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GENERAL STUDIES (TEST CODE : 874)

Name of Candidate	NAVNEET MANN (36473)		
Medium Eng./Hindi	ENG.	Registration Number	36473
Center	ORN	Date	27/9/17

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	12.5	
2	12.5	
3	12.5	
4	12.5	
5	12.5	
6	12.5	
7	12.5	
8	12.5	
9	12.5	
10	12.5	
11	12.5	
12	12.5	
13	12.5	
14	12.5	
15	12.5	
16	12.5	
17	12.5	
18	12.5	
19	12.5	
20	12.5	

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. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Answer the following questions in not more than 200 words each:

1. The greatness of the Mughal achievement in the political unification of India was matched by the splendour and beauty of the work of architects, poets, historians, painters and musicians who flourished in the period. Comment.

भारत के राजनीतिक एकीकरण में मुगलकालीन उपलब्धियों की महानता वस्तुतः वास्तुकारों, कवियों, इतिहासकारों, चित्रकारों एवं संगीतकारों के कार्यों की भव्यता एवं सुंदरता से अभिव्यक्त होती है, जो उस काल में फले-फूले। टिप्पणी कीजिए।

The Mughal Period can be referred to as one of the high points of Indian history not only in the political ~~sense~~ sense but also in the cultural sense.

The Mughal rulers, started from Babur to Humayun to Akbar and further, politically unified the sub-continent and established a "kingdom" in the real sense.

But the greatness of the Mughals was equally replicated in the architectural and cultural sphere.

→ ARCHITECTURE & The Mughal Rule

marked the "classical age" for the Indo-Islamic architecture. All the prominent features like use of pietra-dura, Charbagh style, jali work, minars and arches, etc. are well represented in the structure of this period like the Red Fort, Jama Masjid, Taj Mahal, Buland Darwaza, etc.

→ POETRY : Poetry received a fillip with the advent of the Mughal rule. The Mughal rulers themselves were talented poets like Akbar, Jahangir. Poetic works of those times used both Persian and Indian languages and later Urdu.

→ HISTORIANS : Historical accounts too flourished during this time. Accounts of Abul Fazl (Ain-e-Akbari) and Md. Lohani (during Shah-Jahan's reign)

are well known.

→ PAINTING: The miniature-style of painting reached its highest point. Rulers combined both Indian elements with Persian elements - calligraphy, perspective, etc. Akbar established royal karkhanas and Jahangir himself was a painter.

→ MUSIC: Music especially Hindustani music flourished during this time. the Shrumpada school under Tan Sen, Khayal school, Tappa school under Md. Shah "Rangela" are some of the significant contributions.

Therefore, the Mughal Rule marked an all-round development in all spheres of polity, culture, art.

2. Traditionally, India had developed wide-ranging water harvesting techniques in keeping with the local ecological conditions and their water needs. Substantiate with examples.

पारंपरिक रूप से भारत ने स्थानीय पारिस्थितिक दशाओं एवं अपनी स्थानिक जल आवश्यकताओं के अनुसार विविध प्रकार की जल संचयन (वाटर हार्वेस्टिंग) तकनीकों का विकास किया था। उदाहरण सहित पुष्ट कीजिए।

India since the earliest times was ~~not~~ not only a geographically large, extensive landscape but also housed a potentially large population (present more than 16% of the ^{world} population). However, such an extensive region comprises of only 4% of the water resources of the world.

water shortage and scarcity issues have been faced by the resident of the subcontinent since the Ancient times. water shortages generally have arisen due to less than needed rainfall and also due to unequal distribution of rainfall.

In this respect, water harvesting techniques have been developed by Indians since the ancient times.

→ The earliest example can be the Great Bath of the Harappan civilisation.

→ Remains of tanks found dating to the Mauryan Age suggest water harvesting techniques being prevalent during that time. Seasonal nature of rainfall and the need of water to meet agricultural needs necessitated construction of tank-like structures.

→ Similar practice of tank building was continued by the Guptas.

→ Meanwhile, in the hilly regions (of Kashmir, etc) in order to prevent the water from ~~run~~ running-off

'kuls', 'guls' were formed.

→ In the desert areas, 'johads' and 'khadins' are prominent.

→ The ~~so~~ need for daily usage, agricultural practices and even for recreation led to the Medieval Rulers like the Sultanate rulers to construct Baolis (like the Agrasen Ki Baoli and those in Hauz Khas).

→ Mughal Rulers also introduced water element in their structures (like in Taj Mahal).

→ Due to seasonal nature of rivers, Bamboo drip irrigation was prevalent.

→ Moreover, the Dravidian style temples too had water tanks within their premises.

Thus, the need of water ~~and~~ has been ~~so~~ recognised since the earliest times in India and arrangements for it had been made.

3. Imperial rivalries of 18th Century Europe were played out in India as well. Comment in the context of the Carnatic Wars.

18वीं सदी के यूरोप की साम्राज्यिक प्रतिद्वंद्विताएं भारत में भी देखी गईं। कर्नाटक युद्धों के संदर्भ में टिप्पणी कीजिए।

The 18th century marked imperialist rivalries between two European leaders - Britain and France and the events that followed had ramifications in India as well.

Major events of the 18th century - Austrian War of Succession, the American war of Independence and the Seven Years War - were all born out of the imperialist rivalries between Britain and France.

India, too had become an active ground of fighting between imperialist powers during this time. All major

European powers - British, France, Spanish, Dutch - wanted a "piece" out of the "Indian cake".

In this context, the Carnatic wars are worth mention. All the 3 Carnatic wars - 1946 to 1948, 1949 to 1954, 1957 to 1963 - were all due to rivalries between Britain and France.

The 1st Carnatic war was due to the Austrian war of Succession. However, the war turned out to be fruitless and inconclusive for both.

The 2nd Carnatic war was due to the issue of disputed successions to the thrones of Hyderabad.

and the Carnatic. After the war, Britain established influence over Carnatic and France over Hyderabad.

the 3rd Carnatic war emerged out of the Seven Years War. France lost the Battle of Wandiwash and the entire 7 Years War and finally by the Treaty of Paris also lost their claim over India.

Thus, the imperialist rivalries of the 18th century played out in India as well and has consequential outcomes for the Indian subcontinent.

4. The Lucknow session of 1916 was a watershed event during the freedom struggle of India due to various reasons. Elucidate.
भारत के स्वतंत्रता संघर्ष के दौरान 1916 का लखनऊ सत्र विभिन्न कारणों से एक ऐतिहासिक घटना थी। स्पष्ट कीजिए।

The Lucknow session of the Congress in 1916 is considered as one of the momentous events of the Indian freedom struggle.

Prior to the 1916 Session, the Indian freedom struggle had entered into a state of despondency especially after the Surat Split of 1907.

Tilak and Annie Besant partially revived during their Home Rule Movements which created the ideal ground for the 1916 session.

The Lucknow Session (1916) was a watershed moment upto

to multiple reasons:

- The session witnessed the Lucknow Pact between the Congress and the Muslim League.
- The Extremists rejoined the Congress.
- The session and its outcomes brought the British to the backfoot, leading to the Montagu Speech and finally the Montagu - Chelmsford Reforms.
- The session was also significant as it witnessed the attendance of Mahatma Gandhi. It was this session ⁱⁿ which Gandhi was requested to lead the Camparan Movement.

- The Congress split and the eventual re-unification turned out to be significant lesson for the later ~~o~~ leaders to maintain unity which was evident during the ~~to~~ time of the formation of the Swaraj Party (1923).

Therefore, the Lucknow Session of 1916 was truly a ~~so~~ significant event in the Indian freedom struggle.

5. Reforms initiated by the Justice Party became a model for social affirmative action in the country. Comment.

जस्टिस पार्टी द्वारा आरंभ किए गए सुधार देश में सकारात्मक सामाजिक कार्यवाही हेतु एक आदर्श बन गए थे। टिप्पणी कीजिए।

India historically has been the land of social inequalities arising out the caste system. In this, the Justice party made contributions to reverse the trend.

The Justice Party with contributions of leaders like E. Rameswami Naicker (Periyar) was established for the cause of the Depressed Sections. It has its roots during the Self-Respect Movement.

During the freedom struggle, the Justice Party and leaders like

Dr. B.R. Ambedkar had reached a consensus the depressed classes could not join the mainstream of the society on their own. Thus, special efforts in the form of affirmative action had to be made in their favour.

Justice Party soon emerged as a model for social affirmative action for years to come due to the reforms it advocated.

- It denounced the practice of untouchability.
- It advocated temperance for the untouchables.
- The party advocated for reservation of seats in the legislature for the

depressed sections so that their 'political voice' could ~~be~~ heard.

— they also advocated affirmative action / positive discrimination for the Depressed sections in matters of social welfare and education, employment.

thus, the Justice Party programme and the associated reforms truly epitomised the model for affirmative action which eventually nudged the nationalist leaders to provide the same.

6. War in the Korean Peninsula proved to be disastrous for Korea, a missed opportunity for the United States and a defining moment for China.
Examine.

कोरियाई प्रायद्वीप में हुआ युद्ध कोरिया के लिए विनाशकारी, संयुक्त राज्य अमेरिका के लिए एक खोया हुआ अवसर तथा चीन के लिए एक निर्णायक क्षण सिद्ध हुआ। परीक्षण कीजिए।

The Korean Crisis (1950-51)

is considered as ~~the~~ one of the worst legacies of the cold war, the ramifications of which are even evident today.

The Korean Peninsula was occupied by Japan in 1910. After the end of the 2nd world war, the Korean Peninsula was partitioned into North and South, each to be respectively managed by USSR and USA briefly. However the temporary state of affairs soon became permanent.

The Korean Crisis which emerged out of in 1950 still has not ended as a peace agreement has still not been signed.

The war was disastrous for Korea as the peninsula continues to remain divided. The frustrations of the division are being felt today in the form of nuclear attacks by DPRK (North Korea).

The Korean war was a missed opportunity for USA. USA was partially successful in protecting South Korea from falling in the "trap of communism". However, the war is considered as a failure of for USA's Containment Policy.

However, the Korean war turned out to be a defining moment for China. A recently independent country which had been internationally isolated (due to its adoption of communism) soon became the hub of international politics. The crucial role of China in the Korean crisis is intressed even today.

Therefore, the Korean war was not simply a war at a tiny peninsula but a war had and still has significant consequences for all the world powers.

7. The Munich Pact brought neither peace nor stability in relations between European countries, rather it turned out to be an act of appeasement that made war inevitable. Comment.

म्यूनिख समझौते ने यूरोपीय देशों के बीच संबंधों में न तो शांति उत्पन्न की और न ही स्थिरता, अपितु यह तुष्टीकरण की एक ऐसी कार्यवाही सिद्ध हुआ जिसने युद्ध को अपरिहार्य बना दिया। टिप्पणी कीजिए।

The Munich Pact signed between the European Powers of Britain and France with the then Nazi Germany is considered as the ultimate act of appeasement which made the 2nd world war inevitable.

The humiliation on the defeat of the 1st world war and then the Versailles Treaty (1919) finally brought Adolf Hitler to power in Germany. He soon established his 'Nazi State' and started his expansionism and militarisation in complete violation of the Versailles Treaty.

However, instead of criticising Hitler, Britain and France as important leaders of the League of Nations adopted a wait and watch approach and did nothing to balance the aggressor. This is called the Policy of Appeasement.

The ultimate manifestation of this appeasement was the Munich Pact under which Hitler was allowed to occupy Sudetenland provided he leaves Poland untouched.

Probably, Britain and France saw the Communist Russia as

a bigger threat than the Nazi Germany and thus, adopted appeasement.

However, the Munich Pact only further emboldened Hitler to further go with expansion. The pact was followed by Hitler occupying Poland, reuniting ^{with} Austria which ultimately marked the advent of the 2nd world war.

8. Explain how Gandhi's non-violent philosophy influenced Martin Luther King Jr.'s methods. Also discuss the contributions and accomplishments of King to ensure civil rights for all people regardless of race in America.

व्याख्या कीजिए कि किस प्रकार से गांधीजी के अहिंसावादी दर्शन ने मार्टिन लूथर किंग जूनियर के तरीकों को प्रभावित किया। साथ ही अमेरिका में नस्लीय भेदभाव के बिना सभी लोगों के लिए नागरिक अधिकार सुनिश्चित करने में मार्टिन लूथर किंग के योगदानों एवं उपलब्धियों की भी चर्चा कीजिए।

Martin Luther King Jr. once
said "Jesus gave us the message
and Gandhi gave us the method".

Mahatma Gandhi and practice
of non-violence has found supporters
not only in India but across
the globe. World leaders like
Martin Luther King Jr., Nelson Mandela
have been influenced by the
Gandhian philosophy.

Gandhi's idea of satyagraha was
based on the edifice of truth

and non-violence. According to Gandhi,
"an eye for an eye makes the
whole world blind".

Martin Luther King Jr. is considered
as the one of the most prominent
advocate of Black Rights. The issue
of racism and the associated
issues of the Black there had become
increasingly vitriolic during the 1960s.
Even though USA as a democracy
was established in 1787 yet Blacks
were still not treated as equal.

In this, Martin Luther King played
an important role in the Black
Rights Movement. He was
influenced by the Gandhian
principles of non-violence and

Satyagraha - the ^{influence of} Gandhian non-violent philosophy is evident in King's literary works and speeches. The silent protests and marches led by him also bear influence of Gandhism.

on the part of King
Years of ardent struggles finally
urged the USA government to
extend the basic set of rights to
the Black there.

It is due to King and his
contributions that the Blacks
today enjoy the basic set of
fundamental rights of equality,
freedom, voting, etc.

9. Apart from the linguistic reorganisation of states, the three language formula was an important part of government policy to address the language question in India. Discuss.

राज्यों के भाषाई पुनर्गठन के अतिरिक्त, त्रि-भाषा सूत्र भारत में भाषा की समस्या का समाधान करने की सरकार की नीति का एक महत्वपूर्ण भाग था। चर्चा कीजिए।

Since the time of the Indian freedom struggle, the question of language had always been an emotive issue.

The language question soon surfaced just after independence in the form of the linguistic reorganisation of the states and the three language formula.

Earlier the leaders were averse to address the language question. The Partition and the associated communal tensions were the reasons behind this.

So, initially the linguistic reorganisation of the state was rejected (by the Shah Commission and the JVP Committee). It was only after the death of P. Srinawalu which forced the government to come out Andhra Pradesh that the Fazl Ali Commission recommended the linguistic reorganisation of states.

In this, the 3 language formula is also of worth mention. Since Independence, the issue of the country's ~~official~~ ^{national} language had been much vexed. While Northern leaders favoured Hindi, leaders in the south favoured English.

Added to this was the issue of the languages of the minorities. In adoption of ~~both~~ ^{either} English ^{or} ~~and~~ Hindi as the ^{national} official language, the linguistic minorities were to be at the losing end.

The 3 language issue was finally resolved. By the Official language Act (1962), both Hindi and English were adopted as the official languages but none as national language.

Moreover, on the recommendation of the Fazl Ali Commission, the Constitution was amended to include Art 350A (which provides linguistic minorities to be taught in their mother tongue in primary school) and Art 350B (Officer of linguistic minorities to protect ~~the~~ rights of the linguistic minorities).

10. Enumerate the measures for the welfare of Unorganised Workers in India. In the context of problems being faced by domestic helps, discuss the need for additional measures to safeguard their interests.

भारत में असंगठित कामगारों के कल्याण हेतु किए गए उपायों को सूचीबद्ध कीजिए। 'घरेलू सहायकों' द्वारा सामना की जा रही समस्याओं के संदर्भ में, उनके हितों की रक्षा करने हेतु अतिरिक्त उपायों की आवश्यकता की चर्चा कीजिए।

About 92% of the workforce of India comprises of the unorganised workers.

welfare measures in favour of the unorganised sector have been a challenge. This is because the workers are not accounted for in the domain of formal labor. Their are not within fold of the social security benefits available to the formal sector workers.

Yet, the government has over the time extended multiple measures in favour of the unorganised workers.

- The government has recently proposed a draft social welfare code by the means of which social security would now be extended to even the unorganised workers.
- The Employee Compensation Act, 1923 has been amended to provide greater protection against accidents, mishaps.
- The government also provides skill augmentation programmes (like the PM Kaushal Vikas Yojana) so that unorganised workers can turn into formal-sector workers.
- Access to Basic amenities of food, shelter, etc. through PDS, PM Awas Yojana, etc. 

In this context, the cause of the "domestic helps" too should be brought into notice.

There is a need to extend additional reforms like compulsary registration, employers providing social security benefits, to the 'domestic helps', etc.

The need is due to the peculiar problems that they face :

- lack of security of job and tenure
- lowly paid
- a job of low dignity which also opens door for greater exploitation
- lack of access to any social security benefits.
- no fixed working hours and no fixed leave.

11. The manner in which the mentally ill have been treated in India suggests that policy measures alone may not be sufficient to address the challenges faced by them. Discuss.

भारत में मानसिक रूप से रोग ग्रस्त व्यक्तियों के साथ जिस प्रकार का व्यवहार किया जाता रहा है उससे यह सिद्ध होता है कि मात्र नीतिगत उपाय ही उनके द्वारा सामना की जाने वाली चुनौतियों का समाधान करने के लिए पर्याप्त नहीं हैं। चर्चा कीजिए।

The mentally ill not only form one of the most miniscule sections of the Indian society but also one of the most ignored sections of the society.

In the recent past, many policy measures have been extended in favour of the mentally ill persons. For instance, the Mental Health Care Act, ~~decriminalise~~ decriminalisation of suicide, opening of wards for the mentally ill in hospitals, professionalisation of the psychiatric profession and the National Health Policy (2017).

However, the mentally ill face certain unique challenges due to which policy measures alone do not work. These challenges are:

- the social stigma associated with the mentally challenged
- issues of depression and mental illness are taken seriously and discussed and are often ignored.
- perpetual economic dependency of the mentally challenged.
- lack of "political voice"
- poor state of hospitals for the mentally challenged.
- lack of adequate number of professionally trained psychiatrists

- lack of adequate personal care
 → the drug menace too opens
~~the~~ door for mental illnesses.

Thus, in order to bring a positive,
~~and~~ substantive change in the
 lives of the mentally challenged
additional measures are required -

- enhancing social awareness and sensitivity
- tackling the drug menace
- improving ^{condition of} mental health care
centres, etc.

12. Highlight the characteristics of Particularly Vulnerable Tribal Groups (PVTGs) and discuss the challenges faced by them. Also enumerate the measures taken by the government to address these challenges.

विशिष्ट रूप से सुभेद्य जनजातीय समूहों (Particularly Vulnerable Tribal Groups: PVTGs) की विशेषताओं पर प्रकाश डालिए एवं उनके द्वारा सामना की जाने वाली चुनौतियों की चर्चा कीजिए। साथ ही सरकार द्वारा इन चुनौतियों का समाधान करने हेतु किए गए उपायों को सूचीबद्ध कीजिए।

The PVTGs are different ~~for~~ from the other tribal groups in a number of different ways.

The PVTGs are :

- the most isolated of the tribals
- they have their own way of living with no absolute contact with the outside world
- all their members continue to reside the territory they historically ~~settled~~ settled on
- they are particularly vulnerable as they are highly economically backward

- lack of any access to formal education and jobs further intensifies their vulnerability.

In this context they face multiple challenges:

→ Economic Challenges :

- lack of any viable economic activity
- industrial activities (mining) destroy their livelihoods
- perpetual state of poverty
- lack of skills

→ Socio-cultural challenges :

- not in touch with mainstream society
- still follow age-old cultural practices

→ Political challenges :

- lack of political representation at any level - local, state, national

In order to address these measures, the government has undertaken the following measures:

- (1) first proper census on the number and strength of the PYTGs
- (2) enhancing connectivity to these areas
- (3) allowing ~~to~~ the PYTGs to develop and govern according to their "tribal genius"
- (4) jobs (through NREGA) and skill training for those members of PYTGs who want to enter into the mainstream.

The PYTGs due to being highly isolated should not be overly administered and "Pt. Nehru" Tribal Panchayat Policy should be adopted.

13. While suburbanisation is a common phenomenon in most urbanising countries, it is occurring at a relatively early stage of India's urban development. Enumerating the reasons behind this development, highlight the challenges it is creating for Indian cities.

यद्यपि उपशहरीकरण अधिकांश शहरीकृत हो रहे देशों में एक सामान्य परिघटना है, किन्तु भारत के शहरी विकास के संदर्भ में यह अपेक्षाकृत प्रारंभिक चरण पर में हो रही है। इस विकास के अंतर्निहित कारणों को सूचीबद्ध करते हुए भारतीय शहरों के लिए इसके द्वारा उत्पन्न की जा रही चुनौतियों पर प्रकाश डालिए।

While urbanisation is considered as the phenomena of increasingly greater population residing in urban areas, suburbanisation is the phenomena of the areas adjoining urban centres to acquire ^{are} ^{to} urban characteristics yet ~~still have~~ ^{are} ^{to} reach the goal of urbanisation.

The proliferation of sub-urban areas is a common feature across urbanised countries. However, it is peculiar that suburbs have increasingly grown in numbers and size.

in India which still has ~~not~~ not fully urbanised. The emergence of hubs like Gurgaon, Noida, Faridabad, Ghaziabad around Delhi serves a case in point.

the reasons which can be attributed to the emergence of suburbs include:

- lack of adequate space in urban centres due to excessive immigration
- development of industries on city margins
- shortage of urban centres and their unequal distribution
- economic linkages between urban centres and adjoining areas

However, the process of suburbanisation is beset by certain challenges:

- lack of uniform administrative and governance policies in main urban centres and suburbs
- environmental hazards overflowing out of the urban centres to the suburbs
- loss of potential agricultural land in adjoining areas
- destruction of traditional villages in the adjoining areas
- loss of cultural heritage
- proliferation of slums

Therefore, there is a need of a more planned approach towards urbanisation.

14. Various geographical and anthropogenic factors have rendered Brahmaputra Valley susceptible to recurrent floods. Discuss the causes and suggest suitable measures of mitigation.

विविध भौगोलिक एवं मानव जनित कारकों ने ब्रह्मपुत्र घाटी को बारम्बार बाढ़ों हेतु अति संवेदनशील बना दिया है। इसके कारणों की चर्चा कीजिए तथा शमन के उचित उपाय सुझाइए।

Brahmaputra River is one of the most flood prone rivers in India.

Geographical Causes

- Heavy Rainfall due to to south west monsoon
- steep slopes of the Himalayas
- meandering path of the Brahmaputra River
- changing course of the river
- excessive accumulation of sediments in the lower valley with no 'filtering-off' mechanism

Anthropogenic factors

- Deforestation
- soil erosion
- Building of dams and reservoirs
- construction of roads, industries without due consideration to its environmental impacts
- practice of jhum cultivation, 'slash and burn' agriculture

Measures for mitigation include:

- Adopting of safe agricultural practices: contour bunding, terrace farming
- promotion of afforestation
- proper, comprehensive environmental impact assessment before ~~also~~ commencing any developmental project

- early warning system
- community participation
- GIS mapping
- timely rehabilitation of
vulnerable sections

15. Give a brief account of Earth's heat budget. Also discuss how increasing concentration of carbon dioxide in Earth's atmosphere affects it.

पृथ्वी के ऊष्मा बजट का एक संक्षिप्त विवरण दीजिए। साथ ही चर्चा कीजिए कि पृथ्वी के वायुमंडल में कार्बन डाइऑक्साइड की निरंतर बढ़ रही सांद्रता इसे किस प्रकार प्रभावित करती है।

Earth's Heat Budget is based on the principle of earth's net zero gain / loss of heat.

According to this, the Earth neither gains heat nor loses heat. This is because the amount of heat it gains is eventually lost. This helps ensure that Earth's temperature remains the same.

For instance, for every 100 units of heat energy incident on Earth, only 65 units are absorbed by the Earth and the rest is radiated.

back into the atmosphere. These reflected 35 units are explained by the effect of ALBEDO.

The 65 units are absorbed by the ^(51 units) surface and the ^(14 units) atmosphere of the earth. By processes of condensation, radiation, evaporation, the 65 units are finally re-emitted out.

Thus, there is not gain or loss of heat. This is called the Earth's heat Budget.

Carbon Dioxide (CO₂) today is considered as the most potent gas responsible for the greenhouse effect and thus, global warming.

^{greenhouse}
CO₂ is the gas most emitted by humans (75% of the total amount of gas emitted).

This increasing concentration of CO₂ in the earth's atmosphere increasingly affects it. Increasing CO₂ amounts contribute to the Greenhouse effect leading to increasing temperature of earth. ~~The increase~~

The increasing CO₂ concentration also adversely affects the Heat Budget.

Due to increased retained heat by the CO₂, ~~the~~ earth is put on extra effort to emit the extra heat. However, this can continue only upto a limit after which there would be a net gain of heat leading to Global warming.

Thus, increasing amounts of CO₂ imbalance the Heat Budget.

16. Give an outline of the major geological events that have shaped the present drainage system of Peninsular India. Also, explain why peninsular rivers are unsuitable for navigation but facilitate hydroelectric power generation.

प्रायद्वीपीय भारत के वर्तमान अपवाह तंत्र को आकार प्रदान करने वाली प्रमुख भू-गर्भीय घटनाओं की एक रूपरेखा प्रस्तुत कीजिये। साथ ही स्पष्ट कीजिए कि ऐसा क्यों है कि प्रायद्वीपीय नदियां नौवहन के लिए अनुपयुक्त हैं लेकिन जलविद्युत उत्पादन को सुविधाजनक बनाती हैं।

Peninsula Drainage System has some unique features:

- Seasonal nature of flow
- most ~~peninsular~~ rivers drain into the Bay of Bengal
- while ~~east~~ flowing river form estuarine deltas, delta formation is missing in the western rivers

Major geological events are the reason behind this.

- The striking of the Indian Plate with the Eurasian Plate create a depression in the North. This is led to the ~~low~~

of water from perennial rivers of the North, contributing to seasonal flow of Peninsular rivers

- the submergence effect on the western coast and step-like orientation of Western Ghats leads to west flowing rivers to debouch into the sea without forming deltas.
- the geological orientation, tilt of the Peninsular towards the East cause most rivers to fall into the Bay of Bengal.

Peninsular Rivers are suitable for hydroelectric power generation as the rivers flow through mountains of extensive heights, rivers fall off steep cliffs. This offers high potential energy which can be used for

generating hydropower.

But these rivers are not suitable for ~~generation~~ navigation. This is attributed to the seasonal flow of the rivers. For almost half a year, the rivers turn out dry and thus are not suitable for navigational purposes.

The rich vegetation of the western ~~unlike~~ ~~and~~, the short ~~courses~~ of the western rivers and the heavy erosion of the Eastern side by East flowing rivers are additional reasons.

17. Elaborate with examples as to how government policies influence the location of industries. Also, mention the steps taken by the Government of India to stimulate industrial activity in backward regions.

उदाहरण सहित व्याख्या कीजिए कि किस प्रकार से सरकारी नीतियां औद्योगिक अवस्थिति को प्रभावित करती हैं। साथ ही, भारत सरकार द्वारा पिछड़े क्षेत्रों में औद्योगिक गतिविधियों को बढ़ावा देने हेतु उठाए गए कदमों का भी उल्लेख कीजिए।

Government Policies play a significant role in influencing the location of industries. This is primarily because of the incentives they provide in the form of:

- easier government clearances
- easier land acquisition norms
- availability of raw material at ~~affords~~ affordable prices / rates
- transportation facilities
- export facilities
- market access
- provided the advantage of geographical ~~inter~~ inertia.

→ access to power/energy, capital, labour.

In this respect the Government has taken significant steps to stimulate industrial activities in the backward regions:

→ relaxation of land acquisition norms

→ access to nearby sources of energy

eg - Shakti Policy to link power producers with ~~producers~~ ^{coal} producers

→ incentives for employees locals

→ easy access to capital

→ special economic zones

→ relaxation of export, import norms.

18. Explain, in brief, the process of cloud formation. Also, elucidate how clouds can help in weather forecasting.

संक्षेप में बादल बनने की प्रक्रिया की व्याख्या कीजिए। साथ ही स्पष्ट कीजिए कि मौसम के पूर्वानुमान में बादल किस प्रकार सहायता कर सकते हैं।

Clouds refer to the condensation of water at a fairly large scale in the upper layers of the atmosphere.

There are 2 preconditions for the formation of clouds:

- Air must be saturated with water
- There should be enough condensation nuclei around which water vapours can condense to form water droplets/ice.

Clouds are formed when water vapour happens to cool down its

dew point and further below
which condenses into water droplets
and/or ice.

- Clouds play a crucial role in weather forecasting. Clouds have an important role to play in predicting:
- duration and amount of sunlight
 - rainfall : Clouds give rain, but all clouds don't give rain
 - clouds also determine prevalent weather conditions, temperature and humidity levels

Therefore, clouds have a crucial role to play as a weather controller.

19. The socio-economic and ecological consequences of soil degradation are far-reaching. Discuss. Suggest measures that can be taken to restore soil fertility and arrest soil degradation.

मृदा निम्नीकरण के सामाजिक-आर्थिक एवं पारिस्थितिक परिणाम दूरगामी प्रभाव डालने वाले होते हैं। चर्चा कीजिए। मृदा उर्वरता को पुनर्स्थापित करने एवं मृदा निम्नीकरण को रोकने हेतु किए जा सकने वाले उपाय सुझाइए।

According to Franklin D. Roosevelt,
"the nation that destroys its soil
 destroys itself".

Soil degradation is referred to as
 the decline in the soil fertility,
 fall in the nutrient capacity of
 the soil and fall in the soil
 depth.

There are far-reaching socio-economic
and ecological consequences of
soil degradation.

Socio-economic consequences

(1) decreased agricultural productivity

- (2) increased farmer distress
- (3) decline in agricultural income
- (4) rise in farmer suicides
- (5) loss of food security
- (6) greater rural to urban migration
- (7) ~~over~~ overcrowding of urban centres
- (8) proliferation of slums.

Ecological consequences

- (1) soil erosion (69% of Indian soils face erosion of some kind)
- (2) desertification
- (3) increased frequency of floods and droughts
- (4) loss in natural vegetation and biodiversity

Measures required to address
soil degradation :

- (1) Afforestation practices, adequately
CAMPFA.
- (2) planned urbanisation and
~~include~~ industrialisation.
- (3) prevent overgrazing
- (4) prevent excessive use of fertilizers,
pesticides, water (causes sanitation,
waterlogging)
- (5) use of geotextiles
- (6) rain water harvesting and watershed management.
- (7) contour bunding and trace farming in hilly regions
- (8) planting shelter belts in
desert areas.

20. Development of island territories requires a careful balancing of environmental and tribal concerns with exploitation of economic potential. Elaborating on the threats faced by island territories of India, comment on the recent measures proposed by the government regarding their development.

द्वीपीय क्षेत्रों के विकास हेतु संभावित आर्थिक क्षमताओं के दोहन के साथ ही पर्यावरणीय एवं जनजातीय चिंताओं के मध्य विवेकपूर्ण संतुलन की आवश्यकता है। भारत के द्वीपीय क्षेत्रों द्वारा सामना किए जाने वाले खतरों को विस्तार से बताते हुए, उनके विकास के संबंध में सरकार द्वारा हाल ही में प्रस्तावित उपायों पर टिप्पणी कीजिए।

India possesses the island territories of Lakshwadeep islands and Andaman and Nicobar islands which not only have immense economic potential but also are of strategic importance.

Yet any plan for development faces certain threats and challenges :-

→ Environmental Concerns :

- loss of biodiversity like coral Reefs in Lakshwadeep

- issues of flooding & submergence
- marine pollution
- prone to seismic and volcanic activity (Andaman & Nicobar Islands)

→ Tribal concerns :

- loss of isolation of tribals
- loss of habitats and traditional forested lands
- loss of livelihood
- lack of autonomy

Thus, the environmental, tribal concerns need to be balanced with the economic potential. In this respect, the government has taken following measures to develop these territories -

- extension of optical fibre-based communication system to these territories
- early warning systems to prevent the destruction caused by disasters
- Recent strategic plan for development of Andaman Islands
- port led development
- enhancing maritime security