Increased migration to low lands.
↳ more stress in these regions.

③ Biodiversity loss.

④ Affects climate of the region

- ↳ change in agriculture patterns
etc.

Thus, this region is of immense importance.

Initiatives like the Third Pole Platform,
NitiAayog Paper on Spring management,
National Action Plan on Himalayan region
(part of NAPCC) is the way forward

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

Earth's magnetism is the magnetic property of the earth. There have been many attempts to explain the phenomenon, the most accepted reasoning is the convection current in the earth's ex core.

The substances that constitute the core (Nickel) Ni and Fe (Iron) have inherent magnetic property, which imbibes magnetism to the earth.

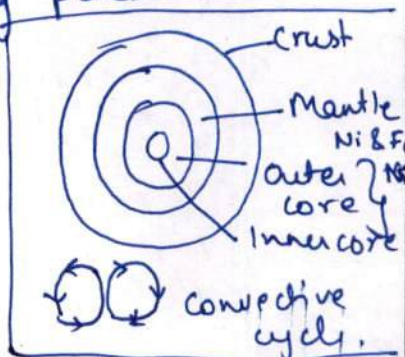
This magnetism is helpful to maintain balance with sun's magnetism and solar winds.

The Earth's magnetism is not uniform throughout due to shifting poles and direction of magnetism.

FACTORS behind Variation

① Temporally

The direction of the earth's magnetism changes with time and it reverses

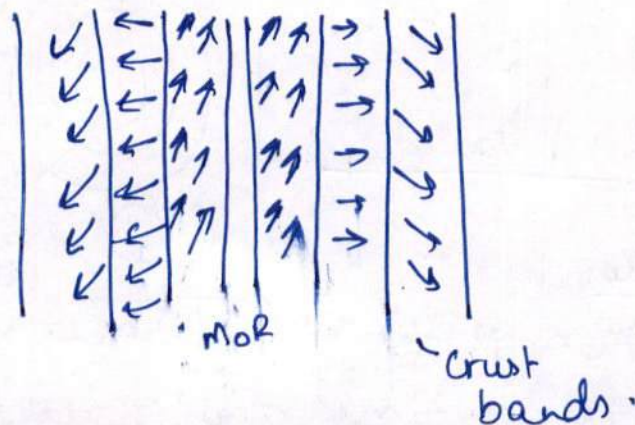


in years as well. Thus the magnetism found in ~~the~~ every age differs which is corroborated ~~with~~ by examining rocks of different age.

② Spatially

When magma solidifies into rock, the magnetism of the rock is fixed and unlike magma does not change with time. Thus, based on the time when the rock was formed, the magnetism there differs.

This is especially seen in mid-oceanic ridges where a banded pattern is viewed on either side of MOR showing different magnetism

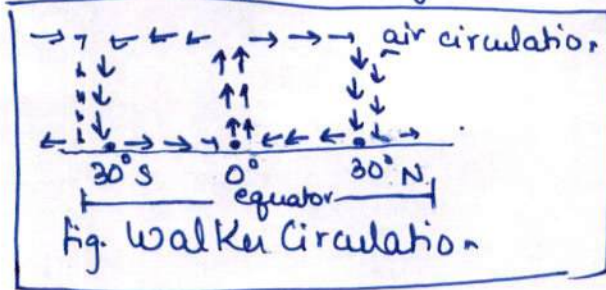


Thus, magnetism anomaly also is an indirect source to study stages in formation of earth and structure of interior of earth

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

(250 words) 15

Walker Circulation is ~~an~~ an air convection cycle of the tropical region

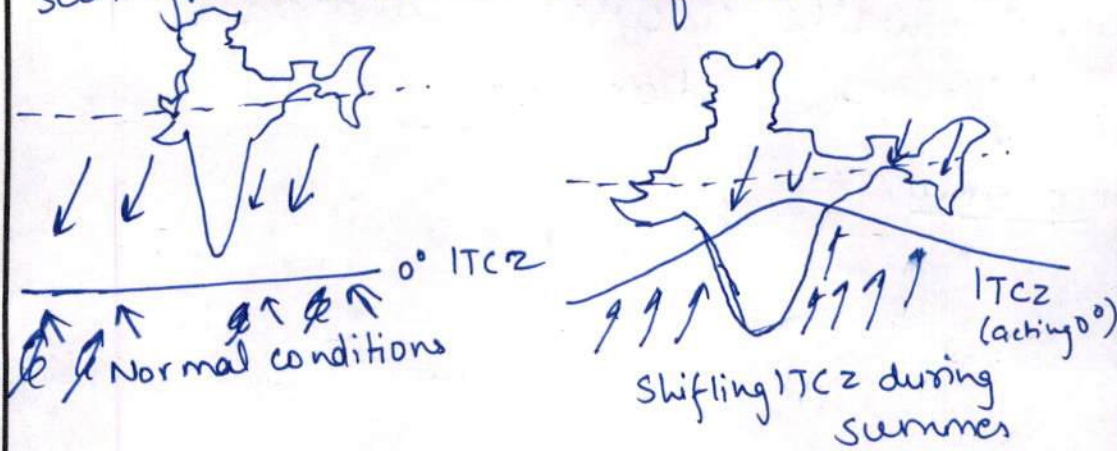


It is characterised by the following:

- (i) Thermally induced low pressure at equator causes air to rise.
- (ii) In upper atmosphere it diverges towards the tropics in both directions
- (iii) at 30°N & 30°S dynamically induced high pressure (descending air) which splits and surface wind flows from tropics to the equator (as it is at lower pressure) (trade winds)
- (iv) ~~these~~ These winds then rise up at the equator thus completing the entire Walker cycle.

Its influence on monsoon can be seen due to the shift in Inter tropical Convergence Zone which is the

~~As~~ thermally induced low pressure region which follows the path of the sun from solstices to equinox.



As can be seen in the figure as ITCZ shifts the trade winds travels over the Indian ocean ~~is~~ from South west (turn due to coriolis force) direction.

These trade winds take up moisture and then enter Indian sub-continent causing rainfall in India (beginning with Kerala), as winds are on-shore

The Walker cell also affects retreating monsoon as now the ITCZ shifts back to normal conditions.

Thus, trade winds again become off-shore
(except in parts of eastern coast)

Thus, the Walker circulation and trade
wind drives the Indian monsoon and
economy