

CS Mains G.S - I

Part - 2

NOTE: As the question on this topic may not come in the exact form in C. S Main Examination we have given slightly more information so that candidates can answer a question on this topic even if it is differently framed. Though care has been taken to give accurate information, if there are any inaccuracies, please write to us at rcreddy.testseries@gmail.com. It will be referred to the experts and, if need be, correction will be made.

Q1. The great Dalit march from Ahmedabad to Una is a reflection of growing Dalit consciousness in post-independent India. Explain

The growing Dalit consciousness is due to

- continuation of social discrimination and attacks on Dalits like the one at Una in Gujarat wherein a few Dalits were beaten by a cow vigilante group for skinning a dead cow,
- increasing percentage of formally educated among the Dalits who are aware of their constitutional rights like Equality before law, Prohibition of discrimination on grounds of caste, religion, etc., Abolition of untouchability, Equality of opportunity in public employment, legal safeguards like Protection of Civil Rights (P C R) Act, 1955, and Prevention of Atrocities against SCs and STs Act, 1989,
- extensive coverage of atrocities on Dalits by television which motivates Dalits to join protest meetings and marches,
- awakening among the Dalits due to 'educate, organise, and agitate' movements which involved launching of periodicals like Mook Nayak, Bahishkrith Bharat, and Janata, addressing meetings, and agitations for achieving self respect for Dalits launched by Dr. Ambedkar, and
- continuation of 'educate, organise, and agitate' activities by leaders of Republican Party of India, Dalit Panthers Party, and Bahujan Samaj Party, and various other organizations like that of students.

Q2. What do you understand by 'Unity in Diversity'? How is it different from Assimilation or Homogenisation? What factors have contributed to the feeling of 'Unity in Diversity' among Indians?

Diversity refers to patterned differences between groups of a society and lack of uniformity. India has huge diversity in terms of race, religion, language, and caste.

Unity means integration that may or may not be based on uniformity. It connotes a sense of one-ness, a sense of we-ness which hold the members of a society together or that bind the diverse groups with one another. Integration does not mean absence of differences.

Whereas assimilation or homogenisation refers to the reduction in differences or diversity in which local cultures are transformed or absorbed by a dominant culture. It advocates uniformity. This leads to sense of deprivation and even hatred in extreme cases among minority groups.

Indian Context:

In India there are bonds of unity underlying the manifold diversity of race, religion, caste, language, and culture. These bonds of unity may be located in a certain underlying uniformity of life as well as in certain mechanisms of integration. These are

- **Geo-political Unity:** India is known for its geographical unity marked by the Himalayas in the north and the oceans on the other sides. Politically, India is now a sovereign state with the same constitution. We share the same political culture marked by the norms of democracy, secularism and socialism. The expressions of this consciousness of the geo-political unity of India are found in Rig-Veda, and in the edicts of Asoka.
- **The Institution of Pilgrimage:** Another source of unity of India lies in what is known as temple culture, which is reflected in the network of shrines and sacred places. From Badrinath and Kedarnath in the north to Rameshwaram in the south, Jagannath Puri in the east to Dwaraka in the west. The religious shrines and holy rivers are spread throughout the length and breadth of the country. Closely related to them is the age-old culture of pilgrimage, which has always moved people to various parts of the country and fostered in them a sense of geo-cultural unity. It has played a significant part in promoting interaction and cultural affinity among the people living in different parts of India.
- **Tradition of Accommodation:** Hinduism, the main religion of India, had been an open religion, a receptive and absorbing religion, and an encompassing religion. It is known for its quality of openness and accommodation. Hindus visit Darghas, Gurudwaras, etc.
- **Tradition of Interdependence:** One manifestation of it is found in the form of Jajmani system, i.e., a system of functional interdependence of castes.

Q3. As per a recent IMF study, India's GDP can expand more if the number of women workers increases to the same level as that of men. What are the factors that inhibit participation of women in Indian economy?

Women constitute 48% (2011 census) of our Indian population, yet their share in total workforce is a mere 22 %. In order to attain and sustain higher economic growth rates, the share of women in the workforce has to increase. The following are the factors that hinder women's participation in work.

- **Education and skills:** National Literacy rate is 74.04% with 82.14% of the males and 65.46% of the females being literate. This shows the clear gap in woman education. Girls are not not admitted in schools and colleges due to burdening them with domestic work, fear of attacks, lack of exclusive toilets for girls in schools, etc.
- **Domestic activities:** Women are regarded as performers of household activities like cooking, taking care of children, elders, collection of water, etc. as a result they spend most of their time in doing these activities which are not considered in GDP calculation.
- **Discrimination at workplaces:** Women are paid lower wages than their male counterparts in informal sector. There exists an attitudinal bias in organisations that prevent women from advancing to leadership positions.
- Inadequate maternity benefits in Private Sector also inhibit their participation in economic activity.
-
- **Safety concerns:** Due to sexual harassment, poor public transportation facilities especially in the late night shifts, women prefer to confine their work to fixed schedules. This results in underutilization of their potential.
- **Lack of support from their family:** It is often observed that many women resign after they give birth to a child. This is due to lack of adequate support from their family to balance personal and professional lives.
- **Societal factors:** Fear of women dominating the family, customs that prohibit women to work outside, and decrees issued by Khap panchayats are a few societal factors that inhibit their participation.

Q4. Slums are in general considered as a menace in urban landscape. However, they play a vital role in ecological structure of Indian cities. Explain their role and also issues that are to be addressed in slum rehabilitation and resettlement strategies

The unchecked, unplanned and haphazard growth of urban areas has resulted in the growth and spread of slums and squatter settlements which present a striking feature of Indian cities, especially of metropolitan cities. For example, the financial capital of India, Mumbai has 48.88 per cent of its population consisting of slum dwellers and Dharavi slum in Central Mumbai is the largest slum of Asia.

Slums are characterized by high population density, poorly built congested houses in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities. Yet, they assume vital niche in the ecological structure of Indian cities as discussed below:

- **Cheap labour force and informal sector:** Slums offer a rich pool of semi-skilled and unskilled labour force to urban areas. They are primarily found in informal sectors like street vendors, rickshaw drivers, domestic helps, etc.
- **Absorbing migrants:** Slums play an essential role by absorbing migrants into urban areas that offer economic opportunities and a viable way out of poverty for them or their children. However poor the quality of life in slums may seem from the outside, from a migrant slum-dweller's perspective, living there is an entirely rational decision as slum provides support in the form of affordable accommodation, social acceptance, etc.
- **Composite culture:** Slums have their unique identity as they act as cultural melting pot where different regions across the country stay together including the migrants.

In spite of several efforts by the Central and State Governments to contain slums, their growth has been increasing sharply. In this context, solving India's slum problem requires holistic approach that recognises the role played by slums in cities. Suggested measures include the following :

Livelihood security has to be assured by ensuring their residences are not far away from their sources of employment with necessary means of transportation.

Slums should be treated as units of SHGs which not only helps in urban poverty alleviation but also leading to women empowerment.

Diversify livelihood options through measures like skill development, and financial

Make social infrastructure like education, health and sanitation affordable and accessible.

Checking migration from rural areas by ensuring proper rural livelihoods.

To make Indian cities the real growth engines of economy, the role played by slums needs to be fully understood and incorporated in rehabilitation strategies so that we develop SMART cities that are inclusive in true sense.

Q5. "Though the term 'secular' did not originally feature in the Indian Constitution, several constitutional provisions suggest very clearly the framework of a secular state." Elaborate and also explain the need for Secularism in India.

Though the term "secular" was introduced in the preamble of the Indian constitution by the 42nd amendment in 1976, several provisions in the original constitution suggest very clearly the framework of a secular state which are as follows:

Firstly, India **has no state religion**, nor does it give any constitutional recognition to the religion of the majority.

Secondly, constitution of India guarantees both **individual and collective freedom of religion** under articles 25 to 30 in Fundamental Rights.

Thirdly, constitution **prohibits discrimination on the basis of religion** under articles 15, 16, 325 and 326.

Need for secularism in India

Secularism is needed in India for national integration by promoting communal harmony

It safe guards democracy by limiting the powers of the majority.

It averts the danger of religious communities overwhelming the state, each with its own view of “good life” as valid for others too.

It protects the equal rights of minorities

India made a commitment to secularism in the context of the two-nation theory and the creation of Pakistan on the basis religion. This earned India respect in global arena. It constitutes a **major component of Indian soft power.**

Q6. IPCC's Fifth Assessment Report stated that Himalayan glaciers would shrink by 45 percent by 2100, if Earth's average surface temperature rises by 1.8 degrees Celsius. This would have grave impact on one of the most densely populated regions of the world - Indian sub-continent. Examine the potential impact of this on the region and suggest suitable measures to tackle this problem.

The snow- and -ice-rich Himalayan region supplies water (Indus-Ganga-Brahmaputra- Irrawaddy and Yellow river systems) for billions of people in Asia and is sometimes referred to as the Earth’s “Third Pole.” Retreating glaciers, over the next several decades, are likely to cause significant problems to the Indian subcontinent region.

Immediate impact :

- It will result in flooding due to increased volume of water in the rivers.
- Food insecurity will emerge in the Indian sub-continent as floods damage crops and also cause increased salinity due to water logging in low lying areas.
- Livelihood security of population dependent on these rivers like farmers, fishermen and others will get affected.
- It will result in diseases associated with floods like cholera, typhoid, etc..and proliferation of malaria due to the presence of stagnant water in low lying areas.
- It threatens the biodiversity due to the change in amount of water in the rivers which damages the riverine ecosystem.

Long term impact :

- Migration : The flood prone regions become sources of migration, resulting in movement of people to the interiors, thus further straining the existing infrastructure.
- Drought : Once the melting of Himalayan glaciers recede, they would not be acting as strong sources of fresh water to the Himalayan rivers as in the past. Hence, the regions along the river courses become dependent on rainfall from South West monsoons, western disturbances, etc. whose failure results in drought like conditions.
- Submergence of low lying areas : Low lying areas like Bangladesh and its adjoining areas are highly prone to submergence as water previously locked in glaciers is added to oceans.
- Navigation : The inland navigation may be adversely impacted as the depth of the rivers decreases due to lower water availability.
- Extinction of older species takes place as changes in water flow causes evolution of newer species to at the cost of older species.
- Water Wars might emerge with the increasing demand for water for irrigated farming and industry among people of different regions, particularly if a major drought occurs.

Suggestions :

Mitigation measures :

- A. Flood protection measures like strengthening of embankments, afforestation along the river banks, etc. should be carried out.

- B. Storage capacities of food grains and their proper procurement and distribution have to be ensured.
- C. Deforestation has to be checked, and illegal encroachment on the flood plains has to be stopped.

Adaptation measures :

- A. Carry out flood zone management on the lines of coastal zone management.
- B. Adopt suitable cropping practices. Develop climatic and saline resistant crop varieties.
- C. Diversify the livelihood options of people living in these regions.
- D. Ex situ conservation of species of the riverine ecosystem to ensure biodiversity remains intact.

Q7. Both the Himalayan rivers and peninsular rivers offer unique advantages and challenges in hydel power generation. Explain.

India has extensive river systems which are classified into Himalayan and Peninsular rivers systems. They offer huge hydel power potential along with challenges as discussed below:

HIMALAYAN RIVERS :

Advantages :

- The relatively young Himalayan rivers compared to peninsular rivers are known for their high speed streams because of steep slopes and dissected terrains.
- Availability of water in these rivers is perennial as they are glacier fed. This allows uninterrupted hydel power production.
- Densely populated downstream regions and industries create demand for hydel electricity produced.

Challenges :

- The Himalayan region is also prone to earthquakes thus making the hydel projects challenging.
- Changing course of rivers (like Kosi), and braided channels (like Brahmaputra) pose a huge challenge in construction and maintenance of hydel projects.
- Deforestation alters the carrying capacity of rivers which ultimately adversely impacts the hydel power projects.
- Climate change in the form of melting of glaciers makes the flow of water in these rivers
- uncertain.

PENINSULAR RIVER SYSTEM :

Advantages :

1. The hard rock topography of the peninsular region helps in storage of water easier, thus their flow can be better regulated compared to the Himalayan rivers.
2. The presence of fast flowing rivers along Western Ghats offers a huge hydel potential .

Challenges :

- Availability water in these rivers is largely dependent on monsoonal rainfall. And, the impact of climate change on monsoons further aggravates the situation.
- Interstate river water disputes are a major hurdle in the construction multipurpose dams.
- Spurt in demands for release of water in times of distress for drinking water, irrigation, etc.. seriously constrain the availability of water for hydel power generation.

Q8. “South East Asia, containing the world’s third largest tropical forest, is experiencing deforestation rates higher than almost anywhere else on the earth” Explain.

Almost the whole of Southeast Asia was covered by forest 8 000 years ago. Today, only about half the land area is covered by forest. It is estimated by UNEP that the region is losing about 1.2 per cent of its remaining forest area each year, with Cambodia, Indonesia and the Philippines reporting annual losses of two per cent over the last five years. Out of 27 million hectares of peat land in Southeast Asia, an estimated 12 million hectares has been deforested or degraded over the past ten years.

The reason for higher rates of deforestation in South East Asian tropical forests is given below.

Logging: Most of the more accessible forests in the region have been logged at least once. Commercial logging in South East Asia has been heavily concentrated in forest areas that are accessible by bulldozers, trucks and coastal shipping.

Legal and illegal logging has prompted the loss of a multitude of "forest refugia" (or wildlife reservoirs) in the Southeast Asian rainforests, which are crucial to the replenishing of tropical plant and animal species.

- 2) Forest Fires: Widespread logging led to one of the largest fires ever burned in Kalimantan in 1992-1993. Around 27,000 square km of forest got burned. In 1998 thousands of forest fires burned over Malaysia and the Indonesian archipelago
- 3) Political instability: In 1992, lawlessness contributed to widespread deforestation.
- 4) Palm-oil: It has become a global commodity and a source of destruction for the rainforests of Southeast Asia. In the last decade alone the production of this commodity has more than doubled and the land area harvested for palm oil has tripled.
- 5) Mining : Over the last four decades, the two largest rainforest countries in the region – Indonesia and Malaysia – have permitted a massive mining activities which led to deforestation. One such example is mining of tin in Malaysia.
- 6) Shifting cultivation, that provided subsistence requirements of a large number of people in the mountains of South and Southeast Asia under a situation of low population, contributed to deforestation.
- 7) Agriculture: Rapid expansion of commercial agriculture is one of the reasons for deforestation. Rapid modification of land use is happening due to increased population density. Cultivation of rubber, palm, and paddy is also happening at the cost of forests.
- 8) Fuel wood, though not a major reason, consumption is also one of the reasons for deforestation of tropical forests.
- 9) Cattle ranching has also contributed to the deforestation of tropical forests.

Q9. What do you understand by least cost approach for location of industries? Explain how the location of iron and steel industry in India justifies this approach.

Least cost approach means maximizing the profits by reducing cost of production and making the product competitive in the market. One of the main factors effecting cost of production is transportation cost. In order to reduce transportation cost, heavy industries are located close to raw material like: iron and steel, cement, cotton, jute, etc.

Industrial location is affected by factors such as nearness to raw material, transportation facilities, availability of labour, market, government policy, etc,. Most important factors for establishing steel plants are nearness to raw material and water, availability of transportation facilities. In the table given below, location of major steel plants and source of raw material and nearness to transportation facilities are given to justify how locational factors influenced in establishing those industries.

	Iron Ore	Coal	Manganese	Dolomite & Limestone	Port & NH	Water
TISCO, Jamshedpur (3.9 MT pig iron, 2 MT ingot steel, 3 MT saleable steel)	Singbhum (Jharkhand), Mayurbhanj (Orissa) 75-100 KM	Jharia and Raniganj 160-200 KM	Kendujhar district in Orissa	Sundargarh Orissa	Kolkata Port 250 KM & Close to NH 6	Subamrekh a River
Hindustan Steel Limited at Rourkela (1.2 MT ingot steel, 1.1 MT saleable steel)	Sundargarh and Keonjhar districts. 80 KM	Jharia and Talcher 170-225 KM	Barajmda	Baradwar and Pumapani	Kolkata Port & Nagpur - Kolkata railway line	Bramhadi River
Vishakhapatnam Steel Plant , Vizag (3.2 MT hot metal, 2.5 MT liquid steel, 2.2 MT saleable steel, 0.8 MT pig iron)		Damodar valley in Jharkhand & Imports from Australia (Gas from KG basin in future)	Orissa	Chhattisgarh; Madhya Pradesh and Orissa.	Vizag Port. NH 16 and railway junction	Yeleru canal to the Kanithi balancing reservoir (Godavari River)
Bokaro Steel Ltd (3.6 MT crude steel, 3.1 saleable steel)	Kiriburu mine in Orissa	Jharia coalfields 65 KM		Palamu district of Jharkhand	Kolkata Port 300 KM	Damodar River
Hindusthan Steel Ltd, Durgapur (1.2 MT crude steel, 1.1 saleable steel)	Bolani mines and Mayurbhanj (320 KM)	Jharia and Raniganj	Keonjhar district of Orissa	Birmitrapur in Sundargarh	Kolkata port 170 KM	Durgapur Barrage (Damodar River)

Bhilai Steel Plant (4.2 MT crude steel, 3.8 saleable steel)	Dalli-Rajhara range 80 KM	Korba and Kargali fields of Chhattisgarh 225 KM	Bhandara of Maharashtra and Balaghat of Madhya Pradesh	Nandini mines 24 KM	Kolkata - Nagpur railway line	Tendula Track tank
--	------------------------------	--	--	------------------------	-------------------------------	--------------------

Q10. Explain the characteristics of jet streams and their role in precipitation in India

Jet streams are defined as meandering, circumpolar air circulation in a narrow belt of a few hundred kilometers width in the upper limit of troposphere at very high speeds. Sub-tropical westerly jet stream, and tropical easterly jet streams are a few examples.

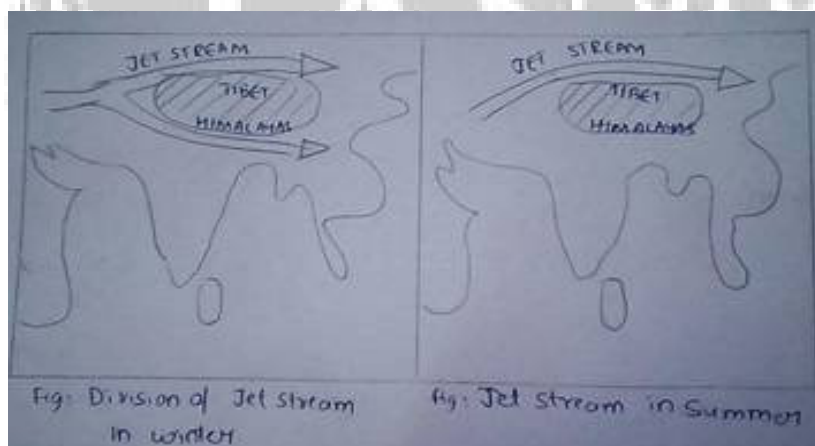
Characteristics :

1. They may range from 40-160 km in width and 2-3 km in depth.
2. They are also called as circumpolar whirl as they move around the poles in both the hemispheres.
3. They have meandering paths and their extent narrows down during summer while they extend upto 20 degrees latitudes during winter.

Role of jet streams in precipitation in India :

Monsoonal precipitation :

1. **Sub-tropical westerly jet stream** : This jet stream is bifurcated into two parts by the Himalayan ranges and the Tibetan plateau during the months of March and April. But, by the end of May, its southern branch disappears due to the northward shift of this jet stream on the account of apparent movement of the Sun. This process causes sudden movement of monsoonal winds into the Indian subcontinent.
2. **Easterly jet stream** : The Easterly jet stream is responsible for steering the tropical depressions into India. They have a crucial role in the monsoonal rainfall distribution. The nature of frequency of these depressions results in assessing the rainfall pattern during the monsoon .



Winter precipitation :

The North western India receives precipitation in the winter which is highly beneficial to the rabi cultivation. The winter precipitation is caused due to the western cyclonic disturbances that are formed over Mediterranean sea. These disturbances are brought into India by the westerly jet streams.

