UPSC GS MAINS PAPER - 1

HINTS

1. *The ancient civilization in Indian sub-continent differed from those of Egypt, Mesopotamia and Greece in that its culture and traditions have been preserved without a breakdown to the present day. Comment.*

Hints:

• Many great cultures had developed in different countries and regions of the world. Many of them have perished or have been replaced by other cultures.

• However Indian culture has had an enduring character. Despite major changes and upheavals significant threads of continuity can be traced throughout the course of Indian history right upto the present day.

• Some aspects of Harappan culture are still practised, such as, the worshipping of Mother Goddess and Pashupati. Similarly, Vedic, Buddhist, Jain and many other traditions continue to be followed even today. Hence the continuity and change in our civilization has gone hand in hand. In fact, a remarkable feature of Indian culture is that along with continuity it has kept on changing, whereas the basic spirit of our culture continued. It has kept on discarding what was becoming irrelevant in the modern age.

• As a result, movements have grown and reforms brought about. The reform movements in the Vedic religion brought about by Jainism and Buddhism in sixth century BC and the religious and social awakening in the eighteenth and nineteenth centuries in modern India are a few examples when revolutionary changes were brought about in Indian thought and practices. Yet the thread of basic philosophy of Indian culture continued and still persists.

• Further all these civilizations except of India had institutional slavery, whereas India lacked any such exploitative system at large scale. Though, it had social outcasts and untouchables, but even their status was much better than slaves elsewhere. This, institution also became the reason for downfall for the great civilizations like Egypt and Mesopotamia.

• Thus, due to all these features Indian civilization continued without break.

2. *Mesolithic rock cut architecture of India not only reflects the cultural life of the times but also a fine aesthetic sense comparable to modern painting. Critically evaluate this comment.*

Hints:

• The term Mesolithic art refers to all arts and crafts created between the end of the Palaeolithic Ice Age (10,000 BCE) and the beginning of farming, i.e., Neolithic age.

• The art of that period mostly catered on what man lived, whereas the classical arts essentially depicted what man saw and the Modern Art depicted what man thought. Since the earliest art form was closest to nature, it has a deep aesthetic sense, which appeal most people compared to the Modern Art.

• The main feature of Mesolithic rock cut architecture is rock cave paintings which reflected the daily life of that period in a sense, because most of the paintings showed animals, hunting scenes, etc.

- The Mesolithic sites also had painting of social life, sexual activity, child birth, rearing of children and burial ceremony. This makes it clear that Mesolithic man had developed an aesthetic sense, since most of the painting depicted the nature around the men.

- While, the early modern paintings were artificial and ornate and lacked aesthetic sense, because they were promoted by British rulers and materialist theme dominated in their paintings and nature was completely ignored as in bazaar paintings and company school.

- However, in late 19th century many modern painters like Raja Ravi Verma, Amrita Shergill and painters of Bengal School, Nandlal Bose, Abanindranath Tagore also reflected cultural times of the age and had fine aesthetic sense like Mesolithic paintings, since nature was represented with utmost realism in their paintings, example being the famous Bharat Mata painting of Abanindranath Tagore.

- Even contemporary Indian paintings of M.F. Hussein, reflect a fine aesthetic sense, because they are mostly based on European neo-classical traditions. Whereas, the abstract modern art certainly lack the nature's proportions and the aesthetics of classical and stone age art and appeal to a selected class of people.

3. *How different would have been the achievement of Indian independence without Mahatma Gandhi? Discuss.*

Hints:

- Gandhi was the central figure in the Indian national movement. He played a major role in attaining the independence. He was a preacher of non-violence. Though the non-violence has been a dominant aspect of Indian civilization from the time of Buddha, nevertheless Gandhi was the first leader to use it as the instrument for the attainment of Swaraj. This provided a strong moral force in fighting against the mighty British Empire.

- The freedom movement as started by the Congress was in a Think-Tank mode. The two segments of Congress, the Moderates and Extremists were moving on two different ideologies.

- Further, the revolutionary terrorism was also increasing due to various policies of British India. Along with that communalism was also increasing and riots became very common.

- Gandhi transformed the whole movement into an activist mode which helped in Congress getting mainstream popularity and become vanguard of the movement.

- People of all segments, caste and class participated in freedom movement under him. He has led to generation of feeling of national integration and solidarity.

- Gandhi was not merely a political leader; he was also an important spiritual figure for many young leaders and the large number of Indian masses. This added full vigour to the fight for independence as lot of people could connect Swaraj with religion and religious way of life.

- If Gandhiji would not have been present then our nation would have been more divided on communal and caste angle.

4. *Mahatma Gandhi and Dr. B. R. Ambedkar, despite having divergent approaches and strategies, had a common goal of amelioration of the downtrodden. Elucidate.*

Hints:

- Gandhi and Ambedkar, though had the common objective of uplifting the downtrodden, they approached with divergent strategies.

- Gandhi had a deep faith in Varna system, though it further stretched into the caste system. He believed that a person being born into a particular caste had a divine dispensation. But Ambedkar was wholly against the system. He wanted to abolish casteism to improve the status of the depressed people.

- Gandhi urged the middle and upper classes to support and work for the upliftment of the depressed section. He spread this message through his weekly publication "Harijan". During truce time, he

appealed the Congressmen to go to the villages to serve the untouchables and to try for their integration with the mainstream. Whereas, Ambedkar did not believe in the help and support of the upper classes. He encouraged his men to educate themselves and fight for their rights.

- Ambedkar demanded separate electorate from the British Empire to protect the interests of the downtrodden in the round table conference. Gandhi was against this as he thought the mechanism will further intensify the division in the society. So, he proposed for more number of reserved seats in legislature to protect the rights of these people. As a result, Poona Pact was signed in 1932.

- Gandhi was in favour of decentralization to empower the villages. Ambedkar strongly opposed as he was afraid of village headmen assuming more power, which will further exploit the underprivileged section.

- Thus, while both the leaders wanted to change the condition of downtrodden, their approach was different, while Gandhi had an evolutionary approach, Ambedkar had revolutionary approach.

5. *It would have been difficult for the Constituent Assembly to complete its historic task of drafting the Constitution for Independent India in just three years but for the experience gained with the Government of India Act, 1935. Discuss.*

Hints:

- The Constituent Assembly took almost three years (2 years, 11 months and 17 days to be precise) to complete its historic task of drafting the Constitution for Independent India. During this period, it held eleven sessions covering a total of 165 days.

- To complete Indian constitution was a difficult task in the above mentioned time period in the absence of an earlier legal document which could serve as the basic draft. The GOI 1935 Act acted as a draft as it was a comprehensive legal document for the governance of the country.

- Similarly, the drastic changes were already known beforehand from the demands and aspirations of freedom fighters, such as democracy based on universal adult franchise. Thus, fundamentals were already known much in advance.

- The 1935 Act provided the solid foundation on which the changes could be made as per the aspiration of the people of India. India did not have to start from the beginning. However, many new additions were made taking into account the myriad experiences from the polity of other constitutions - Britain, U.S.A, Irish, Canadian, etc.

- The Act of 1935 had many detailed provisions, which has been preserved intact, because three elections were conducted on the basis of that system, including 1937 provincial elections and the system was becoming familiar for the Indians. Thus, the already known issues with the system made it easier for drafting committee to retain relevant and delete non-suitable sections from the Act and transform it into India's constitution.

6. *Why did the industrial revolution first occur in England? Discuss the quality of life of the people there during the industrialization. How does it compare with that in India at present?*

Hints:

- The industrial revolution started in England because of following factors:

- **Economic factors:**

   a) Agriculture revolution- there was consolidation of land holdings, new agricultural equipments like iron and steel ploughshare were used. The increase in agriculture productivity ensured availability of raw material and labour for industrial revolution.

   b) Due to the success of British mercantilism there was increased demand for British goods throughout the world. Rich merchants accumulated huge capital which could be invested in factories, etc.

   c) Proximity of iron and steel mines too provided necessary impetus because it saved the transportation cost.

- **Political factors:** There was political stability in Britain. British citizens enjoyed civil liberties like right to property, etc. There was legal protection to land owners. Britain participated in wars but suffered no damages because of its geographic location and naval supremacy.

- **Social and Religious factors:** Liberal, progressive ideas under the influence of enlightenment led to many breakthrough inventions like weaving machine, steam engines, etc. Unlike continental Europe, the society was free from social conflicts as citizens enjoyed legal protections. The protestant ethics led to accumulation of wealth and high savings rate.

- **Impact of industrial revolution on quality of life of people:** It had positive impacts like diverse high quality cheap goods were available & gave a boost to urbanization. At the same time, it was a time of flux as the old social structures and institutions were being transformed. There was a trend towards nuclear families, increase in social mobility, more emphasis on achieving status. Ethical and moral foundations weakened due to problems of slums, social crimes, etc. In the industrial districts, children tended to enter the workforce at younger age. Many of the new factory owners preferred to employ children as they viewed them more docile and tractable than adults.

- **Comparison with India at present times:** After independence, India embarked on the journey of planned industrialisation on the socialistic pattern. The role of state was very important with focus on industrial goods. There is less exploitation of working class as many labour laws are enacted to protect their rights. The Social institutions like marriage, family are getting transformed due to industrialization. However 47% of economy is still agriculture based, which is much higher than Britain of 19th century. Rural urban migration in search of new job opportunities landing people in slums and poor hygienic conditions.

7. *To what extent can Germany be held responsible for causing the two World Wars? Discuss critically.*

Hints:

- The First World War was the result of developments on political-military front which were taking place after the exit of Bismark. The new King Kaiser William II was young and impatient and his foreign policy divided Europe into two hostile blocks.

- There was an end to French isolation as new alliances were formed between France-Britain & France -Russia & also the Triple Entente. However, the immediate reasons were arms race, diplomatic humiliation of Germany during Moroccan crisis, etc. There was spread of rapid nationalism due to unfulfilled nationalistic aspirations. The fight for colonies also added fuel to the fued.

- Austria-Hungary wanted war to settle Serbia challenge forever. Serbia wanted a war to attract attention of big power towards Serbian cause. The interference of Germany in Ottoman empire through infrastructure development created doubt about intentions of Germany. Thus, developments in Germany only acted as a catalyst, in the equation which was already very unstable.

- Germany was defeated in World War I and they were forced to pay heavy reparations to the victors. Their economy could not take the pressure and it fell apart. Severe inflation and depression followed. As a result of the Treaty of Versailles and the economic disasters that followed, the German people became very resentful towards the victors of World War I, namely France and Great Britain.

- Therefore, Germany started the fight against them in lieu of conquering Europe and gaining the pride back.

- Later Hitler defied the Versailles and Locarno treaties by remilitarising the Rhineland. He encountered little opposition from other European powers. Germany and Italy formed the Rome-Berlin Axis. A month later, Germany and Japan signed the Anti-Comintern Pact, which Italy joined in the following year. This all led to World War II.

8. *Describe any four cultural elements of diversity in India and rate their relative significance in building a national identity.*

Hints:

- The Indian national identity is composed of several themes, which include the identity of India as a land of multiple religions, languages, races and ethnicity.

- One of the most important aspects of this cultural diversity is religious diversity; India has been home to all major religions of the world for centuries, apart from its own indigenous beliefs and systems.

- The spiritual aspect of religion is quite similar in all religions. In every religion an emphasis is placed on the moral conduct and transcendence of the selfish ego. While this aspect of religion is a matter of personal devotion, the temporal aspect of religion is always related with the group identity and solidarity is maintained by religious rituals and community's beliefs. At the temporal level, different religious groups differ from each other. But in India, there has always been respect and tolerance towards different religions, which leads to national integration.

- Similarly, the caste diversity is present in all religions, whereas these are not present anywhere else in world in those religions.

- Language is another source of cultural diversity as well as unity. It contributes to collective identities and even to conflicts. Twenty two languages are recognized by Indian Constitution. All major languages have regional and dialectical variations.

- Fundamental unity is found in the ideas and themes expressed in these languages. There is unity also at the level of grammatical structures.

- India possesses a rich variety of races. The physical features and complexion of the Indian people also differ from region to region.

- But inspite of these diversities unity is present among people and they associate themselves as Indian rather than regional identities.

9. *Critically examine whether growing population is the cause of poverty OR poverty is the main cause of population increase in India.*

Hints:

- The UN Human Rights Council has defined poverty as "a human condition characterized by the sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political and social rights".

- Poverty and population growth has a two way linkage.

- At one end high population growth rate is one of major reasons of poverty in India. As high population below poverty line add to high level of illiteracy, poor health care facilities and poor access to financial resources. Hence high population growth affects the per capita income and makes per capita income even lower.

- Whereas on the other side for poor, one more child means two more hands to work and earn for livelihood of family, and this particular reason make poverty a strong cause for growing population. Further, lack of money and proper awareness or education about contraceptive methods is among major causes of population increase in India due to poverty. It leads to poor lifestyle and high mortality, particularly among children, which keeps the fertility rates high, due to uncertainty, further increasing the population upwards.

- Overall, it is a vicious cycle and it can't be determined what leads to what and thus, the focus shall be on the regulation and control of both of these phenomenons.

10. *How do you explain the statistics that show that the sex ratio in Tribes in India is more favourable to women than the sex ratio among Scheduled Castes?*

Hints:

- The sex ratio for the overall population is 940 females per 1000 males and that of Scheduled Tribes 990 females per thousand males. Sex Ratio (number of Females per 1000 Males) is an important population characteristic that highlights the social attention provided to women.

- In the absence of any interference, there is always an excess of male mortality during infancy since the female fetus and the female infant is biologically stronger compared to her male counterpart.

- This biological advantage wanes during the subsequent years of life due to the inequality faced by the girl child in access to food, nutrition, health-care and other life sustaining resources. As a reason there is an emergence of excess female child mortality based on behavioral as opposed to the biological reasons. The stronger the inequality, the larger is the excess female child mortality.

- The sex ratio of tribes in India are more favourable because since time immemorial, tribals have never discriminated between a boy and a girl. They have Matriarchal society. Tribals do not go for sex determination and female foeticide whereas in schedule caste the discrimination is present.

11. *Discuss the changes in the trends of labour migration within and outside India in the last four decades.*

Hints:

- Migration refers to the movement of organisms like animals and birds in geographical space. There are several factors, which induce people to migrate.

- The reasons may be economic, social or political.

- When people migrate within the same country it is called internal migration. When migration involves crossing the boundaries of a given country, it is called international migration.

- Trend of migration within India

    a) Inter State Migration (East to West Migration): The migration from eastern part of country which includes UP, Bihar, Orissa, West Bengal or North Eastern states, etc. to western part which includes Maharashtra, Gujarat, Delhi, Punjab or Haryana etc. is almost a regular phenomenon from last four decades.

    b) Initially Maharashtra and Gujarat along with Kolkata were the only favourite destinations; but after destruction of industries in Kolkata during the rule of communists, green revolution, industrial growth and peace established in Punjab or Delhi area; Delhi, Punjab and Haryana become the major destination for migrants.

    c) Short term or temporary migration increased at rapid pace in last some decades in different areas due to agriculture after green revolution, construction sector especially after boost of real estate, etc.

    d) In last four decades, female migration rate has surpassed the male migration rate in both rural and urban areas.

- Trend in Migration outside India

    a) West or Developed Countries: However international migration from India to developed countries like US, UK or Canada have continued unabated from long time but rate of migrants got substantially increased after period of globalization. Also considerable numbers of Indians are immigrating on a permanent basis to these industrialized nations rather than on temporary basis.

    b) Middle East: After increase in oil prices in 1973-74, Gulf region attracts a significant proportion of migrants from India especially semi skilled and unskilled labour. Initially, Saudi Arabia and UAE were major destinations as accounts for more than 60% of migrant workers from India but after 1990s migrant workers significantly declined in Saudi Arabia but continually unabated in UAE. Kerala, Tamil Nadu, AP and Punjab mainly accounts for out-migration to Middle East Asia.

    c) One of the striking trends in relation to the unskilled/semi-skilled emigration from India in the recent years is the phenomenal increase in the numbers migrating to Malaysia.

    d) Estimates of the number of international migrants by sex show that the volume of international migrants has been nearly equal for both men and women.

12. *Discuss the positive and negative effects of globalization on women in India.*

Hints:

- Globalization is a complex phenomenon in which movement of organizations, ideas, discourses, and peoples have taken a global or trans-national form.

- The positive effect of globalization is that it has opened up broader communication lines and attracted more companies as well as different organizations into India.

- This provides opportunities for not only working men, but also women, who are becoming a larger part of the workforce. With new jobs for women, there are opportunities for higher pay, which raises self-confidence and brings about independence. This, in turn, can promote equality between the sexes, something that Indian women have been struggling for their entire lives.

- Globalization has the power to uproot the traditional treatment towards women to afford them an equal stance in society.

- Despite the positive effects of globalization through increased employment opportunities for women, globalization has a darker, more sinister side. Out of the total 397 million workers in India, 123.9 million are women and of these women 96% of female workers are in the unorganized sector.

- Accordingly, although more women are now seeking paid employment, a vast majority of them obtain only poorly paid, unskilled jobs in the informal sector, without any job security or social security.

- Additionally working women in India are more likely to be subjected to intense exploitation; they are exposed to more and more risks that cause health hazards and are forced to endure greater levels of physical and mental stress.

- Thus it would appear, that globalization has made many international corporations richer by the billions at the expense of women who are suffering enormously due to this expansion of corporate empires.

13. *Debate the issue of whether and how contemporary movements for assertion of Dalit identity work towards annihilation of caste.*

- Traditionally there was no term as dalit, as it was a term popularized by Dr. Ambedkar, and it means oppressed. It was used as a term to describe the people known as Shudra in traditional varna system. Today it expands to all those considered to be either similarly placed or as victims of exploitation and discrimination, be it political, social or religious and often include adivasis too in its widest form.

- The term Dalit has become a political identity, similar to the way African Americans in the United States moved away from the use of the term Negro, to the use of Black or African-American. Dalits today use the term Dalit as they believe the term is more than being broken and is in fact an identity born of struggle and assertion.

- In recent decades, various Dalit identity movements had lead to Dalit consciousness leading to political awareness and the notion of collective identity among the diverse Dalit communities. This identity is also the result of positive discrimination or affirmative action as the reservation is the only reason why caste identity is recorded and maintained by government.

- Thus, it may be counter-productive, but such maintenance of caste identities has also prevented the annihilation of caste too up to some extent.

- Today the identity has pervaded so deep, that even in case of non-discrimination the identity is highlighted leading to further strengthening of system, for example, media reports an accident also with religious or caste identities, when it is completely unnecessary, say, a dalit youth killed in car accident.

- In order to attain annihilation of caste it is necessary that the caste identities are weakened over time and not strengthened and thus, the political movements to gain mileage from identity shall be discouraged and any unnecessary use of the term shall be restricted so that it doesn't lead to social division.

14. *Explain the factors responsible for the origin of ocean currents? How do they influence regional climates, fishing and navigation?*

Hints:

- Ocean currents are streams made up of horizontal and vertical components of the circulation system of ocean waters. The factors responsible for origin of ocean currents may be discussed as:

  a) **Planetary winds:** Planetary winds are the principal cause of the origin of ocean currents. Such winds drive surface water along with them.

  b) **Difference of density and salinity:** Difference of density and salinity in ocean water motivates denser waters to sink and move as undercurrents; whereas lighter waters move towards the denser water as surface currents.

  c) **The rotation of the Earth:** The rotation of the Earth causes Coriolis force which affects the direction of movement of water and leads to formation of ocean currents.

  d) **The shape of coastline:** The shape of coastline is also an important factor that affects the current in the oceans.

  e) **Frictional force:** Movement of water through the oceans is slowed by friction, with surrounding fluid moving at a different velocity which leads to a difference in the speed of water and generates current.

- The influence of ocean currents can be discussed as:

  a) **On regional climate:** Winds blowing over a warm current become warm and at the same time, pick up moisture. Thus, the wind that reaches the land brings down the temperature and causes heavy rainfall. The western coast of Europe is an example of such a region. Such winds bring down the temperature of the land like the Kuroshio (warm) current, which flows along the east coast of Japan. Ocean currents also lower the temperature of a region. For eg, The California (cold) current, which flows along the western coast of USA, makes the region much cooler than other places in the west coast on the same latitude.

  b) **Navigation:** By using predicted, real-time and short-term forecasted currents, ships can be safely docked and undocked, maneuvered in confined waterways and safely navigated through coastal waters. Lack of this knowledge can lead to collisions and delayed arrivals. Ships sailing with a current gain speed which helps in saving fuel and time. Ships moving against a current lose speed.

  c) **Fishing:** Places where cold and warm currents meet are ideal for the growth of plankton which is food for fish. These regions thus have developed into major fishing grounds of the world. Newfoundland on the eastern coast of North America is the meeting point of the Gulf Stream and the Labrador Current. It is one of the major fishing centers of the world.

15. *Mumbai, Delhi and Kolkata are the three mega cities of the country but the air pollution is much more serious problem in Delhi as compared to the other two. Why is this so?*

Hints:

- Though all the mega cities in India suffer from the problem of air pollution at alarmingly high levels due to growth in number of personal vehicles, increasing populations and effects of rapid urbanization, but, the problem is specifically more in Delhi as compared to the cities of Mumbai and Kolkata. This can be attributed to the following factors:

  a) Delhi is landlocked when compared to Mumbai and Kolkata so the level of pollution is more as the level of particulate matter and pollutants is not able to get discharged into the surrounding areas. Mumbai is surrounded by sea on three sides and Kolkata on two sides so the pollutants are discharged into the surrounding large water bodies and the level of pollution over these cities comes to be less when compared to Delhi.

  b) The highly variable winds near the coast may sweep pollutants out to sea on a land breeze but then bring them back with the sea breeze. The variations in sea breeze circulation also have distinct effect on the pollutant transport and dispersion mechanisms in the coastal urban areas. Whereas in

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case of Delhi the principle of continentality occurs thus in winters high pressures develop due to which the pollutants remain near to the ground.

   c) Due to the landlocked nature of location of Delhi, during winter months fog occurs in Delhi which further adds to the problem of pollution.

   d) The next reason can be the increasing pollution from nearby industrial areas in close proximity of Delhi like Faridabad, Okhla and Noida industrial regions, whereas this is not the case with either Mumbai or Kolkata. The pollution level from the industries in nearby areas of Delhi has added more to the problem of Delhi.

   e) Moreover, the burning of paddy crops and other crops in Punjab and Haryana during winter months also is responsible for pollution, whereas no such incidents are reported in other two cities.

- Thus, the problem of pollution in Delhi can be attributed to the geographical location of Delhi when compared to Mumbai and Kolkata. The need of the hour is to devise some mechanisms which can help to bring down the level of pollution in the city such as using less pollution causing vehicles, developing a good mass transit system and controlling waste effluents from industries.

16. *India is well endowed with fresh water resources. Critically examine why it still suffers from water scarcity.*

Hints:

- India is not an inherently water-short country. Its average total annual rainfall which is higher than the world average of 990 mm should normally suffice to meet the country's critical needs. India has enough fresh water to meet its needs but the problem is the unequal distribution and sporadic nature of monsoon. The causes of water scarcity can be discussed as:

   a) Unequal water distribution as most of the rainfall that is received in India is distributed over a specific time and area. The level of water table rises during rainfall months but then decreases when there is no rainfall.

   b) Overpopulated cities, which create pressure on natural resources add to the problem of water scarcity.

   c) Due to inefficient irrigation techniques and small land holdings for agriculture, over-exploitation of groundwater is in practice. This has lowered the water table, leading to conflict between the demands from industry, agriculture and domestic sector.

   d) Lack of recycling capacity for used water and low emphasis on water treatment and reuse along with dumping of municipal and industrial waste in water bodies has led to reduction in input to water sources.

   e) Low awareness about rain water harvesting, water usage efficiency coupled with increasing purchasing power of people has increased demand leading to magnification of the problem.

   f) Increasing Geogenic groundwater pollution as well as increasing river pollution limits utilizable water in the country.

   g) Climate change increases incidences of droughts and reduce annual precipitation in drought prone central and North West India.

- To meet the problem of water scarcity it is necessary to use water resources in a planned and comprehensive way.

17. *The states of Jammu and Kashmir, Himachal Pradesh and Uttarakhand are reaching the limits of their ecological carrying capacity due to tourism. Critically evaluate.*

Hints:

- The hilly states of Jammu and Kashmir, Himachal Pradesh and Uttarakhand are endowed with beautiful natural landscape. Thus, they have the potential to attract tourists from all over the world. Mountains have become a magnet for tourism, which is the most rapidly growing industry in the world.

- The impacts of tourism on mountain ecosystems and biological resources are of great concern, both at the local and global scales, because of the high degree of biodiversity and environmental sensitivity of mountain areas. Tourism create pressure on the local resources.

- Due to this, there are apprehensions that they might be reaching the limits of their ecological carrying capacity. The carrying capacity implies the maximum population size that the ecosystem could sustain indefinitely.

- For instance, to handle the growing tourist industry, the Dal Lake in Srinagar has been encroached, through haphazard urbanisation. Similarly is the case of Uttarakhand, which has places of religious significance and attracts lots of followers annually led to development of roads and bridges which has disturbed the ecological balance.

- But we may not say that these regions as a whole are reaching their ecological carrying capacity as the tourist activities in these areas are limited to very small regions as compared to their state area.

- In Jammu and Kashmir, it is confined to Ladakh, Srinagar and Jammu district. In Uttarakhand, it is mostly confined to the Western part which is full of religious places like Badrinath, Kedarnath, Haridwar, Rishikesh, etc. In Himachal, the tourist areas are located mainly in three districts - Kullu, Dharamsala, Shimla, whereas rest of the areas gets less than 5% to total tourists arriving to the state as aggregate.

- Thus, these states require destination specific checks, instead of common policy for whole state. The need of hour is to promote other areas and diversify the tourism industry across the state with principle of Eco-tourism, i.e., uniting conservation, communities, and sustainable travel.

18. *How far do you agree that the behaviour of the Indian monsoon has been changing due to humanizing landscapes? Discuss.*

Hints:

- Humanizing the landscape can be defined as changing the natural landscape architecture as per requirement of human beings like Urbanization or Industrialization. All these make disturbances in hydrological cycle of atmosphere either reducing or increasing the rate of evaporation and ultimately cause to change the pattern of Indian Monsoon. Let's take some examples of humanizing the landscape.

  a) **Devastation of Wetlands:** A wetland is a land area that is saturated with water either permanently or seasonally. Wetlands play a number of roles in the environment, principally water purification, flood control, carbon sink and shoreline stability. Devastation of wetlands in urban areas such as lake or ponds is one of major reason of irregular rain pattern in big cities like Chennai or Srinagar.

  b) **Deforestation:** Large scale deforestation for the purpose of Urbanization and Industrialization is the cause of increase in Carbon Dioxide (CO_2) or GHG in the environment (as per estimate, 1/5th of global GHG emissions are result of deforestation and forest degradation).

  c) **Concrete Use:** Largely use of concrete in urban areas is causes poor recharging of groundwater and change the hydrological cycle of environment which ultimately disturbs the Monsoon system of India.

  d) **Agriculture:** Large scale use of chemicals and bore well irrigation in agriculture are other examples of humanizing the landscape.

  e) Creation of large dams in hilly areas which have changed the ecological flow of rivers is also an example of humanizing the landscape.

- However humanizing the landscape is one of major reason for changing the behavior of Indian Monsoon but also affected by other reasons such as Pollution due to vehicular and industrial emissions. This leads to climate change which change the behaviour of Indian Monsoon.

GS**SCORE**

19. *Smart cities in India cannot sustain without smart villages. Discuss this statement in the backdrop of rural urban integration.*

Hints:

- Currently, 31% of India's population lives in cities; these cities also generate 63% of the nation's economic activity. These numbers are rapidly increasing, with almost half of India's population projected to live in its cities by 2030.

- Smart Cities focus on the most pressing needs and on the greatest opportunities to improve quality of life for residents today and in the future.

- Smart cities are generally focus on subjects like Energy, Transport, Public Health, Education, Affordable Housing or Waste Management with the help of modern technology.

- But for the success of smart city mission, rural-urban migration has to be reduced. Migration is the major hurdle in development of smart cities because:

  a) Migration leads to development of slums which reduces the availability of basic amenities to the people.

  b) The large scale migration lead to increase in labor supply and ultimately reduce wage rate which cause people to live with pitiable housing and education facilities.

  c) Large epidemics cause by diseases like dengue, malaria etc are indirect result of population explosion in big cities which is mainly caused by migration.

  d) It also leads to degradation of environment.

- Hence if sufficient basic amenities and facilities shall not be provided in peri-urban and village areas then effective resource system of smart cities might not be able to provide quality of life to people which is the main aim of Smart city mission.

- So, there is need to build smart villages with better education, health and employment opportunities to make smart cities sustainable.

- Dozens of services including construction, farming, electricity, health care, water, retail, manufacturing and logistics are needed in building a smart village.

- Computing, communication and information technologies play a major role in design, delivery and monitoring of the services. All the techniques and technologies needed to build a smart village are available now and some of them are being used in villages in India but these are disparate, fragmented and piecemeal efforts.

- The need of the hour is strategy, integrated planning, and above all monitoring and execution of the activities using appropriate governance models.

20. *What are the economic significances of discovery of oil in Arctic Sea and its possible enviroNemental consequences?*

Hints:

- According to U.S. Geological Survey estimates Arctic sea has 90 billion barrels of oil, 44 billion barrels of natural gas liquids. There may also be significant reserves of coal, zinc and silver.

- This the discovery of oil in the Arctic sea can have wide range of opportunities for the world from various angles such as:

  a) Exploration of energy fuels will lead to energy security for world as world is facing resource scarcity.

  b) Exploring these resource will cater to growing needs of world economy and may reduce the price of oil.

c) Oil exploration might add some revenue to arctic region.

- However, discovery of these resources is likely to be associated with various environmental consequences such as:

  a) Oil spill if occurs causes much damage to already fragile and vulnerable arctic ecosystem. This spill is impossible to clean up and takes much to recover because of factors like, lack of sunlight, high wind, low visibility and moving icebergs

  b) Exploration of these resources would impact marine ecology as it is one of fragile regions in the world. Many wild life species like polar bears would be extinct once exploration starts.

  c) Toxies like Mercury, lead and arsenic could be released into arctic region.

  d) Excessive oceanic noises during extraction process will cause damage to species like whales which uses sound for navigation and hunting.

  e) Once transportation linkages are established and with increase in human activity, it will lead to complete melt which could significantly impact sea levels across and could have impact on low lying coastal countries.

- The solution may lie on increasing investments and knowledge flows towards renewable options that are abundant and un-perishing. Regulating the fragile arctic ecosystem exploitation therefore needs to be done based on cost benefit analysis.

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