

INDIAN ECONOMY**STEEL INDUSTRY IN INDIA**

According to recent information shared by the Union Minister for Steel in Lok Sabha, Indian steel companies including the public sector steel companies have consistently enhanced their capacities, production and sales including exports over the years.

Key Points**Improvements:**

- India was a net exporter of steel in 2019-20 and during the period of April-August, 2020, steel exports from India have increased by more than 153% in comparison to the same period in 2019-20.
- Capacity for domestic crude steel production has been expanded from 109.85 Million Tonnes Per Annum (MTPA) in 2014-15 to 142.29 MTPA in 2019-20.
- Crude steel production has gone up from 88.98 MTPA in 2014-15 to 109.14 MTPA in 2019-20.
- These improvements can be attributed to the continuous efforts of skill training and government initiatives in the country.

Skill Training:

- By Skill Training Centres under the Ministry of Steel. For example, National Institute of Secondary Steel Technology (Punjab), Institute for Steel Development and Growth (Kolkata), etc.
- By Central Public Sector Enterprises (CPSEs) like Steel Authority of India Ltd. (SAIL) and Rashtriya Ispat Nigam Ltd. (RINL).
- Both CPSEs have been making continuous efforts towards reducing the operational costs through technology induction, enhanced productivity and streamlining procurement.

Challenges:

- Capital: Iron and steel industry requires large capital investment which is difficult for a developing country like India to afford. Many of the public sector integrated steel plants have been established with the help of foreign aid.
- Low Productivity: The per capita labour productivity in the country is at 90-100 tonnes for the steel industry which is very low. It is 600-700 tonnes per person in Korea, Japan, and other steel producing nations.
- Low Potential Utilisation: Durgapur steel plant makes use of approximately 50% of its potential which is caused by factors like strikes, shortage of raw materials, energy crisis, incompetent administration, etc.
- Huge Demand: Huge chunks of steel are to be imported in order to meet the demands. In order to save invaluable foreign exchange, productivity needs to be increased.
- Inferior Quality of Products: The weak infrastructure, capital inputs and other facilities eventually lead to a steel making process which is more time-taking, expensive and produces an inferior variety of steel products.

Government Initiatives for Steel Industry

- National Steel Policy (NSP) 2017: It seeks to create a technologically advanced and globally competitive steel industry that promotes economic growth.
- Steel Scrap Recycling Policy: It was launched to utilise steel scrap emanating from vehicles and white goods (that have reached their end of life) for quality steel production.
- Introduction of Quick Response (QR) code based traceable tags where quality and genealogy can be tracked, wireless hand-held terminal to reduce retention time and improved identification and handling of the material and steel ladle management system are few other initiatives.
- Optimisation of coke, pellet and sinter quality to improve the yield and throughput of the Blast Furnaces and modelling of iron making process inside a blast furnace to reduce coke consumption and enhance the yield.
- Adoption of the Fourth Industrial Revolution (Industry 4.0): It will improve manufacturing processes, material usage, energy efficiency, plant and worker productivity, supply chain and product life-cycle.
- Steel Research and Technology Mission of India: It provides for the grant of financial assistance to various institutions including Council of Scientific and Industrial Research (CSIR) laboratories and academic institutions for carrying out research in the iron and steel

sector including environmental issues like utilisation of wastes, improvement in energy efficiency and reduction in greenhouse gases (GHG) emission.

- Draft Framework Policy: It is aimed at facilitating setting up of greenfield steel clusters along with development and expansion of existing steel clusters.
- The steel clusters will help the country become Atmanirbhar (self-reliant) in value-added steel and capital goods and also generate employment, especially in the eastern part of the country covering the states of Chhattisgarh, Jharkhand, West Bengal, Odisha and Andhra Pradesh as part of the Purvodaya initiative of the Ministry of Steel.

Way Forward

- The Indian steel industry has entered into a new development stage, post de-regulation, riding high on the resurgent economy and rising demand for steel.
- Huge scope for growth is offered by India's comparatively low per capita steel consumption and the expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors.
- The steel industry's products play a crucial role in the development of the sustainable society and its significance for India's prosperity and welfare cannot be emphasised enough.

INTERNATIONAL RELATION

USA sanctions against ICC Officials

- The USA announced sanctions, including asset freezes and visa bans, against two officials of the International Criminal Court (ICC) for their investigation into alleged war crimes by the USA forces and the Central Intelligence Agency (CIA) in Afghanistan since 2003.

Key Points

- **The USA's Stand:** Not only sanctions against officials, earlier the USA criticized the ICC.
- The USA has considered the ICC a threat to USA sovereignty, and announced the strict punitive measures that are generally reserved for use against terror groups and those accused of abusing human rights.
- USA had never ratified the "Rome Statute", which created the ICC in 1998, and thus is not subject to its rulings.
- The USA administration also called ICC a thoroughly broken and corrupted institution.
- ICC's Stand on USA Sanctions: An unacceptable attempt to interfere with the rule of law and the Court's judicial proceedings.
- It stands firmly by its staff and officials and remains unwavering in its commitment to discharging, independently and impartially, the mandate laid down in its founding treaty, the Rome Statute.

Criticism of the USA's Sanctions:

- The USA decision has been criticised by the United Nations, the European Union, 10 members of the UN Security Council, including the UK and France, as well as several international human rights agencies, all of which have called for the sanctions to be reversed.
- The international NGO Human Rights Watch has observed that by penalising war crimes investigators, the USA is openly siding with those who commit and cover up human rights abuses.
- The USA action is a setback to the international rules-based multilateral order.
- The decision to sanction anybody assisting the ICC will deter victims of violence in Afghanistan from speaking out.
- The USA's unilateral sanctions would encourage other regimes accused of war crimes to flout the ICC's rulings.

International Criminal Court

- The International Criminal Court (ICC) is an intergovernmental organization and international tribunal that sits in The Hague in the Netherlands.
- It was set up after the ad hoc tribunals to deal with Rwanda war crimes proved ineffective. ICC is a criminal court.
- The ICC has the jurisdiction to prosecute individuals for the international crimes of genocide, crimes against humanity, and war crimes.
- ICC is based on the principle of complementarity. ICC was not created to supplant the authority of national courts. However, when a state's legal system collapses or when a government is a perpetrator of heinous crimes, the ICC can exercise jurisdiction. ICC is a court of last resort.
- The ICC began functioning on 1st July 2002, the date that the Rome Statute entered into force.
- The Rome Statute is a multilateral treaty which serves as the ICC's foundational and governing document.

- States which become party to the Rome Statute, for example by ratifying it, become member states of the ICC.
- The Rome Statute has been signed by 139 countries, and 123 have ratified it through their Parliaments and internal process.
- USA and the ICC: Although the USA was part of the founding movement to build the ICC to try cases of genocide and war crime, especially after the courts in Rwanda failed, it decided not to ratify the Statute in 2002.
- USA opposed the ICC due to apprehensions that it will be used politically against its nationals.
- Countries like Russia, China and India were never in favour of the Rome Statute or the ICC, and never signed on.
- India and ICC
- India is not a party to ICC.
- For India, the decision was based on a number of principles. The major objections of India to the Rome Statute are:
- The ICC is a criminal court, unlike the International Court of Justice (which adjudicates on civil matters), and arrogates to itself the right to prosecute matters against countries that aren't even signatories.
- Since ICC is subordinate to the UN Security Council (UNSC), permanent members are vested with unbridled powers.
- India also objected to the omission of cross-border terror, use of nuclear arms and weapons of mass destruction from the areas the ICC would institute its investigations.
- Way Forward
- While the USA's concerns about the ICC are shared by India and other countries that weren't signatories, the USA action is seen as another blow to multilateralism.
- In the last few years, the USA administration has walked out of several UN agencies and international agreements, including the Human Rights Council, UNESCO, the Paris climate change agreement and the Iran nuclear accord.
- Particularly at a time the USA accuses China of disregarding international norms in the South China Sea and other areas, and of human rights violations in Xinjiang and Tibet, the USA's pushback over the ICC's case in Afghanistan seems counterproductive.
- The independence of the ICC and its ability to operate without interference must be guaranteed so that it can decide matters without any influence or pressures. Further, there is a need for an independent expert review of its own functioning.

INDIAN GEOGRAPHY

Methane Hydrates in KG Basin

- Recently, a study on biogenic methane hydrate in the Krishna-Godavari (KG) Basin was conducted by the researchers at the Agharkar Research Institute (ARI), an autonomous institute of the Department of Science and Technology, Government of India.

Key Points

- **Biogenic Methane:** It is the methane produced from the metabolic activities of living organisms. The research team has identified the methanogens that produced the biogenic methane trapped as methane hydrate, which can be a significant source of energy.
- **Methanogens:** These are microorganisms that produce methane as a metabolic by-product in hypoxic (low levels of oxygen) conditions.
- The ARI team has documented a predominance of genus Methanosarcina in the KG basin, followed by a few other genera Methanoculleus, Methanobacterium.
- Methane hydrate is formed when hydrogen-bonded water and methane gas come into contact at high pressures and low temperatures such as in oceans.

Significance of the Study:

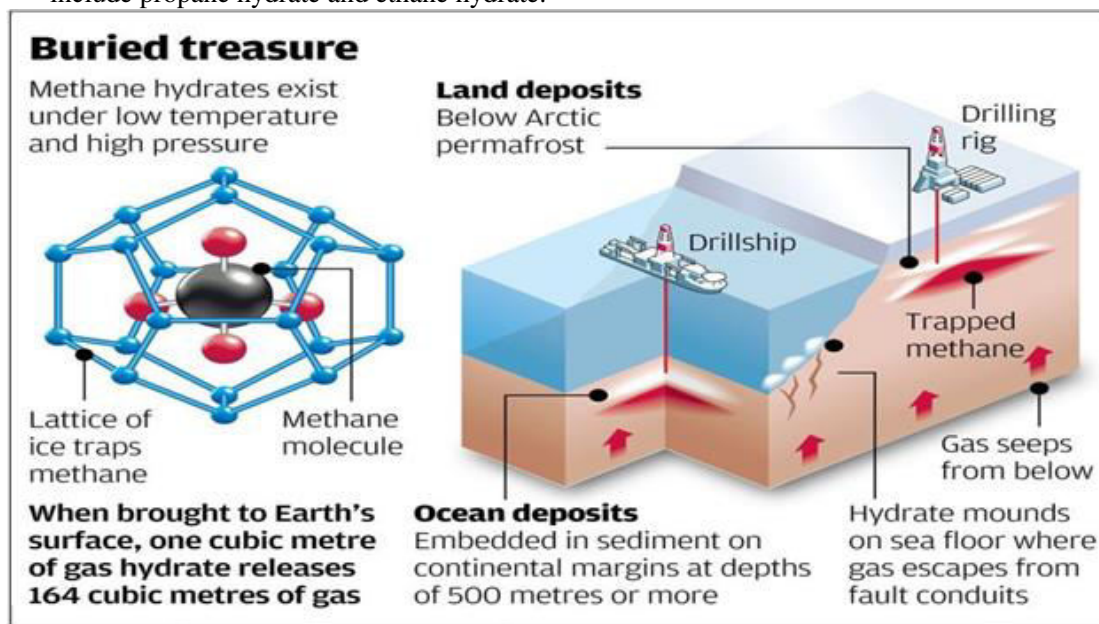
- Methane is a clean and economical fuel.
- It is estimated that one cubic meter of methane hydrate contains 160-180 cubic meters of methane.
- This study revealed maximum methanogenic diversity in the KG basin, which is one of the prominent reasons to confirm it to be the extreme source of biogenic methane in comparison to the Andaman and Mahanadi basins.
- Even the lowest estimate of methane present in the methane hydrates in the KG Basin is twice that of all fossil fuel reserves available worldwide.

Krishna-Godavari Basin

- An extensive deltaic plain formed by two large east coast rivers, Krishna and Godavari in the state of Andhra Pradesh and the adjoining areas of Bay of Bengal in which these rivers discharge their water is known as Krishna-Godavari Basin.
- The KG Basin is a large basin of continental margin located on the east coast of India.
- Its land part covers an area of 15000 sq. km
- The offshore part covers an area of 25,000 sq. km up to 1000 m isobath.
- The basin contains about 5 km thick sediments with several cycles of deposition, ranging in age from Late Carboniferous to Pleistocene.
- The major geomorphological units of the basin are upland plains, coastal plains, recent flood and delta plains.
- The site is known for the D-6 block with the biggest natural gas reserves in India. The first gas discovery was made in 1983 by ONGC.
- The basin is home to the Olive Ridley Sea Turtle (IUCN Status: Vulnerable).

Methane Hydrate

- Methane hydrate is a crystalline solid that consists of a methane molecule surrounded by a cage of interlocking water molecules.
- Methane hydrate is an "ice" that only occurs naturally in subsurface deposits where temperature and pressure conditions are favourable for its formation.
- Difficult to handle: If the ice is removed from this temperature/pressure environment, it becomes unstable. For this reason, methane hydrate deposits are difficult to study and handle.
- They cannot be drilled and cored for study like other subsurface materials because as they are brought to the surface, the pressure is reduced and the temperature rises.
- This causes the ice to melt and the methane to escape.
- Several other names are commonly used for methane hydrate. These include: methane clathrate, hydromethane, methane ice, fire ice, natural gas hydrate, and gas hydrate.
- Most methane hydrate deposits also contain small amounts of other hydrocarbon hydrates. These include propane hydrate and ethane hydrate.



SCIENCE AND TECHNOLOGY

Graphene Mask

- Recently, the researchers from the City University of Hong Kong have produced a laser-induced form of graphene masks that inactivate the coronavirus species.

Key Points

- Graphene Mask and Coronaviruses:
- Initial tests deactivated two coronavirus species. The researchers are also planning to test this mask on the Covid-19 (SARS-Cov-2) virus.

- Coronaviruses are a large family of viruses that are known to cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).
- The researchers also tested it on E coli (bacteria), which showed an antibacterial efficiency of around 80%. The efficiency can be raised to almost 100% with exposure to sunlight for 10 minutes.
- Graphene is known for antibacterial properties.
- **Production:** All carbon-containing materials, such as cellulose or paper, can be converted into graphene. The researchers described the production of laser-induced graphene as a "green technique."
- **Benefits:** It is reusable. Can also be produced at low cost. It also resolves the problems of sourcing raw materials and disposing of non-biodegradable masks.

Graphene

It is a single layer (monolayer) of carbon atoms. It is one atom thick. It is the building-block of Graphite.

Properties: It is harder than diamond yet more elastic than rubber; tougher than steel yet lighter than aluminium. Graphene is the strongest known material.

Other Properties of Graphene are:

- Lowest resistivity substance known at room temperature.
- High thermal stability.
- High elasticity.
- High electrical conductivity.
- Electron mobility is high at room temperature.
- Graphene oxide (GO) membranes can be used to filter common salt from seawater.

Uses: Its thin composition and high conductivity means it can be used in applications ranging from miniaturised electronics to biomedical devices like computers, solar panels, batteries, sensors and other devices.

Carbon Allotropes: Diamond, graphite and fullerenes (substances that include nanotubes and buckminsterfullerene) are the important allotropes of pure carbon.

Allotropy is the property of some chemical elements to exist in two or more different forms, in the same physical state.

INDIAN ART AND CULTURE

Promotion of Buddhist Sites

- The Ministry of Tourism has undertaken development of tourism related infrastructure and facilities at various Buddhist Sites in the country under its flagship schemes of Swadesh Darshan & PRASHAD.

Key Points

Steps Taken to Promote Buddhist Sites:

- **Swadesh Darshan Scheme:** It has included Buddhist circuit and Spiritual circuit among its 13 thematic circuits under which buddhist sites are being promoted.
- **PRASHAD Scheme:** 30 projects for development of infrastructure have also been undertaken under the PRASHAD Scheme.
- **Iconic Tourist Sites:** Buddhist Sites at Bodhgaya, Ajanta & Ellora have been identified to be developed as Iconic Tourist Sites (aimed at enhancing India's soft power).
- **Buddhist Conclave:** Buddhist Conclave is organised every alternate year with the objective of promoting India as a Buddhist Destination and major markets around the globe.
- **Diversity of Languages:** Signages have been installed in Chinese language at buddhist monuments in Uttar Pradesh and in Sinhala language (official language of Sri Lanka) at Sanchi monuments in Madhya Pradesh.

PRASHAD Scheme:

- The 'National Mission on Pilgrimage Rejuvenation and Spiritual Augmentation Drive' (PRASAD) was launched by the Ministry of Tourism in the year 2014-15 with the objective of holistic development of identified pilgrimage destinations.
- The name of the scheme was changed from PRASAD to "National Mission on Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive (PRASHAD)" in October 2017.
- After the discontinuation of the HRIDAY scheme of the Ministry of Housing and Urban Development, the development of Heritage destinations was included in the PRASAD Scheme, changing it to PRASHAD.

- Implementation Agency: The projects identified under this scheme shall be implemented through the identified agencies by the respective State/ Union Territory Government.

Objective:

- Rejuvenation and spiritual augmentation of important national/ global pilgrimage and heritage sites.
- Follow community-based development and create awareness among the local communities.
- Integrated tourism development of heritage city, local arts, culture, handicrafts, cuisine, etc., to generate livelihood.
- Strengthen the mechanism for bridging the infrastructural gaps.

Swadesh Darshan Scheme

- Swadesh Darshan, a Central Sector Scheme, was launched in 2014 -15 for integrated development of theme based tourist circuits in the country.
- Under the scheme, the Ministry of Tourism provides Central Financial Assistance (CFA) to State Governments/Union Territory Administrations for infrastructure development of circuits.
- This scheme is envisioned to synergise with other schemes like Swachh Bharat Abhiyan, Skill India, Make in India etc. with the idea of positioning the tourism sector as a major engine for job creation, driving force for economic growth, building synergy with various sectors to enable tourism to realise its potential.

Way Forward

- India's Buddhist heritage is not only important from the tourism point of view but is also a binding factor that strengthens its relationship with Asian countries, in line with its Act East Policy.
- As peace and sustainable development are interlinked, the Buddha's prism can be the guiding lights to every single stakeholder from local to global institutions and leaders, to work together for promoting dialogue, harmony, and justice based on compassion and wisdom.

IMPORTANT FACTS FOR PRELIM

Supplementary Grants

- **Supplementary Grant:** It is granted when the amount authorised by the Parliament through the appropriation act for a particular service for the current financial year is found to be insufficient for that year.
- It is specified by the Article 115 of the constitution of India, along with Additional and Excess Grants.

Other Grants:

- In addition to the budget that contains the ordinary estimates of income and expenditure for one financial year, various other grants are made by the Parliament under extraordinary or special circumstances. Apart from Supplementary Grants, these include:
- **Additional Grant:** It is granted when a need has arisen during the current financial year for additional expenditure upon some new service not contemplated in the budget for that year.
- **Excess Grant :** It is granted when money has been spent on any service during a financial year in excess of the amount granted for that service in the budget for that year. It is voted by the Lok Sabha after the financial year. Before the demands for excess grants are submitted to the Lok Sabha for voting, they must be approved by the Public Accounts Committee of Parliament.
- **Vote of Credit:** It is granted for meeting an unexpected demand upon the resources of India, when on account of the magnitude or the indefinite character of the service, the demand cannot be stated with the details ordinarily given in a budget. Hence, it is like a blank cheque given to the Executive by the Lok Sabha.
- **Exceptional Grant:** It is granted for a special purpose and forms no part of the current service of any financial year.
- **Token Grant:** It is granted when funds to meet the proposed expenditure on a new service can be made available by reappropriation. A demand for the grant of a token sum (of Re 1) is submitted to the vote of the Lok Sabha and if assented, funds are made available.
- Reappropriation involves transfer of funds from one head to another. It does not involve any additional expenditure.
- Votes on account, votes of credit and exceptional grants are specified in **Article 116** of the constitution.
- Supplementary, additional, excess and exceptional grants and vote of credit are regulated by the same procedure which is applicable in the case of a regular budget.

DAILY ANSWER WRITING PRACTICE

Qns. "India is one of the major hubs of illicit drug trade ." Discuss the statement in the light of drug abuse problem in India especially in the border areas.(150 words)

Ans.

- Recently, AIIMS submitted its report "Magnitude of Substance Use in India" to the Ministry of Social Justice and Empowerment.

Key highlights of the report are:

- Around 5 crore Indians reported to have used cannabis and opioids at the time of the survey (conducted in the year 2018).
- It has been estimated that there are about 8.5 lakh people who inject drugs.
- Of the total cases estimated by the report, more than half of them are contributed by states like Punjab, Assam, Delhi, Haryana, Manipur, Mizoram, Sikkim and Uttar Pradesh.
- About 60 lakh people are estimated to need help for their opioid use problems.

India and Illicit Drug Trade

- Major Hub of Illicit Drug Trade:** According to a report by the United Nation Office on Drugs and Crime (UNODC), India is one of the major hubs of illicit drug trade ranging from age-old cannabis to newer prescription drugs like tramadol, and designer drugs like methamphetamine.
- Drug Trafficking Routes:** India is in the middle of two major illicit opium production regions in the world, the Golden Crescent (Iran-Afghanistan-Pakistan) in the west and the Golden Triangle (South-East Asia) in the east.

Golden Triangle

- It represents the region coinciding with the rural mountains of Myanmar, Laos, and Thailand.
- It is Southeast Asia's main opium-producing region and one of the oldest narcotics supply routes to Europe and North America.

Golden Crescent

- This region of South Asia is a principal global site for opium production and distribution.
- It comprises Afghanistan, Iran, and Pakistan.

Associated Challenges

- Easy Borders:** The borders are porous and difficult to control in the lower Mekong region so cross-border movements and drug trafficking are rampant in the region.
- Evolving Ways of Trafficking:** The methods of containerised trafficking, couriers and body-packing have reduced are some ways of drug movement in India.
- Limited Control:** There is limited government control in the Golden Triangle and trafficking continues at high volumes.
- Unaffected Supply:** The supply of precursor chemicals is easier because major organised crime groups source chemicals through direct diversion from industry and not diversion from illicit overseas trade channels.

Way Forward

- Additional efforts would be required at the national, regional, and international level to carefully analyse methods and trends to understand changes to drug markets in the wake of the pandemic.
- There is a need to understand the change in the strategy of drug trafficking organisations as a result of the Covid-19 measures.
- Therefore, use of maritime trafficking routes from Myanmar along the Andaman Sea, some of which cross Indian territorial waters must be strategically observed by India to curb the trafficking.
- Moreover, methods or procedures to deal with illicit drug supply, their usage must be institutionalised in order to ensure that fight against this menace is not compromised in face of a pandemic or any other crisis.
- Addiction should not be seen as a character flaw, but as an ailment that any other person could be struggling with. Therefore, the stigma associated with drug taking needs to be reduced.

Conclusion

- Drug addiction and trafficking can harm the national security and integrity of a nation and degrades the human resource of a country.
- With the advent of coronavirus, the intensity of the illicit drug trade in India is expected to rise. The government needs to implement the existing laws strictly to prevent drug trafficking and its resultant drug abuse.

DAILY QUIZ

1. With reference to Inflation Indices in India, consider the following statements:
 1. The retail inflation is measured by the Consumer Price Index (CPI).
 2. CPI is published by the Office of Economic Adviser, Ministry of Commerce and Industry.
 3. The Monetary Policy Committee (MPC) uses Wholesale Price Index(WPI) data to control inflation
 Which of the statements given above is/are correct?
 - a) 1 and 2 only
 - b) 1 only**
 - c) 1 and 3 only
 - d) 2 and 3 only
2. Consider the following statements:
 1. Exceptional Grant is granted when the amount authorised by the Parliament for any service is found to be insufficient in that year.
 2. Vote of Credit is granted for meeting an unexpected demand upon the resources of India.
 3. Supplementary Grant is granted for a special purpose and forms no part of the current service of any financial year.
 Which of the statements given above is/are correct?
 - a) 1 only
 - b) 2 only**
 - c) 1 and 3 only
 - d) 2 and 3 only
3. With reference to 'Methane Hydrate', consider the following statements:
 1. It is formed when hydrogen-bonded water and methane gas come into contact at high pressures and low temperature.
 2. It can be extracted by drilling the ocean surface.
 Which if the statement given above is/are correct?
 - a) 1 only**
 - b) 2 only
 - c) Both 1 and 2
 - d) Neither 1 nor 2
4. With reference to the Graphene, consider the following statements:
 1. It is one atom thick.
 2. It is an allotrope of carbon.
 3. It is the strongest known material.
 Which of the statements given above is/are correct?
 - a) 1 only
 - b) 1 and 2 only
 - c) 2 and 3 only
 - d) 1, 2 and 3**
5. With reference to PRASHAD scheme, consider the following statements:
 1. Its objective is rejuvenation and spiritual augmentation of important national pilgrimage and heritage sites.
 2. The projects identified under this scheme are implemented by the Ministry of Tourism.
 Which of the statements given above is/are correct?
 - a) 1 only**
 - b) 2 only
 - c) Both 1 and 2
 - d) Neither 1 nor 2