

ECONOMY

ROLE OF CASTE IN ECONOMIC TRANSFORMATION

CONTEXT : India has been in a phase of jobless growth for at least two decades now, coupled with rising poverty and discontent in rural areas.

HOW CASTE RETARDS ECONOMIC GROWTH AND DEVELOPMENT

There is a link between economic transformation and caste in India. In the contemporary period it still plays an important role in understanding social and economic inequalities.

Social Bias

- Caste, through its rigid social control and networks facilitates economic mobility for some and erects barriers for others by mounting disadvantages on them.
- It also shapes the ownership pattern of land and capital and simultaneously regulates access to political, social, and economic capital too.

Colonial Rule impact

- India has one of the highest land inequalities in the world today. This unequal distribution of land was perpetuated by British Colonial intervention, which legalised a traditional disparity.
 - Some castes were assigned land ownership at the expense of others by the British for its administrative practices. They made an artificial distinction between proper cultivators who belong to certain castes and those labourers — lower caste subjects who cultivated granted/ gifted lands, that have institutionalised caste within the land revenue bureaucracy.
 - The British inscribed caste in land governance categories and procedures that still underpin postcolonial land ownership pattern in India.
- Land reform that took place after India's independence largely excluded Dalits and lower castes.

Impact of Green Revolution

- The Green Revolution that brought changes in the farm sector did not alter land inequality as it was mostly achieved through technological intervention.
 - The castes that were associated with this land pattern and benefited from the Green Revolution tightened their social control over others in rural India.

Role of Education

- The Indian education system has been suffering from an elite bias since colonial times.
 - British colonialists educated tiny groups of elites, largely from upper castes, for their own administrative purpose.
- Although the Indian Constitution guaranteed free and compulsory education under its directive principles, it was hardly translated into practice. Instead, attention was given to higher education for the elites.
 - Inequality in access to education got translated into inequality in other economic domains including wage differentials in India.

Barrier to entrepreneurship

- Castes that were already in control of trading and industrial spaces resisted the entry of others.
 - Even those who had economic surplus in farm sectors could not invest in nonfarm modern sectors.
- Social inequalities have mounted barriers for economic transition due to which the agrarian capital could not move into modern sectors.
- Even the relative success in South India is being attributed to the 'Vaishya vacuum' — an absence of traditional merchant castes.

HOW IT DELAYS ECONOMIC TRANSFORMATION

There are 3 ways in which Caste system delays economic development

- ownership and land inequality related to productivity failure within the farm sector
- elite bias in higher education
- Historical neglect of mass education and caste based entry barriers and exclusive networks in the modern sector.

INITIATIVES TAKEN TO ELIMINATE DISCRIMINATION AND PROMOTE TRANSFORMATION

1. Constitutional Provisions:

❖ Prohibition of Discrimination:

- Article 15 of the Constitution of India states that
- The State shall not discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them.

❖ **Equality of Opportunity:**

- Article 16 of the Constitution of India states that:
- There shall be equality of opportunity for all citizens in matters of employment under the State.
- No citizen shall, on grounds only of religion, race, caste, sex, descent, place of birth or any of them, be ineligible for any office under the State.

❖ **Compulsory Education:**

- Article 21A of the Constitution of India states that:
- The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine.

2. Land Reforms:

❖ **Land Ceiling:**

- The laws set a limit on how much land an individual or corporation could hold, also known as a land 'ceiling', and allowed the government to reapportion surplus land to the landless.

3. Human Development:

❖ **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):**

- It aims to mobilise youth to take up skill training with the aim of increasing productivity and aligning the training and certification to the needs of the country.

❖ **SANKALP Scheme:**

- Skills Acquisition and Knowledge Awareness for Livelihood (SANKALP) is an outcome-oriented programme of the Ministry of Skill Development & Entrepreneurship (MSDE) with a special focus on decentralised planning and quality improvement.

❖ **Stand Up India Scheme:**

- It was launched in April 2016 to promote entrepreneurship at the grass-root level focusing on economic empowerment and job creation.
- To leverage the institutional credit structure to reach out to the underserved sector of people such as SCs, STs and Women Entrepreneurs.

❖ **Pradhan Mantri Mudra Yojana:**

- It provides funding to the non-corporate small business sector through various last-mile financial institutions like Banks, Non-Banking Financial Companies (NBFCs) and Micro Finance Institutions (MFIs).
- Loans have been given to disadvantaged sections of society such as women **entrepreneurs**, SC/ST/OBC borrowers, Minority community borrowers, etc. The focus has also been on new entrepreneurs.

Way Forward

▪ **Learning from Neighbours:**

- As success witnessed in China and other S.E Asian Countries, India should put more focus on areas of Human Development, Low End Jobs, Rural Development to support economic transformation.

▪ **Rationalisation of Reservation Policy:**

- It should be made sure that every community/caste under a **reservation** category should be provided with equal representation in the employment/educational opportunities.
- Saturation of a particular community/caste in reservation violates the aim of reservation i.e. equal opportunity to all.

▪ **Audit of Initiatives:**

- An audit of the existing initiatives could be carried out at state level to ensure that the initiatives are efficiently providing the result for which they were launched.

▪ **Going Rural:**

- Ground level survey of the Socio Economic needs of the backward classes at rural level would provide the real picture of their situation.
 - It would enable the government to prepare an efficient blueprint for their welfare, which would contribute to the economy in a significant manner.

PRELIMS

1. Earthquake in Afghanistan

Recently, an Earthquake of magnitude 6.1 struck a rural, mountainous region of eastern Afghanistan.

Causes of Earthquake in the region:

• **Alpide belt:**

- Afghanistan is earthquake-prone because it's located in the mountainous Hindu Kush region, which is part of the Alpide belt.

- This belt is the second most seismically active region in the world after the Pacific Ring of Fire.
- The Alpid belt runs about 15,000 kilometers, from the southern part of Eurasia through the Himalayas and into the Atlantic.
- Along with the Hindu Kush, it includes a number of mountain ranges, such as the Alps, Atlas Mountains and the Caucasus Mountains.
- **Converging plates:**
 - The Earth's crust is especially lively in Afghanistan because it is where the Arabian, Indian and Eurasian tectonic plates meet.
 - The boundary between the Indian and Eurasian plates exists near Afghanistan's border with Pakistan.
 - Recent earthquake formed when the Indian plate crashed violently with the Eurasian plate.
 - Collisions like this shake and squeeze the ground upwards.
 - Along with causing earthquakes, this movement creates mountains like the Himalayas or the Hindu Kush and Pamir mountain ranges in northeast Afghanistan.

Earthquake

- It is the shaking of the surface of the Earth which results in a sudden release of energy in the Earth's lithosphere (rocky outer part of the Earth) that creates seismic waves.
- Earthquakes can cause severe damage, particularly in an area where homes and other buildings are poorly constructed and landslides are common.
- An earthquake's point of initial rupture is called its hypocenter or focus.
- The epicentre is the point at ground level directly above the hypocenter.
- It is measured in the Richter scale.

2. Registered Unrecognised Political Parties (RUPPs)

Recently, the Election Commission of India issued an order to push the Registered Unrecognised Political Parties (RUPPs) for ensuring due compliances.

Background

- India has a multi-party system.
- The Election Commission of India (ECI) accords recognition to the national level and the state level political parties based upon objective criteria.
- A recognised political party enjoys privileges like a reserved party symbol, free broadcast time on state-run television and radio, consultation in the setting of election dates, and giving input in setting electoral rules and regulations.
- Other political parties that wish to contest local, state or national elections are required to be registered by the Election Commission of India.
- Registered Parties are upgraded as recognised National Party or State Party by the ECI if they meet the relevant criteria after a Lok Sabha or State legislative assembly election.
- The Recognised Party status is reviewed periodically by the ECI.

About the recent decisions

- **Data:** There are 2,796 RUPPs according to EC's data till 2021, an increase of more than 300% since 2001.
- Removing parties: Few days before there was a decision to delete the 87 non-existent RUPPs.
 - Recently, the Commission decided to delete 111 additional RUPPs from the register.
- Non compliance: Address of communication was statutorily required as registration requirement under section 29A (4); any change in address was required to be communicated to the ECI under section 29A (9), which they have not complied with.
 - They have been violating the Representation of the People Act, 1951.

How are Political Parties registered?

- Political Parties registrations are governed by the provisions of the Representation of the People Act, 1951.
- According to the EC, any party seeking registration has to submit an application to the Commission within a period of 30 days.
 - Powers conferred by EC under Article 324 of the Constitution of India and Section 29A of the Representation of the People Act, 1951.
- Section 29A of RPA, 1951: Indian Citizen, Purpose of contesting elections, & 100 registered electors as its members.
- There is no procedure available for the de-registration of dormant political parties.

3. One Nation One Ration Card (ONORC)

- Recently, Assam has become the 36th State/UT to implement One Nation One Ration Card (ONORC).

About One Nation One Ration Card

- Ministry: It was rolled out by the Ministry of Consumer Affairs, Food and Public Distribution in 2019.
- Aim: To ensure hassle-free delivery of subsidised food grains to all migratory beneficiaries anywhere in the country through nation-wide portability under National Food Security Act (NFSA).
 - To empower all National Food Security Act migrant beneficiaries to access foodgrains from any Fair Price Shop (FPS) of their choice anywhere in the country by using their same/existing ration card with biometric authentication.
 - A card bearing 10 digit number will be issued to the complaint state's BPL card holders which will be linked to AADHAR database.
 - Beneficiaries can lift their entitled foodgrains from any electronic point of sale (ePoS) enabled FPS in the country through portability.
- Objective: To empower all NFSA beneficiaries to become AtmaNirbhar for their food security anywhere in the country, through portability of their existing ration cards enabling them to seamlessly lift their entitled subsidised foodgrains from any Fair Price Shop of their choice.
- MERA RATION' mobile application: Another dimension under ONORC plan is the 'MERA RATION' mobile application which has been rolled out to take maximum advantage of the ONORC plan.
 - The mobile app is providing a host of useful real time information to the beneficiaries and is **available in 13 languages**.

4. Four coral species recorded for first time in Indian waters: Study

Recently, four new species of corals were recorded in the Indian waters of the Andaman and Nicobar Islands.

Major Findings:

- The newly recorded species are:
 - Truncatoflabellum crassum,
 - T. incrustatum ,
 - T. aculeatum , and
 - T. irregulare
 - They are a part of the family Flabellidae.
- These species belong to the group "azooxanthellate corals".
- These corals are a group of hard corals and the four new records are solitary and a highly compressed skeletal structures.
- The details of the new records have been published in Thalassas: An International Journal of Marine Sciences in a paper.
- More about azooxanthellate corals:
 - Azooxanthellate corals are a group of corals that do not contain zooxanthellae.
 - They are non-reef building, unicellular, golden-brown algae.
 - They derive nourishment not from the sun but from capturing different forms of plankton.
 - These groups of corals are deep-sea representatives, with the majority of species reporting from between 200 m to 1000 m.
 - Their occurrences are also reported from shallow coastal waters.

Coral Reefs:

- A coral reef is an underwater ecosystem characterized by reef-building corals.
- Reefs are formed of colonies of coral polyps held together by calcium carbonate.
- **Symbiotic Relationship:**
 - Corals share a symbiotic relationship with single-celled algae called zooxanthellae.
 - The zooxanthellae also give corals their bright colour.
 - The algae provides the coral with food and nutrients, which they make through photosynthesis, using the sun's light.
 - Algae provide up to 90 per cent of the coral's energy.
 - In turn, the corals give the algae a home and key nutrients.
- **Temperature:**
 - The temperature of the water should not be below 20°C.
 - The most favourable temperature for the growth of the coral reefs is between 23°C to 25°C.
 - The temperature should not exceed 35°C.
- **Salinity:**

- Corals can survive only under saline conditions with an average salinity between 27% to 40%.
- **Shallow Water:**
 - Coral reefs grow better in shallow water having a depth less than 50 m. The depth of the water should not exceed 200m.
- **Coral reefs are divided into four classes:**
 - fringing reefs,
 - barrier reefs,
 - atolls, and
 - patch reefs.
- **Coral reefs in India:**
 - There are about 570 species of hard corals found in India
 - India has four major coral reef areas: Gulf of Mannar, Andaman and Nicobar Islands, Lakshadweep islands and the Gulf of Kutch.
 - Almost 90% of corals are found in the waters surrounding Andaman and Nicobar Islands.

ANSWER WRITTING

Q. What is Quantum Supremacy? Also discuss the possible applications of quantum computers in different fields.(150 words)

Introduction

The phrase “quantum supremacy” was coined in 2012 by John Preskill. It refers to a quantum computer solving a problem that cannot be expected of a classical computer in a normal lifetime. A quantum computer can solve complex problems that are beyond the scope of a classical computer. The basic advantage of Quantum Computing is its speed as it is able to simulate several classical computers working in parallel. Google recently announced that it achieved Quantum supremacy.

Body

Possible applications of quantum computers in different fields:

- **Data Mining and Artificial Intelligence (AI):** Quantum computers would be useful for tasks which handle huge amounts of data. Data mining and artificial intelligence would be major beneficiaries, along with sciences which deal in volumes of data, from astronomy to linguistics.
- **Drug Discovery:** It could help with the development of new pharmaceuticals, new energy sources, new ways to collect solar power, and new materials.
- It can have a major impact through quantum chemistry, which could be important in agriculture and human health.
- **GPS Navigation:** Solving complicated optimization problems, such as calculating how to deliver packages in the shortest time while using the least energy could be achieved by quantum computing. Addressing these challenges could save both, money and help the environment.
- **Encryption:** Improving encryption technology by generating random numbers.
- Building Machine Learning Systems better at tasks like distinguishing between real and fake items like bogus political videos.

Conclusion

Thus, it can be fairly concluded that Quantum Computing has huge potential in different fields. India in 2018, unveiled a programme called Quantum-Enabled Science & Technology (QuEST) which aims at building a quantum computer in India within the next decade. However, to fully achieve the fruits of quantum computing extensive research and funding are required.

QUIZ

1. Consider the following statements regarding earthquakes
 - 1) P- waves are the first waves to be recorded on a Seismograph.
 - 2) The energy of earthquake is released through a point called epicentre.
 Which of the above is/are correct?
 a) Only 1 b) Only 2 c) Both 1 and 2 d) None of the Above
2. Consider the following
 - 1) African Plate 2) Antarctic Plate
 - 3) Caribbean Plate 4) Indo-Australian Plate 5) Arabian Plate
 Which of the above are the major plates of the world?
 a) 1 and 2 only b) 1, 2 and 4 only c) 1, 3 and 5 only d) 1,2,4 and 5 only
3. Consider the following statements regarding political parties in India.
 1. The Election Commission of India (ECI) accords recognition to the national level and the state level political parties
 2. The Recognised Party status is reviewed periodically by the ECI.

- Which of the above is/are correct?
a) 1 only b) 2 only c) **Both 1 and 2** d) Neither 1 nor 2
4. The One Nation One Ration Card scheme is an initiative of which of the following ministries?
(a) Ministry of Housing & Urban Affairs
(b) Ministry of Education
(c) **Ministry of Consumer Affairs, Food and Public**
(d) Ministry of Finance
5. Consider the following statements about coral reefs.
1. A coral reef is an underwater ecosystem characterized by reef-building corals.
2. Reefs are formed of colonies of coral polyps held together by calcium carbonate.
3. Belize Barrier Reef is the largest coral reef in the world.
Select the correct answer from the following
a) **1 and 2 only** b) 2 and 3 only c) 1 and 3 only d) All of the above
6. Consider the following statements:
1. When interest rates rise in the US, Foreign Portfolio Investors withdraw money from India and invest in bonds in their domestic markets.
2. Foreign Portfolio Investors are the largest non-promoter shareholders in the Indian market.
Which of the above statement(s) is/are correct?
a) 1 only b) 2 only c) **Both 1 and 2** d) Neither 1 nor 2
7. Consider the following statements regarding the taxation of Virtual Digital Assets (VDA):
1. When the transfer of VDA takes place through an exchange, the VDA is not owned by the exchange, the exchange deducts tax.
2. When the payment between the seller and the exchange is being done through a broker, tax is deducted from both the exchange and the broker.
3. When the transfer of VDA takes place through an exchange, the VDA is owned by the exchange, the responsibility to deduct tax remains with the buyer or the broker.
Which of the above statement(s) is/are correct?
a) 1 and 3 only b) 1 and 2 only c) 2 and 3 only d) **1, 2 and 3**
8. Consider the following statements:
1. Striped Hyena is found in sub-Saharan, northwestern Africa, India, and Turkey.
2. They are nocturnal and are mostly scavengers, feasting on the carcasses of large animals.
3. The International Union for the Conservation of Nature lists striped hyenas on the critically endangered list.
Which of the above statement(s) is/are correct?
a. **1 and 2 only**
b. 2 and 3 only
c. 1 and 3 only
d. 1, 2 and 3
9. Consider the following statements:
1. The Levallois technique is used to chip a side of a stone to make it sharp.
2. The Levallois technique came into use in the Neolithic era with the use of the Acheulean handaxe.
Which of the above statement(s) is/are correct?
a. **1 only**
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2
10. The recently launched NIRYAT portal is associated with which of the following statements?
a. **It will provide information regarding India's foreign trade.**
b. It will provide information regarding India's domestic trade.
c. It will provide information on all customs procedures in India.
d. It will provide information on the skill development programmes available for the youths.