



**Q1. Highlight the Central Asian and Greco -Bactrian elements in Gandhara art.  
(Answer in 150 words)**

Gandharaschool of art was one of the major schools of art in the history of ancient India. This style of art was closely associated with Mahayana Buddhism and hence the main theme of this art was Lord Buddha and Bodhisattvas.

It mostly flourished in the areas of Afghanistan and present North-Western India. The period around which the Gandharaschool of art flourished could be said to be from 1st century BCE to 4th century CE.

**Central Asian Influence:**

- Shaka and Kushana rulers patronised the Gandhara art leading to its flourishing.
- They brought culture of their respective lands and local Hellenistic art tradition in Gandhara art.
- Hellenized Bactrians played a part in the creation of the anthropomorphic image of Buddha.
- certain iconographic elements associated with Buddhist ideology appear in Gandhara art in the forms derived from Iranian iconography, such as 'fire altars' and the flame halo.

**Greco-Bactrian Influence:**

- Vajrapani found in the right hand of future buddha is told as transformed symbol of hercules who is seen as protector of buddha.
- Some images of buddha in gandhar are presented in greek architectural environment bearing the affinity of Corinthian.
- The Apollo like face of buddha; natural realism; wavy hair as seen in images of buddha in gandhar resembles to Hellenistic tradition.
- Gandhara art also followed Hellenic fashions in numismatics, such as having themselves represented in profile on coins, with legends, which carry the year of minting and other details.
- The drape of Buddha Garment garment recalls the togas of Hellenistic sculpture, the divine figure often acquires humanistic details such as jewellery and a moustache.
- Figures from the Greek pantheon appear alongside statues of the Buddha, often flanked by Corinthian columns and mounted on friezes.
- Older forms of Indian art had not bothered with chronology. There, forms and figures crowd the frame, almost like lush, natural growth. The sculptures of the Gandharaschool, in contrast, inhabit sequential narratives.



**Q2. The 1857 Uprising was the culmination the recurrent big and small local rebellions that had occurred in the preceding hundred years of British rule.**

**Elucidate (Answer in 150 words)**

From 1763 to 1856 there were more than 40 major rebellions apart from hundreds of minor ones. These rebellions were, however, local in character and effects. They were isolated from each other because each rebellion had a different motive.

- The Faqir and Sanyasi Rebellions (1770–1820s), Farazi Movement (1838-1848), Wahabi Movement (1830's-1860's) were the peasant revolution before 1857. They were directed against the land revenue system of British.
- The Santhal Rebellion (1855-57), The Uprising of the Bhils (1818-1831), The Kol Uprising (1831-1832) were the major tribal movement.

**How they led to 1857 Uprising:**

- They created awareness about the exploitative nature of British rule.
- They led to organization and collectiveness of the society.
- They inculcated an idea of India among the people of India.
- They were used to highlight that rather than creating differences between society, society must fight against british rule.
- They made other people aware about the hollowness of british ideals of promoting civilization.
- It provided leaders who played critical role during 1857 struggle.

Thus, these revolt provided foundation for the 1857 uprising.

**Q3. Examine the linkages between 19th centuries 'Indian Renaissance' and the emergence of national identity. (Answer in 150 words)**

Indian Renaissance refer to social and religious reform that began to manifest itself from the early decades of the 19th century. The central figure of this Indian Renaissance was Raja Rammohan Roy. These leaders were no longer willing to accept the traditions, beliefs and practices of Hindu society simply because they had been observed for centuries.

**Emergence of National Identity:**

- They helped in promoting rationalism in the society, developing an Indian identity based on reason.
- They promoted concept of Triumph of truth which later became state emblem.
- These movements advocated women 's rights like Ban on Sati marriage, widow remarriage which helped in developing an identity of promotion of human rights, concept of equality in society.



## GS – 1 2019 MAINS WITH MODEL ANSWERS

- Their question of religious and societal practices helped in developing the secular values in society.
- Movements like Periyar's self-respect movement helped in emergence of identity of Social justice.

But these **movements also weakened the national identity at some time.**

- Arya Samaj movement of Shuddhi Karan seeded communalism in society.
- They mostly promoted western values of modernity and rejected the good values of Indian culture too.
- These movements were not mass based and only promoted values in a specific section or in a specific area.

Thus, Indian Renaissance helped in developing the identity of secularism, justice, human values which became hall mark of modern India. But, it was the pan India movement led by Mahatma Gandhi which gave impetus to these ideas at bigger level.

### **Q4. Assess the impact of global warming on coral life system with examples. (Answer in 150 words)**

Global warming is the long-term rise in the average temperature of the Earth's climate system. It is a major aspect of current climate change.

#### **Impact on Coral reefs:**

- As temperatures rise, mass coral bleaching events and infectious disease outbreaks are becoming more frequent. Great Barrier Reef in Australia and the Northwestern Hawaiian Islands in the United States have all experienced their worst bleaching on record with devastating effects.
- Carbon dioxide absorbed into the ocean from the atmosphere has already begun to reduce calcification rates in reef-building and reef-associated organisms by oceanic acidification.
- Sea level rise may lead to increases in sedimentation for reefs located near land-based sources of sediment. Sedimentation runoff can lead to the smothering of coral.
- Changes in storm patterns lead to stronger and more frequent storms that can cause the destruction of coral reefs.
- Altered ocean currents lead to changes in connectivity and temperature regimes that contribute to lack of food for corals and hampers dispersal of coral larvae.

#### **Way Forward:**

- Limiting global average temperature to well below 2°C in line with the Paris Agreement on climate change.



- Economic systems need to rapidly move to the low greenhouse gas emission scenario to enable global temperature decrease.
- Sustaining and restoring coral reefs should be treated as an asset, and long-term investments should be made for their preservation.
- Investments should also include support for research at the frontiers of biology, such as genetic selection of heat-resistant corals that can withstand rising global temperatures.

**Q5. Discuss the causes of depletion of mangroves and explain their importance in maintaining coastal ecology. (Answer in 150 words)**

Mangroves are a group of trees and shrubs that live in the coastal intertidal zone. Mangroves grow in areas with low-oxygen soil, where slow-moving waters allow fine sediments to accumulate.

**Causes behind depletion of Mangroves:**

- Mangrove forests are cleared to make room for agricultural land, human settlements and infrastructure.
- Mangrove trees are used for firewood, construction wood, wood chip and pulp production, charcoal production, and animal fodder.
- Increased dams, irrigation to fulfil agricultural, and population needs reduce the amount of water reaching mangrove forests, changing the salinity level of water in the forest. Mangroves cant survive in higher salinity.
- Coral reefs provide the first barrier against currents and strong waves. When they are destroyed, the stronger-than-normal waves and currents reaching the coast can undermine the fine sediment in which the mangroves grow.
- Fertilizers, pesticides, and other toxic man-made chemicals carried by river systems can smother the mangrove system.

**Importance in maintaining coastal ecology:**

- Mangroves provide nursery habitat for many wildlife species and fishes.
- Mangroves maintain coastal water quality by abiotic and biotic retention, removal, and cycling of nutrients, pollutants, and particulate matter from land-based sources, filtering these materials from water before they reach seaward coral reef and seagrass habitats.
- Mangrove forests are vitally important to coral reef.

Thus, there is a need to protect the Mangrove forest. Plantation of the mangroves along the coast line, protecting the mangrove forest by declaring it as no –go zone, inculcating healthy habits of fishing in fishermen in mangrove forest can protect these forests.



**Q6. Can the strategy of regional-resource based manufacturing help in promoting employment in India? (Answer in 150 words)**

Regional resource based manufacturing means locating the industry at the resource location. Like Steel industry needs to be located closer to iron mines, power industry needs to be set up closer to coal mines.

**It promotes employment:**

- It declines the cost of raw material leading to higher competitiveness which increases export thus generates employment.
- Regional resources based manufacturing can help in targeting of skill development ensuring that industry gets skilled labor at the location itself.
- It helps states to design policies as per their available resources. It makes planning more target oriented ,optimal utilization of resources and generation of employment.

**It cant generate employment:**

- Today most modern industries are foot-loose industry and prefer to be closer to market.
- Industries for which India lacks resources like Semiconductor industry, this strategy will fail.
- With the upcoming wave of automation, it is value addition and research and development which will make the industry competitive than resource based planning.
- No amount of regional-resource based planning can promote employment until redtape, taxation, land and labor reforms are sorted out.
- With majority of resources stuck below the forest area, this strategy can unwind protest.

Thus, regional resources based planning along with land reform, labor reform and increased ease of doing business will promote employment and manufacturing in India.

**Q7. Discuss the factors for localization of agro-based food processing industries of North-West India. (Answer in 150 words)**

Agro based Food Processing includes process under which any raw product of agriculture, dairy, animal husbandry, meat, poultry or fishing is transformed through a process (involving employees, power, machines or money) in such a way that its original physical properties undergo a change and the transformed product has commercial value and is suitable for human and animal consumption.

**Reasons behind localization of it in North-west India:**

- North –west India which includes western UP, Rajasthan, Punjab is leading grower of raw material namely: Sugarcane, paddy , Wheat, Bajra, Mustard which allows easy access to raw material for industries.



## GS – 1 2019 MAINS WITH MODEL ANSWERS

- Higher working age population in these states ensure access to cheap labor which maintains competitiveness of the industry.
- State government support to Sugarcane mills, paddy industries through subsidies , easy financing of loans also ensure financial viability.
- Market access in terms of Many major cities namely Delhi, Jaipur, Lucknow also provide incentive to these industries.
- State focus on development of these industries through institutional measures like sugarcane development board provides marketing avenues for these industries.
- Good infrastructure in terms of rail and road connectivity ensure quick transportation of the products.
- Focus on developing modern agro-processing industries by linking farmers with corporates like Mushroom farming, Bell pepper farming in rajasthan is further encouraging it.

Though industries have localized in north-west India but they still lack in R&D, diversification of the products, excessive dependence on the state for subsidies and poor backward-forward linkages with farmers and markets. Government promotion through cluster based approach to bring economy of scale and policy changes like encouragement to contract farming can provide further impetus to these industries.

### **Q8. What makes Indian society unique in sustaining its culture? Discuss.**

#### **(Answer in 150 words)**

Indian culture is varied and unique in the world. It is a composite mixture of varying styles and influences. Its principles is echoed in the dictum of “Unity in diversity”.

#### **Factors for sustaining it:**

- Indian culture basically originate from homegrown religions like Hinduism, Jainism and Buddhism. Except Buddhism, Jainism and Hinduism still thrives in India thus maintaining its culture.
- It is adaptable and fluid in nature. It has endorsed changes brought by various wave of different culture without changing its core significantly.
- Practice of continuous reform from within like Socio-religious movement in 18<sup>th</sup> century, hindu code –bill has ensured it in line with modernity allowing everybody to prosper.
- The cultural principle of revering forests and rivers, promoting a life of content than materialism is in line with modern sustainable development principle.
- Rise of modern rational leaders like Vivekananda, Gandhi who brought out deep intellectual meaning of it also helped in sustaining Indian culture.
- In today’s times monetization of many cultural traits like Navratri (Dandiya ), karwaChauth, Diwali has ensured its growth along with capitalism.



## GS – 1 2019 MAINS WITH MODEL ANSWERS

- Government policy support through promotion of tourism around the cultural center, ministry of culture and protection of cultural monuments has further helped in protecting the culture.

Thus, today India culture is thriving with its capacity to link capitalism, spiritualism and humanity. It provides a guiding schema for happy contently life. Translation of the literature in other language, promotion of human contacts through programme like Ek Bharat-Shresth Bharat will further strengthen its presence.

### **Q9. “Empowering women is the key to control population growth”. Discuss (Answer in 150 words)**

India will have highest population in the world by 2025 surpassing china. High population growth puts pressure on resources, push population into poverty, leads to poor development of future children and make government unable to provide good welfare measures for all population.

Indian experience with rigid measures to control population growth has been futile. States which implemented policy of 2 children to contest local bodies polls are among the highest population growth rate. Other measures like forced sterilization, vasectomy in camps have backfired and didn't result into control of population.

#### **Analysis of southern state shows that empowering women leads to control of population growth.**

- Empowering women through education delays the marriage age which controls population growth. National Family Health Survey data shows that investing in the education of girls has led to a reduction in fertility rates.
- Their children, in turn, tend to follow similar patterns, so the effect of graduating one girl sustains itself for generations.
- Independent decision making by women leads to more gap between children, increased usage of contraceptives thus controlling the population growth.
- In neighbouring Sri Lanka, fertility rates have dropped as the age at marriage of girls has risen.
- Experience from the southern states show that decline in fertility due to reduction of Maternal mortality rate (MMR) and IMR is long lasting. Increased chances of survival of child reduces the fertility rate.
- Higher status of women in society will reduce desire for son thus limiting no of children in the family.



Thus, empowering women is the long lasting solution for population growth. Government steps like cash benefit transfer for completing education, gifts for delay in the marriage and abolition of child marriage are aimed towards achieving it.

**Q10. What are the challenges to our cultural practices in the name of secularism (Answer in 150 words)**

Indian secularism is a positive concept, taking along and encouraging all the cultural practices while instilling a scientific temper against superstitions and harmful practices.

But today, practice of secularism is challenging our cultural identities. More and more people across all communities see it as a failed idea and blame it for encouraging competitive sectarianism.

**Challenges to our cultural practices:**

- It has prevented ethnic minority groups from integrating into the wider society and led to cultural ghettoisation.
- Religious issues which are of no importance to minorities are raised in the name of secularism. Abolishment of Triple talaq which encourages our culture of protecting human rights is called as anti-secular in nature.
- Secularism was espoused to promote culture of peace and harmony but today, it has converted into electoral secularism where divide in society is done for vote banks.
- Secularism envisaged encouragement to diversity of opinion, ideas. But, today, our culture is becoming a majority-minority debate in the name of secularism. We do not allow argumentative Indians to cherish different ideas and opinions.
- Socio-economic issues like education, unemployment, poverty are presented as failure of secularism in India.
- Our cultural practices encourages progressive ideas, focusses on self realization but politics of minority has always revolved around religious issues in the name of secularism preventing the inculcation of progressive ideas.
- Cultural practice of promoting rationalism and scientific tempers is discarded. Majority and minority both demand to propagate inhuman practices like non entry of women in temples in the name of secularism.

But, our cultural practices are adaptable in nature. Rapid economic development, increased access to education, exposure to global ideas through internet will help in countering the challenges presented by abuse of secularism.





**Q11. Many voices had strengthened and enriched the nationalist movement during the Gandhian phase. Elaborate (Answer in 250 words)**

Nationalist movement during Gandhian phase (1915-1947) had provided many leaders with diverging opinions and organizations which provided strong foundation for the nationalist movement. These leaders helped in enriching the foundation of nationalist movement, provided it with required man power to continue, helped it to reach the masses and espoused interest of different sections of society thus making it true mass movement.

**Contribution of revolutionary voices:**

- They attacked symbol of British imperialism like post office, railway stations , telegraph stations which kept British always on hook.
- Journals like Yugantar, Kali showcased brutal policies of British which awakened the masses.
- They spearheaded the movement outside India like Madam Cama supported it in Germany.
- They provided army during quit India movement.

**Contribution of different leaders:**

- Subash Chandra Bose established National Planning Committee to ensure equal distribution of wealth among diverse section.
- He established Indian National Army to liberate India. He organized Indian prisoner of war staying abroad and leashed a war on British. INA trials had involved British forces thus encompassing all sections of society into the nationalist movement.
- Sardar Patel played a critical role in many movements like Kheda Satyagraha and Bardoli Satyagraha. He was a dedicated follower of non-violence and truth. He strengthened nationalist movement through strengthening of congress by deciding its stance on issues, raising funds for election and selecting clean candidates in the elections.

**Contribution of artists:**

- Artists like Nandlal Bose who painted famous painting of Gandhi walking for Dandi March, Abhinath Tagore: painter of Bharat Mata image arose nationalist sentiments. They reflected the spirituality of the east as opposed to the materialism of the west.
- Their paintings of Hindu divinities, mythological scenes and Indian life imbued the ideal to look inwards and within one's own culture to draw inspiration. It helped in promoting the concept of Swarjya.
- They played a pivotal role in breaking British cultural supremacy, rebuilding self-identity and inspiring pride in indigenous practices amidst the masses.

**Contribution of women:**

- Sarojini Naidu visited the riot-torn areas, with the aim of persuading people for Hindu-Muslim unity.



## GS – 1 2019 MAINS WITH MODEL ANSWERS

- Women organization pass resolution of equal status for women which made them equal in nationalist movement and later onwards.
- They proved good foot soldier who provided momentum to movement by picketing foreign goods shop, voicing against liquor and running underground campaign.

### **Contribution of Capitalist organization:**

- FICCI refused to negotiate with the British Government, on constitutional as well as economic issues, without the participation of the congress or at least its approval. It granted congress an approval of representing whole India.
- They supported nationalist movement by providing necessary funding, expressing flaws in british economic policies and forming Indian economic policies for growth of India.

Thus, many different voices raise their concern and supported in their own capacity to enrich the nationalist movement. It made movement pan India which led to effective formulation of an all inclusive constitution.

### **Q12. Assess the role of British imperial power in complicating the process of transfer of power during the 1940s. (Answer in 250 words)**

#### **Introduction**

The British even after demand from Indians for Poorna Swaraj and Constitution, remained reluctant to transfer power to Indians, until a series of events making them not to take up responsibility led to ultimate transfer of power to Indians.

#### **Body**

The British further vitiated the already strained relations between INC and Muslim league, the main political parties to ensure their well-being. The second world-war's expenses, reducing clout of the British and rising nationalism in India led to many offers made by British to the Indians which complicated the process of transfer of power.

#### **August Offer (1940)**

- The Goodwill of Indian leaders made them not to take advantage of Britain's position during Second World War, and rather wanted to compromise with British Government to form an Interim Government
- But the stated offer of 'Dominion status', widened the Gulf between Nationalists and British rulers, making things more complex

#### **Cripps Mission (1942)**

- Indian support seemed crucial now as Britain suffered reverses in South East Asia and the threat of Japanese to Invade India, and also pressure from Allied powers to seek Indian Cooperation.



## **GS – 1 2019 MAINS WITH MODEL ANSWERS**

- The Mission's provisions giving right to provinces to secede went against National Unity & Security, it gave rise to Regional aspirations of power.
- The Adoption of a rigid "Take it or leave it" attitude of British added to the deadlock.
- No Clarity as to who would implement and interpret the treaty effecting transfer of power was provided for.
- On top of this, British Government headed by Churchill consistently torpedoed Cripps' efforts.

### **Wavell Plan (1945)**

- The Conservative government in Britain led by Churchill was keen to reach a solution on the constitutional question in India
- This plan attempted at reducing Congress to the status of purely caste Hindu party
- Wavell announcing to break talks, gave Muslim league Virtual Veto and strengthened their position
- All these exposed real character of the British Government

### **Change in Governmental Attitude now**

- The more sympathetic Labour Party Government in Britain, announced that a Constituent assembly would be convened after Elections.
- The British had to retreat now as there was shift in Balance of power after World war2, and because of the tumultuous Indian crowd impatient to do something.

### **The Cabinet Mission (1946)**

- The British withdrawal seemed imminent now as they realized that a settlement was necessary for burying the ghost of mass movement and for good future Indo-British relations.
- The mission provided for Grouping of assemblies into three sections, which led to different interpretation by the Congress and Muslim league , which again caused deadlock in assembly.
- As a result of all this, the Muslim League gave a call for 'Direct Action' to achieve Pakistan' led to Communal Riots on an unprecedented scale.
- The Muslim league took up an Obstructionist Approach with Ulterior motives

### **Attlee's statement, February 1947**

- The British seeing the trouble all around, declared their intention of leaving the Indian Subcontinent
- The British did not want to solve the crisis created by them, and shouldered no responsibility for the prevailing conditions; Instead the British Fixed a deadline of June

### **30, 1948 for transfer of power**

- The statement also contained clear hints of Partition along with Balkanization of the country into numerous states



**Mountbatten Plan, June 3, 1947**

- freedom-with-partition formula was coming to be accepted
- The plan allowed for referendum along the border provinces of India-Pakistan, and the immediate results announced by the British led to confusions and large scale migration of people along borders.
- The plan provided for power transfer through Dominion status to two entities, to resolve constitutional deadlock.
- This way of power Transfer would allow the British to escape the responsibility for the communal situation.
- The Boundary Commissions were set up to demarcate boundaries between two countries' provinces.

**Conclusion**

Thus, a series of tortuous failed negotiations between the British and Indians, led to sudden fall of events with grave consequences for both notions, whose effects are seen to the present day.

**Q13. Explain how the foundations of the modern world were laid by the American and French revolution. (Answer in 250 words)**

American revolution refers to overthrowing of the British rule in 1776 by the America under the leadership of George Washington. French revolution refers to liberation of French society from the exploitative rule of king.

**Role of American revolution in laying down the foundation of Modern world:**

- The rights of the people were incorporated into state constitutions.
- Concepts of liberty, individual rights, equality among men and hostility toward corruption became foundation of modern world.
- It led to initiation of other revolution like French, Russian, Latin American leading to independence of many countries.
- Entry of USA into global world changed the complete equation of the world and declined the importance of Europe in modern world.
- The ideologies of natural rights, social contract theory, republican concept became the justification of democratic governance across the world.
- The Revolution's most important long-term economic consequence was the end of mercantilism.

**Role of French revolution:**

- The Revolution destroyed the power of oligarchies and elites that opposed economic change. It promoted the concept of equality of all men.
- It provided an intellectual and social environment in which ideologies of socialism and communism could flourish, which affected whole modern world.



## GS – 1 2019 MAINS WITH MODEL ANSWERS

- During the French Revolution, hereditary aristocracy was overthrown with the slogan “liberty, equality, fraternity” and France became the first state in history to grant universal male suffrage. The Declaration through bill of rights is regarded as a foundational document of both liberalism and human rights.
- The French Revolution initiated the movement toward the modern nation-state and played a key role in the birth of nationalism across world. It gave birth to modern nations.
- It gave concept of secularism meaning thereby complete separation of state and church. It is today followed by most nations in public places.

Thus, French and American revolution provided ideology of human rights, democratic philosophy, concept of republic, fundamental rights, concept of justice, ideology of nation-state, philosophy of secularism which today marks the whole justification behind the modern world.

### **Q14. What is water stress? How and why does it differ regionally in India? (Answer in 250 words)**

Water stress means when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use. It causes deterioration of fresh water resources in terms of quantity (aquifer over-exploitation, dry rivers, etc.) and quality (eutrophication, organic matter pollution, saline intrusion, etc.)

#### **Water stress in different regions:**

- As per the study conducted by Indian Institute of Technology Bombay, Most vulnerable areas are Punjab, Haryana, Rajasthan, Gujarat and Delhi.
- Least vulnerable areas are North Eastern States, Jammu & Kashmir, Himanchal Pradesh, Uttarakhand, Chhattisgarh, Odisha, Jharkhand and Kerala.
- Moderately vulnerable states are Madhya Pradesh, Maharashtra, Tamil Nadu, Karnataka and Andhra Pradesh.
- Western Ghats are under lowest vulnerability while windward side of the ghats are under moderate vulnerability.
- According to NitiAyog report, 21 cities of India are facing acute water crisis. It involves cities of Delhi, Bangalore and Hyderabad .

#### **Reasons behind Stress in different regions:**

- Excessive use of groundwater has created water stress in regions of Rajasthan, Punjab, Uttar Pradesh.
- Faulty cropping pattern like growing paddy in Punjab, sugarcane in western Uttar Pradesh, Sugarcane in Marathwada region has created water stress in those regions.



## GS – 1 2019 MAINS WITH MODEL ANSWERS

- Pollution of the surface water due to discharge of industrial as well domestic waste in rivers and ponds have created stress in regions of Delhi, Eastern Uttar Pradesh and Bihar.
- Poor rainwater harvesting, non-treatment of the wastewater and discharge of industrial waste have created stress in metropolitan cities.
- Deforestation, unplanned urbanization and disappearance of the water bodies have further aggravated conditions in the westward side of western ghats.
- Low rainfall with high variance has further aggravated conditions in Rajasthan, Gujarat and Marathwada regions.

Government has identified the causes behind these water stress and is taking appropriate measures to curtail it. Namamigange program for cleaning of river, Swachhbharatabhiyan has a component on solid and liquid waste management, encouragement to rainwater harvesting through tax subsidies, river interlinking program to provide water for water deficient regions can help in mitigating the water stress conditions of India.

### **Q15. How can the mountain ecosystem be restored from the negative impact of development initiatives and tourism? (Answer in 250 words)**

Mountain ecosystem refers to ecosystems found on mountains. It involves specific flora and fauna of the mountain, native people, their culture and rituals. Mountain ecosystems include a wide range of small and unique habitats, with flora and fauna that may have very short growing and reproductive seasons, and may be particularly sensitive to disturbance by human activity.

The Mountain ecosystem is vital to the ecological security of the earth, through providing forest cover, feeding perennial rivers that are the source of drinking water, irrigation, and hydropower, conserving biodiversity, providing a rich base for high value agriculture, and spectacular landscapes for sustainable tourism.

In Recent times, rapid development of roads, hydropower projects, unplanned urbanization as well growth of tourism has threatened the mountain ecosystem.

#### **Negative effects of development and tourism on Mountain ecosystem:**

- vegetation clearing and soil erosion
- removal of scarce habitat
- altering of critical landscapes and water flows
- water and air pollution
- wildlife relocation or behavioral changes
- introduction of exotic and invasive species and diseases can also have a significant negative impact on local plant and animal species



**Social Impact:**

- disturbances from high levels and concentrations of visitor noise and activity
- reduced availability of scarce shared resources such as firewood, fish and fresh water
- exposure to and adoption of foreign traditions, lifestyles and products can pose a threat to the unique culture, traditions, knowledge and livelihoods of mountain populations, particularly in remote and indigenous communities.

**Economic Impact:**

- provide little skill-building or training to local people
- Poor working condition
- Involvement of big companies letting revenues leaking out of the communities

**Restoration of Mountain Ecosystem:**

- NitiAyog has initiated 5 thematic projects for restoration of the mountain ecosystem.
  - Inventory and Revival of Springs in Himalayas for Water Security
  - Sustainable Tourism in Indian Himalayan Region
  - Transformative Approach to Shifting Cultivation
  - Strengthening Skill & Entrepreneurship Landscape in Himalayas
  - Data/Information for Informed Decision Making
- Government has launched National Mission for sustaining the Himalayan ecosystem for protection of Himalaya. It includes:
  - Biodiversity conservation and protection.
  - Wild life conservation and protection.
  - Traditional knowledge societies and their livelihood.
- Many private companies conduct green trek where they don't allow littering of trash.
- Government should identify clear tourism path, regulate it through an independent body by providing basic amenities to protect the mountain ecosystem.
- Individual must become aware and shouldn't litter or cause any harm to mountain ecosystem.
- Encouraging small hydroplant to provide electricity to nearby village than large hydropower which submerge huge amount of forests.
- Critical mountain areas should be identified as eco-sensitive zones and made no go areas as recommended by Gadgil committee.
- Mining activities must be strictly regulated to protect the critical ecosystem.
- Afforestation and Social forestry for landslide, floods and avalanche control.

Thus, protecting the mountain ecosystem is for the benefits of individual and society. Mountain services are critical for the growth of human and environment.



**Q16. How is efficient and affordable urban mass transport key to the rapid economic development in India? (Answer in 250 words) 15**

**Introduction:**

India's public transport needs are likely to grow rapidly as the country urbanizes at a fast clip. As per Census 2011 (the population of India is 1.21 billion), India is about 31 per cent urbanized and cities contribute almost 66 per cent to the Gross Domestic Product (GDP) of the country. It is expected that by 2030, 40 per cent of population will call cities home and are also expected to contribute to 75.01 per cent of the GDP.

The Ministry of Housing and Urban Affairs estimates that INR39,20,000 crore (USD600 billion) needs to be invested during the period 2011-31 out of which 44 per cent is to be allocated to urban roads and 11.5 per cent to mass transit systems.

**Efficient and affordable urban mass transport key to rapid economic development of India**

- Releases under-utilized urban lands: The major reasons for urban sprawl and shortage of urban land are the fact that urban lands are not exploited to their optimal potential.
- Ensures sustainable urban growth: TOD curtails urban sprawl and hence reduces the strain on existing infrastructure. This helps in achieving compact and controlled developments within the cities, and reduces the average travel time and household spends on transportation.
- Increased modal shift towards Non-Motorized Transport (NMT): creates a balanced mix of land use through concentrated residential development at a walking distance of 500 to 800m along the transit corridor, or from the transit station.
- Improved quality of life: Shorter commutes result in more leisure hours, reduced pollution, more reliable and safer public transport systems, mixed-use development, and efficient and shared open spaces. All these add up to a significantly improved quality of life.
- It brings economic of scale in the production. With increased mobility at affordable cost, it allows cheaper production of the goods.
- It enhances private sector participation in the economic growth of country. Many private companies are part of development of public transport.
- It initiates diffusion of technology. With many technology specially Electric vehicle becoming the norm for public transport, it help in penetration of modern technology.
- It brings connectivity to sub-urban areas, which become hub for production and economic growth. Connectivity to nearby areas in NCR region through Metro has led to growth of many towns of Faridabad, Noida and other areas.
- Public transport is a major contributor to both national and local city economies through the diverse range of skilled, high-tech jobs that it offers directly.





## GS – 1 2019 MAINS WITH MODEL ANSWERS

- Efficient mobility in cities creates economic opportunities, enables trade, facilitates access to markets and services and makes efficient use of resources.
- Capital investment in public transport sparks a chain reaction in economic activity up to three or four times the initial investment, enabling and promoting urban densification and greater urban productivity.
- Such projects can also help to act as a catalyst for wider urban development, helping to attract businesses and private investment to cities.
- Public transport networks and infrastructure also play an essential role in the 'global appeal' of a city, as cities that are easy to move about in are consequently more appealing to businesses and tourists alike.
- The Public transportation investments sustain clusters of industries and businesses by supporting their closer proximity to each other, improving productivity and creating clusters of activities.
- Efficient transportation reduces the time distance between the suburbs, where some of the labor force lives, to the downtown areas.
- Public transport improvements increase the accessibility of people and businesses to reach jobs, services, goods, and activities, productivity also increases.

Conclusion:

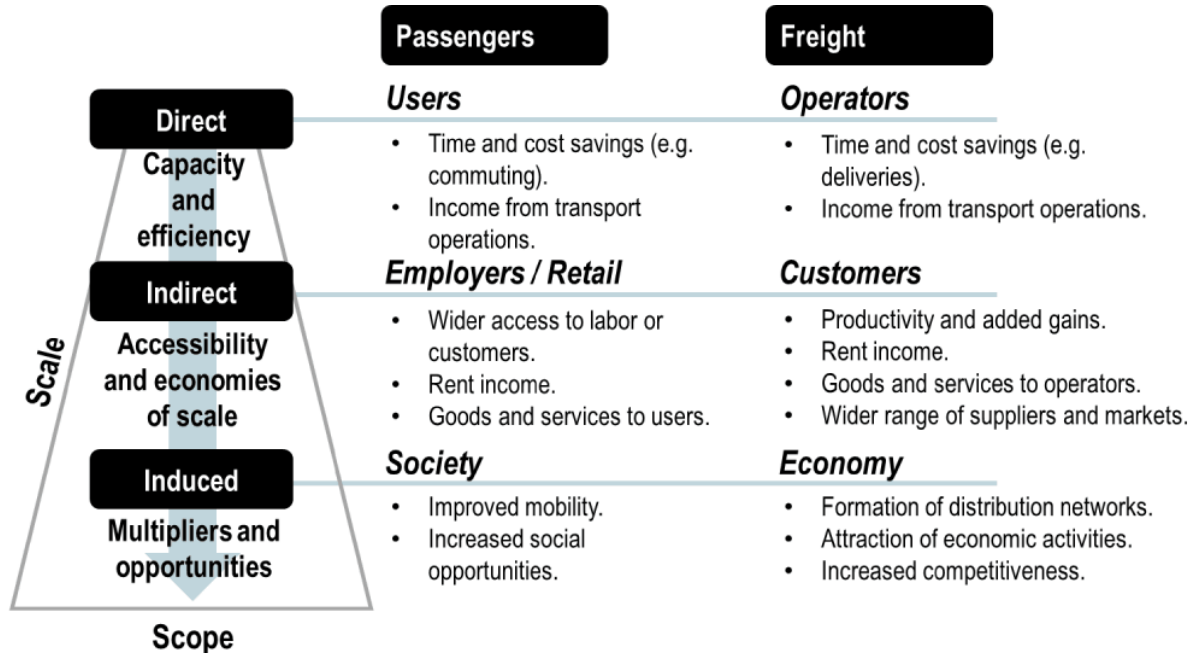
Government has taken many steps to improve urban mass transport in cities.

- National Urban Transport Policy-2006.
- Financial assistance upto 20% for Metro Rail Projects initiated by State Govt.
- More than 22,500 buses sanctioned to 157 cities/cluster of cities under erstwhile JnNURM Scheme.
- 80% financial assistance is being provided by Ministry for preparation of Comprehensive Mobility Plans(CMPs) and other Urban Transport related studies by cities, 50% cost of DPR preparation for Mass Rapid Transport System is also provided under UT planning and Capacity Building Scheme.
- Ministry has also prepared guidance documents for setting up of Unified Metropolitan Transport Authority (UMTA), Urban Transport Fund (UTF), Bus Operations, Traffic Management Information and Control Centre (TMICC), Public Bike Sharing (PBS) etc. for help of the State Govt/City authorities.
- More than 1000 city officials have been trained from all over India on Urban Transport issues.
- Ministry has issued several advisories such congestion charging, innovative financing, UMTA for million plus cities etc. for lthe half of cities.
- Ministry has also provided financial assistance for Bus Rapid Transit System (BRTS) for 12 cities.



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- Urban Transport component such as BRT, Buses, Footpaths, Cycles etc have been made important component of AMRUT scheme of the Ministry.



### Extra information: Need For Affordability of Urban Mass Transport

- Complementary walking and cycling infrastructures are comparatively easy and inexpensive for local authorities to develop. These can immediately reduce injury risks for a very large proportion of urban dwellers.
- For instance, in Nairobi it is estimated that some 40% of daily trips are on foot and another 40% of travel is via informal and poorly organized “matatus,” or shared taxi systems – while only about 9% of travel is by private vehicles
- Among the most significant developments in urban mobility in recent years has been the rise of ride-hailing services like Uber and Ola, which also let users share rides.
- With more than a third of our population already living in urban areas — developed States like Tamil Nadu are more than 50 per cent urbanized — affordable public transport becomes a fundamental necessity, rather than a welfare indulgence.
- One of the greatest drivers of efficiency is the technology-enabled sharing economy and peer-to-peer networks that can enable real time alignment of demand and supply, thereby eliminating expensive underutilization of assets and inventory of time.

### Case Study

Nearly 80 per cent of trips (4.24 million) in Singapore are performed on Public Transport comprising of bus, MRT, LRT, Taxis. The supply of public transport per capita is one of the



highest in the world, due to which there is high usage of public transport, which coupled with travel demand restraint measures, like area licensing system, vehicle quota system, congestion pricing etc. has resulted in decreasing registration of private cars.

**Q17. How do ocean currents and water masses differ in their impacts on marine life and coastal environment? Give suitable examples. (Answer in 250 words) 15**

An ocean current is a continuous, directed movement of sea water generated by a number of forces acting upon the water, including wind, the Coriolis effect and temperature and salinity differences. An ocean current flows for great distances which play a dominant role in determining the climate of many of Earth's regions.

Water mass, a body of ocean water with a distinctive narrow range of temperature and salinity and a particular density resulting from these two parameters. Water masses are formed as the result of climatic effects in specific regions i.e. water mass is a body of water which has physical properties distinct from surrounding water.

**Impact on marine life and coastal environments**

- Warm currents traveling along temperate coasts increase the temperature of the area. Perhaps the most striking example is the Gulf Stream, which makes northwest Europe much more temperate than any other region at the same latitude.
- Cold ocean currents have a direct effect on desert formation in west coast regions of the tropical and subtropical continents. Example- Peru( Humboldt), Canary Current
- Warm ocean currents bring rain to coastal areas on the east coasts of the continents in tropical and subtropical latitudes. This results in warm and rainy climates.
- Mixing of cold and warm ocean currents bear richest fishing grounds in the world. Example: Grand Banks around Newfoundland, Canada and North-Eastern Coast of Japan.
- The mixing of warm and cold currents help to replenish the oxygen and favor the growth of planktons, the primary food for fish population. The best fishing grounds of the world exist mainly in these mixing zones.
- The cold currents from Arctic bring large ice mass from polar region which act as hindrance to the ship navigation.
- Also the fog formation in the region of mixing of warm and cold water current hinders navigation.



- The gyre circulation help in maintaining the latitudinal heat balance.
- Antarctic bottom water is an important water mass that forms on the Antarctic continental shelf as a cold, dense residual brine during the formation of sea ice. Its salinity of 34.62 parts per thousand and temperature of  $-1.9^{\circ}$  C result in a high density of 1.027grams per cubic centimetre, causing it to sink and flow northward along the bottom into the southern oceans.
- Mediterranean water is another example of a water mass. Excessive evaporation, low rainfall, and high temperatures continually generate large volumes of warm, salty (36.5 parts per thousand) water. Its high density causes it to sink to the bottom of the Mediterranean and overflow across the submarine sill at the Strait of Gibraltar, from this place it sinks and spreads at a depth of about 1,000 metres in the Atlantic.

**Impact of Water Mass on Marine life and Coastal environment:**

- Water masses of tropical regions namely dead sea, mediterranean sea has high salinity and doesn't support much of the marine life. There is little mixing of nutrients which is not conducive for growth of planktons and fishes.
- Water masses show mostly upward –downward movement and doesn't flow horizontal in nature.
- Water Mass support a large portion of marine life since sunlight penetrates deep down allowing photosynthesis to take place.
- Since Water Mass are permanently around the land, aquatic existence is abundant, but this is not the case with oceanic current which are in oceans.

**Q18. Do we have cultural pockets of small India all over the nation? Elaborate with examples.**

India is a nation which represents Unity in Diversity. India is not based on western concept of nation-state where one nation has one cultural identity, rather it is based on pluralism.

The diversity within India is so significant that different geographical areas of India possess so much cultural diversity that they become a small India.

- Diversity in architecture can be found enormous within the geographical region of North India. It has muslims mosque based on Persian architecture having dome, minarets and Nagara architecture based temples with Shikhara, Mandapa and garbhagriha. Diverse architecture also includes Indo-islamic buildings.
- Temples of south India has their own diversity with temples belonging to both Shiva and Vishnu deities. There is prevalence of rock cut architecture like Pandavarath in Mahabalipuram and free standing temples like Shore temple at a single place.



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- North-eastern region has its own diversity. Folk Music of north –eastern region has martial performances like Thang-ta in Manipuri, classical music like Manipuri, temple dance like Sattriya and numerous folk dances based on different festivals.
- Cultural diversity of western India in cuisine, handicrafts is enormous. Where Eastern rajasthan has spicy food , neighbour state of Gujarat prefers sweet food. Bandhej print of Rajasthan, Block print of Sanganer, Chickankari of Lucknow brings their own diversity in the small region.
- Small nation is also seen in metropolitan areas. Where uni-colored clothing is preferred in metros while rural areas are colourful in nature. Metro city celebrates Indian as well western festivals like Thanks Giving, haloween with rural India celebrating Pongal in Tamilnadu, Makar Sankranti in North India.
- There is tremendous diversity in dances performed across India with regions having their own diversity. Temple dance like Bharatnatayam, Kuchipudi ,Odia are celebrated in temples in south India. Dances like Mohiniattam is sensual in nature.

Though, India does have cultural pockets of small India but they are all tied up with the same Indian values.

- Values of sacrifice, respect for elders is common across India.
- Joint family system is the norm throughout Indian continent.
- Most of the dances, architecture though diverse in content but take their context from common sources namely Ramayana, Mahabharata.
- Most of the folk art is centered around harvest festivals or arrivals of monsoon.

Thus, India celebrates its unique culture through diversity in approach but unity in values. Cultural ministry has identified these small pockets of culture and encourage it through zonal councils of culture.

### **Q19. What are the continued challenges for women in India against time and space?**

Women in India faces multiple challenges throughout her life from birth to death as well as in public, social and economic space.

#### **Challenges in Time:**

- Female foeticide prevalent in many states make birth of girl child difficult. Girls are given birth as favour than out of love.
- During her childhood stage, she is kept at lower status to her brother in sharing foods, entertainment and schooling.
- Burden of poverty falls unpropotionally on the girl child, drop out rate for the girl child is higher than boys.



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- Child marriage is prevalent in many states which denies girl to realize her potential or life her childhood to the maximum.
- After marriage, they have to bear burden of producing children and not allowed to realize their potential.
- Women has little economic independence. They face higher poverty in old age due to lower economic conditions.

### Challenges in Space:

#### At Public Space:

- Crimes against women are on the rise.
- Women faces issues of safety in the public transport. Most of the public spaces are not properly lit.
- A woman in a public space is immediately an object of consumption.
- Women body, my clothes, my manner, are immediately dissected and deemed appropriate or inappropriate.
- Temples are banned to menstruating women to conserve the notion of “purity”
- The problem of women feeling uncomfortable in public spaces is solved by removing women from these public spaces.
- Public spaces in a city are usually designed based on a traditional conception of the family and a traditional division of labour among women and men (men as workers in the public space and women as caretakers and home keepers in the home and private spaces).

#### At Economic Space:

- There is lack of economic opportunities for women according to their education.
- Women sometimes decline promotions as longer hours interfere with domestic responsibilities.
- Families are patriarchal in nature and doesn't support travelling far from office and working in night.
- Laws like Maternity Benefit act also create hindrance for opportunities of women.

Thus, women have faced numerous issues in time and space. Government has recognized these challenges and working to ameliorate it. Cash Transfer schemes for successive women education, PCPNDT act to safeguard girl child, BetiBachao –BetiPadhaoabhiyan for women education, prevention of sexual harassment at work place, maternity benefit act for managing both the responsibility are key steps to address challenges present in space and time.



**Q20. Are we losing our local identity for the global identity? Discuss.**

**Introduction:**

Globalization is free movement of goods, services, people and ideas across political borders. As a consequence of it, a global identity has emerged. Global identity is a consciousness which conceives itself as a part of emerging world community. The increased interaction between societies with rise in the people to people contact both physically and virtually (through ICT) has led to changes in the identity.

**Body:**

Self and identity are related to the social world in which individuals live and are constructed within social relationships.

**Yes, to an extent, we are losing our local identity.**

- Loss of traditional modes of entertainment like dramas and puppetry for Netflix and western music
- Tastes in younger generation are changing with respect to cuisines. Ex: Traditional snacks which are being replaced by McDonalds and other such global chains
- Change in value systems from respect to elders to everyone being called by their name in a corporate setting, predominance of individual identity over collective identity lately
- Handlooms and Khadi replaced by Global brands like Reebok and Armani.
- Dominance of fairness creams in Indian markets by companies which do not sell them in the west.
- Impact on customs and Traditions- The western Idea of civilization has impacted prospective toward Indian tradition and customs which are looked down as regressive, therefore people are leaving their cultural identity which provided India its cultural diversity.
  - Example - touching the feet of elders.
  - Example - keeping obscenity off the public discourse is now changed esp on social media.
- Local language has been diluted so much to the point that heritage and cultural values will be in the risk of becoming extinct.
- Concepts of good and evil, right and wrong, individualism and pluralism, individual interaction with the society and the very meaning of life are all warped and corrupted by global identity.
- It has commercialized relations that before were based on community life, on gratitude and on affectionate and symbolic exchanges.
- Global identities have completely changed the local lifestyles. The street markets in every city and town are awash with clothes, bags, sun glasses, watches, electrical and electronic goods, music tapes which presents global lifestyle as cool and new.



**However, there is a strong local identity which is thriving in India**

- Jallikattu protests showed that there is assertion of our cultural identity even when the laws are against it.
- Linguistic identity is strong despite the advent of English as lingua franca of the world
- Dressing and food habits have not changed in majority of population, but only in urban affluent pockets Also, there is a reactionary reassertion of local identity over global identity as seen below
- Glorification of the past achievements like scientific discoveries and mathematical concepts
- Rise of new age gurus who have become extremely popular and billionaires in a short span of time
- Anti-cow slaughter movement in many states

**And then there is a mixture of both global and local identity which is creating a GLOCAL identity**

- McAlotikki burgers instead of traditional beef burgers
- Barbie dolls with sarees
- Jain special foods by multinationals without onion and garlic

It is not just Indian culture that is being influenced by global culture, but the reverse is also true. For instance

- India's chicken tikka masala has been Britain's favorite food multiple times in a row.
- Indian TV serials are very popular in central Asia.
- Bollywood movies have influenced many parts of the world including western Europe and USA.
- Sanskrit is now attracting the modern world.
- An international day for yoga was declared by the United Nations General Assembly (UNGA) on December 11, 2014 unanimously Almost 120 countries participated and practiced yoga on 21st June 2016.
- Indian music's influence on world is pervasive and longstanding. Its beauty, grace, and unique melodic phrasing has inspired musicians for decades, and its exciting rhythmic language has given instrumentalists, and even vocalists new resources upon which they have drawn.

**Conclusion:**

In an era marked by a borderless, interconnected global economy, the result has been a truly integrated and accelerated communication across time and space. Between the force of global economic independence and electronic information this accelerated change makes the world, "a burgeoning hybrid of cultures".





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