# Table of Contents

<table>
<thead>
<tr>
<th>Topics</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GS I</strong></td>
<td>3</td>
</tr>
<tr>
<td>Global Gag Rule</td>
<td>3</td>
</tr>
<tr>
<td>Role of Women in Electoral Politics in India</td>
<td>5</td>
</tr>
<tr>
<td>India’s Urban Landscape</td>
<td>7</td>
</tr>
<tr>
<td><strong>GS II</strong></td>
<td>10</td>
</tr>
<tr>
<td>Role of the Supreme Court in backlog problem</td>
<td>10</td>
</tr>
<tr>
<td>Redistributive Resource Transfers</td>
<td>14</td>
</tr>
<tr>
<td>Disparities between States in India</td>
<td>16</td>
</tr>
<tr>
<td>Administrative Tribunals in India</td>
<td>18</td>
</tr>
<tr>
<td>Political Funding in India</td>
<td>20</td>
</tr>
<tr>
<td>Pradhan Mantri Garib Kalyan Yojana, 2016</td>
<td>22</td>
</tr>
<tr>
<td>Ban on FDI in tobacco sector</td>
<td>24</td>
</tr>
<tr>
<td>Medical Stent Implants</td>
<td>26</td>
</tr>
<tr>
<td>Education and the Constitution of India</td>
<td>28</td>
</tr>
<tr>
<td>India’s Foreign Policy</td>
<td>30</td>
</tr>
<tr>
<td>Implications of Donald Trump’s presidency for India</td>
<td>34</td>
</tr>
<tr>
<td>Cementing India - China relations</td>
<td>38</td>
</tr>
<tr>
<td>Common Ground for India - China on Afghanistan</td>
<td>40</td>
</tr>
<tr>
<td>Economic and Technological Cooperation Agreement (ETCA)</td>
<td>42</td>
</tr>
<tr>
<td>India-Sri Lanka Fisherman Dispute</td>
<td>45</td>
</tr>
<tr>
<td>India’s conflict with Pakistan</td>
<td>48</td>
</tr>
<tr>
<td><strong>GS III</strong></td>
<td>50</td>
</tr>
<tr>
<td>Sustaining India’s Growth Momentum</td>
<td>50</td>
</tr>
<tr>
<td>Budgetary Approach to Environmental Protection</td>
<td>52</td>
</tr>
<tr>
<td>Demonetisation Scheme</td>
<td>54</td>
</tr>
<tr>
<td>Infrastructure investments</td>
<td>58</td>
</tr>
<tr>
<td>Contract farming in India</td>
<td>61</td>
</tr>
<tr>
<td>Food and Nutritional Security in India</td>
<td>63</td>
</tr>
<tr>
<td>Palm Oil Cultivation</td>
<td>67</td>
</tr>
<tr>
<td>Antibiotic Resistance</td>
<td>70</td>
</tr>
<tr>
<td>Artificial Intelligence</td>
<td>72</td>
</tr>
<tr>
<td>Biomethanation</td>
<td>79</td>
</tr>
<tr>
<td>Role of Agriculture in Delhi Air Pollution</td>
<td>81</td>
</tr>
<tr>
<td>Impact of Climate Change on Indian Agriculture</td>
<td>84</td>
</tr>
<tr>
<td>Anti Naxal Strategy</td>
<td>86</td>
</tr>
</tbody>
</table>
General Studies – 1; Topic: Role of women and women’s organization, population and associated issues,

Global Gag Rule

1) Introduction
   • The Mexico City policy, also referred to as the global gag rule is a United States government policy that blocks US federal funding for non-governmental organisations that provide or give information about safe abortions
   • The anti-abortion rule, also known as the Mexico City policy, was introduced in 1984 by Ronald Reagan.
   • It has been reinstated numerous times since then by successive governments
   • Trump’s radical expansion of the policy includes all global health organisations that receive US government funding, thus widening the scope of Global Gag rule.
   • The US is the single largest donor to global health efforts, providing nearly $3bn through the United States Agency for International Development (USAid) alone.

2) Negative Impact
   • It severely handicapped a host of non-governmental agencies in poor countries that provide family planning information and services to women
   • These agencies also often help women to deal with unplanned and unwanted pregnancies
   • International reproductive health community is naturally upset at an action that may be technically legal but is morally and ethically questionable
   • The ruling can cut off funds for crucial activities like HIV/AIDS prevention, contraceptive access, sexuality information, maternal and child health
   • Such impacts will be particularly strongly felt in countries in Africa, where the unmet demand for health, reproductive and contraceptive information and services is high
   • The rule can give indirect tool in the hand of government to crack down certain NGO’s.
   • It will deprive women of their right to bodily integrity.
   • In absence of access to scientific and modern methods of abortion, women with unwanted pregnancy will resort to dangerous medical procedures. Thus it will increase the women's mortality and defeat the purpose of decreasing MMR.
   • It will exaggerate the problem of population explosion in developing countries.
   • The policy could put millions of women’s lives at risk: one in 10 maternal deaths in developing countries are caused by unsafe abortions an estimated 20 million take place each year.
   • This blocks access to sexual and reproductive health services in the poorest and hardest to reach communities

3) Positive impact
   • Mr Trump’s rule could have a “silver lining” if it led to an improvement in local services.
   • This could be a stimulus for other philanthropy to step in on abortion, both Indian and global,
   • The move may force the governments to relook into the issue of coercive abortions or involuntary sterilisations. For example Tribal women being forced to undergo sterilization in Government Hospitals
   • It can be indirect tool to fight female foeticide.
   • Also the rule only applies in case of abortion as a means of family planning, not abortion after a sexual attack or abortion to save the life of a pregnant woman.
• This policy will certainly provide a helping hand toward achieving better male-female ratio and stopping illegitimate abortion which is also risk to maternal health.
• Global gag rule certainly put restriction on financial aid to organisation who involve in unethical abortion practice.

4) Impact on India
• Abortion is legal in India, but in some areas, 80 per cent of women do not know this.
• Unsafe abortions kill one woman every two hours in India
• Number of deaths from unsafe abortion would not fall until the procedure became freely available through public services.
• There is a law permitting abortions, but we have not been able to put in place the necessary services across the country
• Often because abortion is stigmatised, people choose not to visit the public system because they do not feel confident their privacy will be respected.
• This policy represents a “subtle interference on the sovereignty of the Indian government’s policy, and also women's rights”.
• 8 per cent of maternal deaths happen because of unsafe abortion. This policy action could inhibit awareness and have a negative impact.
• Gag rule meant that it restricted rights that already exist in India, including having an abortion in the first 20 weeks of pregnancy
• For India, where an estimated 3m unsafe abortions occur, and which receives millions in US foreign assistance, this policy will lead to more suffering for women and their families
Role of Women in Electoral Politics in India

1) **Introduction**
   - The Preamble begins with the words “WE THE PEOPLE OF INDIA ...” which includes men and women of all castes, religions, etc.
   - It wishes to render “EQUALITY of status and of opportunity” to every man and woman.
   - However, Women are excluded from decision-making at every step of the ladder, starting from the household to the top layer of policy making.
   - Although the Constitution of India attempts to remove gender inequalities by enshrining fundamental rights for all citizens, women still have only de jure rather than de facto access to these rights.
   - India is ranked 87 out of 144 countries in the Global Gender Gap 2016, by the World Economic Forum which measures how women fare in economic participation, health, education and political representation.

2) **State of women in Indian politics**
   - Voting percentage for women have increased in assembly polls
   - Women's participation as candidates and the possibilities of their victory are substantially low
   - Irom Sharmila and Najima in Manipur, in the absence of funds, they are campaigning for elections on bicycles.
   - Most of the ‘winnable’ women candidates come from political families.
   - Many women who are made to file nominations from certain constituencies cannot even retain their deposits.
   - India ranks 103rd in the Women in Parliament study.
   - In the Lok Sabha, out of the 543 members, only 65 are women. In the Rajya Sabha, there are only 31 female MPs among 243 members.

3) **Why there is a need for Women’s participation in Politics**
   - The Constitution of India guarantees equality for both men and women
   - Their participation is crucial in the policy formulation and regulation as they represent nearly half of total population.
   - They could act as role model for women empowerment and could bring behavioural change in the society towards the women.
   - More focused policies relating to women safety, education, child care, MMR, child marriage, Domestic violence etc if women are involved in decision making owing to their emotional quotient towards these issues.
   - For building a nation where women thrive and feel safe and respected
   - Places with women representatives have seen less corruption and improved efficiency.
   - Various studies on panchayats have shown the positive effect of reservation on empowerment of women
   - Radha Devi, sarpanch of village in Rajasthan who tried to focus on education of children especially girl child.
   - Sushma Bhadu, sarpanch of Haryana village is popular for the "unveiling" of her 'ghunghat' in a largely patriarchal state is an excellent example
In the absence of gender equality and women empowerment, human rights remain in an inaccessible realm.

4) **Barriers**

- **Patriarchal Society**
  - a) Tendency of confining women to the four walls of domestic life, prohibiting them from decision making
  - b) Recent Nagaland crisis over Urban Local Bodies reservation
  - c) Lapsed women reservation bill, 2008

- **Education**
  - a) One of the key challenges faced by women is lack of education which hinders their political involvement.

- **Representation**
  - a) Lack of representation at Lok Sabha, Rajya Sabha and state legislative assemblies.
  - b) Women’s representation in Parliament in India is lower than even that of much smaller nations like Nepal and Afghanistan.
  - c) India ranks 20th from the bottom when it comes to women's representation in the Parliament with merely 4% representation of women in Lok Sabha.

- **Proxy politics**
  - a) Women candidates who generally win elections are used as proxy by male members in their family
  - b) In many villages of Uttar Pradesh, where women are village panchayat chiefs, their husbands introduce themselves as ‘pradhan pati’ (husband of the panchayat chief).

- **Social Stigma**
  - a) Women are seen as "home makers and care takers" and any deviance from this role is not acceptable by many.

5) **Way Forward**

- Providing quality education to women in the country.
- Awareness about their rights and privileges as mentioned in the Constitution can only be ensured once women are appropriately educated.
- Gender-based violence should be addressed on a priority basis to promote gender equality in the social and political arenas.
- It is imperative to strengthen National Mission of Empowerment of Women functioning and implementation.
- Capacity building of prospective women leaders by imparting leadership training to the female members of political parties.
- A critical mass of women in power can bring about transformation in leadership.
- Just like the recent success of women’s movement to enter the sanctum sanctorum of dargahs and temples, a similar movement needs to begin to increase women's participation in electoral politics.
- Passing Women’s Reservation Bill
General Studies – 1; Topic: Urbanization – problems and remedies

India’s Urban Landscape

1) **Drawbacks of Current model of urbanisation**
   - The new Indian urban landscape is being designed around grand concepts such as smart cities and export-oriented industrial corridors.
   - Social and institutional barriers to the inclusion of migrants in urban life.
   - In our desire to be global, we are emulating outdated models of urbanisation
   - We are emulating the urban models of the European and American cities, which have means of attaining progress through colonization, extracting bullions and slave trade and such ways no longer exist for present day India
   - To attain growth through those grand models, the Government is pushing more debt-investments than investments in infrastructure development and industrialization to increase GDP. This will lead to debt slavery and inequality.
   - Cities built mostly on economic terms without considering or less importance to cultural and recreational aspects of human beings.
   - The cities do not cater for environmental disasters
   - Currently, India’s ongoing urbanisation offers little opportunity for inclusion of its disadvantaged populations.
   - Cities are not only mimicking the social and cultural structures of inequality and exclusion found in rural areas but they are also creating fault lines for future conflicts.
   - There is a growing phenomenon of ‘sons of soil’ or ‘outsider’ based abuse.
   - Politicisation of India’s urban spaces — often for so-called ‘vote-bank populism’ — is creating exclusionary barriers for new migrants and also fuelling their gradual disenfranchisement.
   - Common problems that impact the functioning of most Indian cities are multiple jurisdictions, weak revenue base and human resource capacity deficit.
   - **Solution**
     a) Decentralisation of planning, clear demarcation of the function and authority of urban local bodies (ULBs).
     b) Strengthening taxation base, better developed mechanism for devolution of funds for ULBs from state.
     c) Addressing the employment issues of the migrants by focusing more on urban industrialization.
     d) Rurban Planning, which creates growth at micro-level and impedes rural-to-urban migration.
     e) Revamp urban local bodies, seamless connectivity with suburban areas/ farms.
     f) Inclusion for the elderly and the disabled, Safety of women and children.
     g) Climate mitigation to avoid situations like Chennai floods.
     h) Equity oriented citizen welfare program to minimise poverty through employment generation, housing, better education and skill development, improving health facilities with better sanitation and drinking water facilities.
     i) Availability of cheaper and environment friendly fuel for cooking and transport, cheaper and environment friendly mode of public transport, using environment friendly technologies such as rain water harvesting, solar devices.

2) **United Nations Habitat III conference**
• It provides a roadmap on how to point urbanisation towards a more positive direction, the one that leads to more jobs, cheaper housing, cleaner energy, better transportation and greater social equity
• United Nations Habitat III conference will discuss and adopt United Nations’ New Urban Agenda.
• The New Urban Agenda attempts to address the various opportunities and challenges that are associated with global urban development
• The new agenda acknowledges urbanisation as a transformative force, calling it an engine of sustained and inclusive economic growth
• With UN’s Roadmap to Urbanisation in Hand, It Is Time for India to Transform Its Urban Policy towards more sustainability.

3) Urban planning in India
• The numbers of urban planners are microscopic. Britain has 38 planners per 100,000 people. In India, the figure is just 0.23.
• There are several urban local bodies without a single qualified urban planner.
• Until recently, urban issues did not figure prominently in India’s public policy discourse due to the Gandhian maxim that ‘India lives in villages.’
• The scenario began changing slowly with the launch of the JNURM in 2005 and with the present government’s Smart Cities mission.
• Smart Cities programme, rather than strengthening the elected municipal bodies, has further undermined their authorities by outsourcing managerial responsibilities to Special Purpose Vehicles and planning tasks to external consultants.
• India’s urban population is likely to exceed 590 million people by 2030 — more than the total population of the EU.
• Which means that over the next 15 years, we need to build 22 more cities like Bengaluru to accommodate the new urban residents.
• The New Urban Agenda shows the right direction, but it is upon us to get the fundamentals of our urbanisation policy right.

4) Indian cities, spaces of discrimination
• Cities still remain the best hope for social mobility for millions of oppressed and marginalised communities
• However they increasingly mirror India’s rural social and cultural realities, its entrenched caste system and social customs.
• According to a recent study of spatial inequalities in 10 Indian populous cities, rapid growth in cities has not reduced spatial segregation by caste or religion.
• Dalits and Adivasi are still heavily concentrated within certain geographical areas of cities, mostly in unauthorised settlements and poor neighbourhoods.
• Indian cities are on slow but sure paths towards crises of various kinds, and it is vital to reverse the current trends of segregation and inequality.

5) Housing Demand
• As per the Economic Survey of India, EWS (economically weaker sections) and LIG (lower income groups) together account for 95.6 per cent of the urban housing shortage in the country
Significant increase in the demand for housing in the urban context with the growth of smaller families.

The latest official Economic Survey states that there is a shortage of nearly 20 million homes in India.

Under Pradhan Mantri Awaas Yojana, government has proposed to build 2 crore houses for urban poor including Economically Weaker Sections and Low Income Groups in urban areas by the year 2022.

Challenges faced

a) Supply-side constraints for low-cost and affordable housing include lack of availability of land, and finance at reasonable rates

b) Real estate developers have primarily targeted luxury, high-end and upper-mid housing segment owing to the higher returns

c) High gestation period of housing projects, limited and expensive capital, spiralling land and construction costs, are bottlenecks restricting the desired growth in housing stock in India.

6) The road ahead

- Focussed efforts on land and housing policy reforms
- Delegation of power to urban local bodies
- Fostering innovative housing finance, and reduction in project costs
- Planned urbanisation and other initiatives of the government should ensure that towns and cities are free from slums
- Adequate opportunities for gainful employment
- Providing optimum quality of life to all citizens, including the marginalised sections of society.
Role of the Supreme Court in backlog problem

1) Reasons for pendency of cases

- As of March 2016 Supreme Court contributed almost 60,000 cases to backlog/pendency
- India has just 13 judges per million of its population. That's a very low number, while most developed countries have 50 and some even more than 100.
- The special leave petition (SLP) which the Constituent Assembly hoped would be used sparingly, but which now dwarfs the work of the Supreme Court.
- Increasing number of state and central legislations
- Accumulation of first appeals
- In addition to judicial shortages, courts are underfunded.
- Appeals against orders of quasi-judicial forums going to high courts
- Frequent adjournments and indiscriminate use of writ jurisdiction
- Lack of adequate arrangement to monitor, track and bunch cases for hearing
- Because of its large caseload of rather ordinary cases, the court has had difficulty scheduling important constitutional cases that require larger benches.
- Clerks are currently underutilised in India with each judge having only one or, at most, two clerks.
- The Supreme Court’s acceptance rates, and more importantly the type of cases the court is accepting, that create its current backlog
- According to Markandey Katju, a retired Supreme Court justice, judges should have no more than 300 cases pending at any one time, but backlogs for individual judges stretch into the tens of thousands.
- In the government’s budget for 2016, only 0.2% of the total budget was given to the law ministry, one of the lowest proportions in the world.

2) Implications

- Right to justice, which is a fundamental right, would stand denied to litigants due to the unduly long delay in the disposal of cases
- Due to the backlog, most of India’s prison population are detainees awaiting trial.
- Courts in Mumbai, India’s financial hub are clogged with decade-old land disputes, hindering the city’s industrial development.
- The pursuit of justice, ordinarily a costly endeavour, has only been made more expensive by chronic delays.
As a result, India’s legal system has increasingly become the preserve of the country’s wealthy and well connected.

This exacerbates the discrimination already faced by India’s minority and low-caste groups.

There are hundreds of thousands of innocent poor people in Indian jails and the cases against them constitute the backlog for the courts.

Corruption too, is endemic. People would rather bribe a police officer than go through the lengthy hassle of a trial.

The impunity that criminals may enjoy because of how slowly the legal system operates

**3) Solution**

- Supply-side (more courts/judges)
- Productivity (better procedures, work norms, shift systems)
- Demand-side (alternative dispute resolution, curb on government litigation)

**A ten-year plan to increase the strength of the judiciary five-fold**

a) First thing the government has to do is increase the number of judges.

b) Expand the Supreme Court with the best high court judges.

c) Increase the number of national law schools to get even more lawyers into the system.

d) Raise the number of private law colleges and get in foreign legal firms if necessary.

- Keep courts open 365 days a year

  a) It should be a long-term goal.

  b) Today the Indian citizen is active 24X7 and many services are open round the clock, round the year.

  c) We should also have a special "night shift magistrate" in every town that can handle emergency cases and not have people waiting till the courts open.

  d) We need out of the box solutions to escape from the mess we are in.

- A committee to counter stalling tactics

  a) There are stalling of cases, absentmism, Dates are missed, Medical emergencies crop up, some problem with paperwork and so on and so forth.

  b) It is time this "open secret" must be addressed.

  c) A committee of retired judges should be appointed to find out the problems that lead to the stalling of cases, their remedies and implement them.

- Fast track and "direct to Supreme Court" cases
a) There are some cases that will go through the circuitous route of the sessions court, high court, Supreme Court and the presidential appeal process.

b) This could take decades, waste so many court hours and get so many judges to look into the matter.

c) Such cases should be identified and sent straight to a fast track court. After that the appeal could go straight to the Supreme Court.

d) Supreme Court can have special benches across India so that the poorer citizens can have greater access.

- **Modernisation of courts**
  a) Our courts should be fully digitised and technical experts should be brought in to streamline the whole process right from when a person files a case, to updating it, to the final verdict.
  
b) We can even have a group of editors to condense all verdicts.

- **Overhaul of archaic laws**
  a) We have to do a major overhaul of "de-Britishising" of the system.
  
b) For example, we have Section 377 of the Indian Penal Code (IPC) that criminalises homosexuality. Britain came out with the Sexual Offences Act 1967 that ended up decriminalising homosexuality.

- Expeditious disposal of cases by setting up a special "social justice bench" to deal with the pendency of cases having social issues which are on rise and needs specialised approach.

- Disposal of petty, compoundable criminal matters and other civil disputes through Lok Adalats as an alternate dispute resolution mechanism.

- Amendments in law are also required to speed up the disposal process.

- Making mandatory pre-trial conferences under which both defence and prosecution lawyers will be asked to refrain themselves from seeking "unwarranted" adjournments.

- More judges of sufficient quality in the lower judiciary could go a long way to ease the burdens on the Supreme Court.

- Having four to five clerks for each judge to help filter out appeals, write memos, and draft decisions, which is the norm in countries such as South Africa or the United States, could greatly reduce the judges’ workload.

- Brazil disposes of about 100,000 cases each year with far fewer judges. To take on such a large load, clerks and other staff take a central role in drafting decisions for the many routine matters.

- Create a separate constitutional court, which would only hear constitutional claims, while the final appeal for all other claims would be with a supreme court of appeal.

- Such a system exists in Germany and several other countries.
• Judicial process needs to be streamlined. Lawyers need to be penalised for delaying matters without reason.

4) Conclusion

• Addressing the backlog is necessary to maintain India’s “constitutional democracy,” to adhere to “the rule of law” and to “guarantee order and stability in society”

• The country’s progress depends on a strong judicial system which can provide quick justice because justice delayed is justice denied
General Studies – 2; Topic: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

Redistributive Resource Transfers

1) Introduction
- One of the models of development is based on “aid”, most applicable to the “special category” states in the North-East, Jammu and Kashmir, Himachal Pradesh and Uttarakhand.
- Redistributive Resource Transfers is defined as gross devolution to the states adjusted for the respective state's share in aggregate GDP
- The Economic Survey 2016-17 points out that there is no evidence of a positive relationship between these transfers and various economic outcomes, including per capita consumption, GSDP growth, development of manufacturing etc.

2) Positives of foreign aid
- Core funding
  a) Helps to fund development projects, like infrastructure and educational programmes
  b) Example: World Bank funding for Bihar Rural Roads Project, Nagaland Health Project, Neeranchal National Watershed Project etc
- Frees up money for carrying out strategic activities like mineral exploration, defense spending which helps improve economic activities and enhance security
- Provides short-term relief to geographically deprived states
- Helps in promoting equitable growth of the country by removing fund deficits of under-developed regions

3) Adverse effects of Foreign Aid
- In the international context, foreign “aid” has been shown to create a number of adverse effects.
  - Dependence
    a) Since revenues are being provided from outside, recipient countries may fail to develop their own tax bases or their institutions.
  - Dutch disease
    a) Extra income through Foreign aid pushes the prices of non tradables such as services. The higher service price erodes profitability.
  - Increased Corruption
    a) Diversion of funds rampantly happens through illicit network of few NGO’s and political elites
  - Effect on exports
    a) Inflow of foreign currency into the domestic markets appreciates the exchange rates which in turn reduces their export profitability
  - Lack of sovereign decision making in international affairs
  - Decrements in share of manufacturing in the recipient economy which in turn promotes unemployment and insurgent activities e.g. in states like J&K, Manipur & Nagaland

4) Indian context
- State governments receive funds from the Centre—“Gross devolution”
- Redistributive Resource Transfers are the state’s share in aggregate gross domestic product and serve as a useful measure of “aid”.

Transfer of resources to states are done to avert regional inequalities and correct fiscal imbalances and are therefore crucial

**Higher RRT are associated with:**

a) Lower gross state domestic product (GSDP) growth  
b) Lower fiscal effort (defined as the share of own tax revenue in GSDP)  
c) Smaller share of manufacturing in GSDP  
d) Weaker governance.

States like North East have been highest receiver of RRTs & foreign aid. They have failed to augment their self sufficiency through economic activities.

However, some high RRT recipient states have performed better than others

**Challenges**

a) Poor connectivity and poor infrastructure—physical, financial and digital—that most of the states, and certainly the North-Eastern states, suffer from.

The pathologies associated with foreign “aid” appear to manifest in the context of intra-country transfers too.

5) **Solution**

- The Centre will need to ensure that the resources it redistributes are used more productively.
- Enhancing connectivity on a war footing. Financial inclusion with the Pradhan Mantri Jan Dhan Yojana and expediting the optical fibre network are in the right direction.
- Architecture of redistributive resource flows could be modified.
- Redirect a quantum of RRT directly to households as part of a universal basic income (UBI) scheme in relevant states.
- Find ways to offset the tendency of states receiving high RRT to relax their own tax effort.
- Performance contingent transfers: Continuity of transfers would depend on improvement in economic performance of states.
- To encourage better governance, the fund transfer mechanism could include criteria for resource transfers.

6) **Conclusion**

- It can be seen that finding the easy way out through provision of grants might be counter-productive in the long run.
- Hence, fiscal prudence needs to be maintained by recipients of grants in order to avoid future backlashes.
Disparities between States in India

1) **Introduction**
   - The states across India do not show a uniform growth trend.
   - The Economic Survey pointed out that while the health trends across states are converging, the income and consumption pattern shows a sharp divergence.
   - The progress of the country depends on the progress of each of its individual states.

2) **Reasons for Disparity**
   - **Natural Resources**
     a) India’s different regions are endowed with different natural and human-based resources.
     b) Some states such as West Bengal, Jharkhand, Odisha, Chhattisgarh etc. are endowed with better mineral resources while others such as Punjab and Haryana have better irrigation facilities.
   - **Manmade / Historical Reasons**
     a) Neglect of some regions and preference of other regions in terms of investments and infrastructure facilities.
     b) Historical factors that go back to mughal era and became prominent in British Era, have also contributed to regional inequities.
   - **Government Policies**
     a) Faulty planning process inherited from colonial rule in the post-independence era.
     b) Despite of the pro-backward areas policies and programmes, considerable economic and social inequalities exist among different States.
     c) Inter-state disparities in growth of GSDP have increased post economic reforms period.
     d) Red tapism, corruption, lack of ease of doing of business environment and political and administrative inefficiency.
   - **Geography**
     a) Factors like climate, water ways, terrain and soil are important for development.
     b) For e.g. coastal states have done well due to their developed ports and waterways for trade in comparison to the inland regions.
   - **Social factors**
     a) The poor and illiterate sections of less developed regions has high fertility rate thus growing population.
     b) Incapacity of the states to harness rich demographic dividend due to less developed job market.
   - **Economic factors**
     a) High input cost due to inadequate infrastructure and lack of demand driven market.
     b) Infrastructure like robust transport system is inefficient in poorer states.

3) **Nature of Disparity**
   - Disparities have been strengthening, not weakening, over time.
   - The less developed States are falling behind the richer ones instead of catching up.
   - Five of the six best-performing States in 2001 - Gujarat, Tamil Nadu, Andhra Pradesh, Kerala and Punjab - continue to be the top performers in 2011.
Likewise, four of the six worst-performing States in 2001 - Odisha, Jharkhand, Uttar Pradesh and Bihar - remained at the bottom in 2011.

There is Electricity Power deficit disparity among Indian states. Almost half of the states would be either surplus or balanced, and the remaining states would face both peaking and energy shortages.

Income inequalities are much higher than the inequality in human development.

Poorer countries are catching up with richer countries, the poorer Chinese provinces are catching up with the richer ones, but in India, the less developed states are not catching up.

4) **Way Forward**
   - Implementation of GST will reduce disparities among the state’s leading to more "convergence".
   - By increasing the literacy levels and also providing basic health amenities, to a certain extent the disparities could be reduced.
   - Female literacy is the best antidote to rising total fertility rate (TFR) and female labour participation an effective way to boost per capita incomes.
   - If India has to do well, the States as a whole must do well
   - This requires that large differences in economic development between states must narrow over time.
   - Business friendly environment in terms of single window clearances, transparency in regulation, tax benefits and providing adequate infrastructure
   - The driving force behind the Chinese convergence dynamic has been the migration of people from farms in the interior to factories on the coast; such restructuring is need in India as well.
   - Solving problems specific to backward region – Naxalism; patriarchy; discrimination based on sex and caste
   - Scientific and technological developments - Prudent interlinking of rivers; internet access through innovative projects like project loon; prospect of cloud seeding in drought prone areas; e-education; e-health etc
   - Skill development – less than 5% of labourers in India have any skill certification; more attention to skill development particularly in less developed states.

5) **ARC recommendations**
   - Union and State Governments should adopt a formula for Block-wise devolution of funds targeted at more backward areas.
   - Governance needs to be particularly strengthened in more backward areas within a State.
   - A system of rewarding States (including developed States) achieving significant reduction in intra-State disparities.
   - Additional funds need to be provided to build core infrastructure at the inter-district level in less developed States and backward regions.
   - The quantum of assistance should be made proportionate to the number of people living in such areas.
   - The approach to all such funding should be outcome driven.
Administrative Tribunals in India

1) Introduction
- The Swaran Singh Committee recommended the establishment of Administrative Tribunals as a part of Constitutional adjudicative system.
- Article 323A provides for the establishment of Administrative Tribunals for adjudication of complaints with respect to recruitment, conditions of service of persons appointed to public services and other allied matters.
- Parliament in exercise of this power have established Administrative tribunal act, 1985.
- The act authorises the Central government to establish one Central administrative tribunal and the state administrative tribunals

2) Establishment and Functions
- An administrative tribunal is not a Court.
- It is established by the executive in exercise of, and in accordance with, the statutory provisions
- It is required to act judicially and perform quasi-judicial functions
- Its proceedings are deemed to be judicial proceedings, and in certain procedural matters it has the powers of a Civil Court
- Its decisions are based on rules of natural justice

3) Central Administrative Tribunal
- Administrative Tribunals Act, 1985 provides for the establishment of Central Administrative Tribunal and State Administrative Tribunals.
- CAT exercises original jurisdiction in relation to recruitment and conditions of service of persons appointed to public services
- The Members are drawn, both from judicial as well as administrative streams so as to give the Tribunal the benefit of expertise both in legal and administrative spheres.

4) Advantages
- Flexibility
  a) Rigid procedures and evidence ordeals of courts are not followed, rather it goes by the principle of natural justice.
- Less Expensive
  a) Administrative justice ensures cheap and quick justice.
  b) Its procedures are simple and can be easily understood by a layman.
- Relief to Courts
  a) The system also gives the much-needed relief to ordinary courts of law, which are already overburdened with numerous suits.
- Adequate Justice
  a) In the fast changing world of today, administrative tribunals are the most appropriated means of administrative action, and also the most effective means of giving fair justice to the individuals.
  b) Lawyers, who are more concerned about aspects of law, find it difficult to adequately assess the needs of the modern welfare society
5) **Disadvantages**

- Administrative adjudication is a negation of Rule of Law.
- Administrative tribunals, with their separate laws and procedures often made by themselves, puts a serious limitation upon the principles of Rule of Law.
- Most of the tribunals do not enjoy the same amount of independence of the Executive as do the Courts and the judges.
- The civil and criminal courts have a uniform pattern of administering justice. A uniform code of procedure in administrative adjudication is not there.
- Administrative tribunals are manned by administrators and technical heads who may not have the background of law or training of judicial work.
- At times they adopt summary procedures to deal with cases coming before them.

6) **Concerns / Challenges**

- Functioning of Administrative tribunals suffer from lack of autonomy especially in terms of appointment and funding
- In Chandra kumar case, SC held that the appeals to such tribunals lies before the court and hence defeats the whole purpose of reducing burden of the superior courts.
- Since the tribunals are mainly chaired by the retired judges who are appointed by the government, so the present judges in courts may favour government in certain matter to gain political patronage in appointment to such tribunals after retirement.
- Lack of adequate infrastructure to work smoothly and perform the functions originally envisioned for them.
- There is a lack of understanding of the staffing requirements in tribunals.

7) **Way Forward**

- In the interest of better justice delivery, their traditional structures and methods of functioning can be reformed
- In the interest of maintaining the rule of law in society and to preserve individual freedom, that there should be some kind of judicial control over these tribunals
- Increasing the number of judges, filling the existing vacancy, use of technology to bring efficiency in administration of justice
- Tribunals themselves are better positioned to gauge their own administrative requirements. Therefore providing power to tribunals to create or sanction posts
Political Funding in India

1) **Introduction**
   - Political parties have multiple sources of funding and thus accountability and transparency becomes all the more important.
   - There is a thinking in India that political funding is the nodal centre of unaccounted and illicit money transfers, and is the primary cause of corruption.
   - Political corruption involves an unfair, and most often unlawful, use of public office to secure a private gain.

2) **Funding of elections**
   - The big political funding in India, however, goes into election expenditures.
   - The spending by the candidates and the legal limit prescribed has huge differences.
   - The Centre for Media Studies estimated that an amount of Rs. 30,000 crore was spent by the government, political parties and candidates in the 2014 Lok Sabha elections.
   - The Association for Democratic Reforms found that the total income of all political parties in India from 2004-05 to 2014-15 was Rs. 11,367.34 crore.
   - 69% of the income of political parties came from unknown sources.
   - The amended Foreign Contribution Regulation Act (FCRA), 2010 allows donations to political parties.

3) **Concerns / Challenges**
   - One of the important considerations before political parties in selecting their candidates is whether they can foot the expenditure of their election. The background of the candidate or his or her ideological commitment, become secondary.
   - Political entrepreneurs have always found ways of subverting official vigilance and spend lavishly to gain competitive advantage.
   - Study shows that probability of winning elections for a candidate increases with wealth and criminal background.
   - Voters are willing to vote for criminal candidates as they can help in getting things done in a society.
   - As political parties are not legally bound to submit their income tax returns annually under Section 13A of the Income Tax Act, 1961, it has been noticed that some of them do not submit their returns on time.
   - Companies executing big industrial projects take heavy loans from banks and part of this money goes to political parties as election funds.

4) **Recent Initiatives**
   - Demonetisation move has affected the ‘undisclosed’ sources of income of political parties.
   - The recent Budget announcement that every cash donation above Rs. 2,000 needs to be acknowledged in the IT returns.
   - Amendment has been proposed to the RBI Act to enable issuance of electoral bonds.

5) **Implications on Governance**
• The Criminalisation of the political process and the nexus between politicians, civil servants, and business houses has an influence on policy formulation and governance.
• The decisions by politicians in office can benefit those who fund them leading to Crony Capitalism. The public interest comes second.
• Political corruption can divert scarce resources from poor and disadvantaged people.
• Trust deficit in democratic polity.
• Foreign Funding will have direct intervention by MNCs in the political system and subvert the integrity of parliamentary democracy.
• Creates a cycle of black money generation, transmission and reuse

6) **Recommendations**

• Complete disclosure of political funding and audit of political parties’ accounts have to be the first steps towards reforming political finance
• The key to regulate political funding lies in bringing down election expenditure and ensuring that it provides an opportunity to get the best public men and women to participate
• Holding simultaneous elections to the Lok Sabha as well as the State Assemblies.
• Citizen activism that keeps a close watch over campaigning.
• A system for partial state funding should be introduced in order to reduce the scope of illegitimate and unnecessary funding of expenditure for elections.
• Political parties should lead by example by coming under the ambit of RTI, especially with respect to their funding.
• Have a regulatory authority to receive authentic reports on political funding, scrutinise them and put them in the public domain.
• Funds must be put in a common pool which is controlled and regulated by the Election Commission, so that nexus between big companies and political parties will be minimised
• Levying a cess or tax for the purpose of funding political parties and the elections which the Election Commission can administer as a constitutional body.
• Implementing the recommendations of Institute of Chartered Accounts of India (ICAI) regarding financial statements of political parties
• Transparency in funding is essential to ensuring clean, democratic governance.
General Studies – 2 Topic: Issues relating to poverty and hunger
Pradhan Mantri Garib Kalyan Yojana, 2016

1) Introduction
- Evasion of taxes deprives the nation of critical resources which could enable the Government to undertake anti-poverty and development programmes.
- It also puts a disproportionate burden on the honest taxpayers who have to bear the brunt of higher taxes to make up for the revenue leakage.
- Concerns have been raised that some of the existing provisions of the Income-tax Act, 1961 can possibly be used for concealing black money.
- The Taxation Laws (Second Amendment) Bill, 2016 has been introduced in the Parliament to amend the provisions of the Act to ensure that defaulting assessees are subjected to tax at a higher rate and stringent penalty provision.

2) Provisions in the new bill
- Lok Sabha has passed the Taxation Laws (Second Amendment) Bill, 2016 in the Lok Sabha.
- The new bill attempts to impose a higher rate of tax and penalty in respect of undisclosed incomes.
- It is an attempt to plug loopholes in existing I-T Act being misused to conceal black money
- The bill has proposed an alternative Scheme called as “Taxation and Investment Regime for Pradhan Mantri Garib Kalyan Yojana, 2016’ (PMGKY)”.
- The Pradhan Mantri Garib Kalyan Yojana, 2016 is somewhat similar to IDS, except that the tax rate is higher at 50 per cent.
- This is another chance for rich people to convert their black money into white
- A surcharge called as “Pradhan Mantri Garib Kalyan Cess” at the rate of 33% of tax will be levied on the declarant.
- Total amount of taxes and penalty goes to 50% of the income declared and a minimum amount of 25% has to be keep deposit for the period of 4 years.
- No interest will be given on the money keep as deposit.
- Once taxes and penalties have been paid on the declared amounts, the black money holder will have future immunity on the declared amount.

3) Benefits
- The money which government will receive by this scheme could be used for poor people which will lead to justice and equality to all.
- Also the remaining part of the declared income legitimately comes into the formal economy.
- The scheme PMGKY has been utilized by the finance minister as the gate way for black money holders to convert their holdings.
- The funds which are parked under the scheme of PMGKY by the black money holders will be utilized for the improvement of infrastructure, education, health care sectors of the poor people across the country.

4) Concerns
- No provision for inquiring into the source of funds which may prove to be ineffective in curbing black money.
- The accounts of housewives, small retailers, labourers and artisans can be used in an illicit way since govt has declared not to scan them.
• Many clever ploys have been attempted to subvert this drive and convert black money into white by hiring people to exchange currency and pumping funds into bank accounts for the poor
• Tipping off the taxman to conduct search-and-seizure operations on one’s own premises to avail of a provision that allows individuals to pay a mere 10 per cent penalty on such income if they admit to it.

5) **Conclusion**
- The taxation polices in the year 2016 has made a revolution and the people with lot of unaccounted money has to suffer for it.
- The decision is a Step towards the development of the nation and equal distribution of income among every people of this nation.
General Studies – 2; Topic: Issues relating to development and management of Social Sector/Services relating to Health

Ban on FDI in tobacco sector

1) **Introduction**
   - Recently, the Commerce Ministry sent a note to the Cabinet proposing a blanket ban on FDI in the tobacco sector to better achieve the objective of reducing tobacco consumption.
   - As per WHO Framework Convention on Tobacco Control (FCTC) India is under an obligation to reduce high consumption of tobacco products which pose a grave public health danger.

2) **Ban on FDI in the tobacco sector**
   - India banned FDI in tobacco manufacturing in 2010.
   - Foreign tobacco companies are allowed to invest through technology collaboration, licensing agreements and by forming a trading company.
   - Commerce Ministry sent a note to the Cabinet proposing a blanket ban on FDI through the trademark or licensing route.

**Effect on Tobacco Industry**
   a) This would put an end to all kinds of participation of foreign companies in the tobacco sector.
   b) Some of the American Tobacco giants have invested in the Indian tobacco market and argue that such a ban would be ‘discriminatory’ and ‘protectionist’.
   c) This move would curb on funding sources to domestic industries and impede the growth of these industries in terms of trade, employment, investment etc.

**Investor - State Dispute**
   a) Foreign Tobacco companies might challenge any such blanket ban under India’s bilateral investment treaties (BITs).
   b) FDI blanket ban could be challenged as being discriminatory by favouring domestic tobacco investors over foreign investors.

**Challenges**
   a) Ban on FDI in the tobacco sector cannot bring any substantial impact in curbing the tobacco menace.
   b) Domestic players could occupy the market freed up by foreign players.
   c) Large number of people and farmers engaged in tobacco production and sale has to be provided alternative sources of livelihood.
   d) The ban would also eliminate the possibility of indirect flow of overseas funds to the sector.

3) **Alternative Regulatory Measures**
   - **Plain packaging regulation**
     a) Plain packaging regulation is better than banning FDI completely.
     b) FCTC talks about countries adopting packaging and labelling requirements to create better awareness.
     c) India would be on a much stronger legal wicket in defending it than defending a complete ban on FDI.
     d) Amend the Cigarettes and Other Tobacco Products Act (COTPA) for plain packaging of cigarettes.
     e) Studies from Australia show that smoking rates plunged by 12.2% after plain packaging regulations were introduced.
   - **Increase taxes on tobacco products**
a) Studies argue that overall taxes on cigarettes in India are still low relative to other countries.
b) Bidis have often been exempted from increase in excise taxes despite being the most commonly used tobacco in India.
c) The 2017-18 Budget has only marginally increased the excise duty on handmade bidis.

• **Proactive government**
  a) The government needs to demonstrate strong political will and carefully choose policies to deal with the menace of high tobacco consumption.
  b) Phasing out existing investments in the sector made by domestic companies.

• **Awareness drives**
  a) Engage youth, medical personnel, and media in educating masses about ill-effects of tobacco consumption.
  b) Preventing new users especially youths from getting addicted to Tobacco Products.
  c) An aggressive campaign to disseminate the lethal consequences of tobacco consumption needs to be adopted.

• Across the globe, research has shown that increased taxation and large pictorial warnings have great effect in curbing tobacco consumption.

• It is time to disincentivise tobacco agriculture.
General Studies – 2; Topic: Issues relating to development and management of Social Sector/Services relating to Health.

Medical Stent Implants

1) **Introduction**
   - A stent is a tube-shaped device that, when inserted into a blocked blood vessel, can help clear the blockage.
   - National Pharmaceutical Pricing Authority (NPPA) capped the prices of medical stents, which are used to treat coronary artery disease.
   - The price cap is one example of how a life-saving medical device can be made affordable when the government intervenes to regulate prices.

2) **Indian stent market**
   - Industry estimates suggest that the market is worth $500 million.
   - It is expected to grow many times in the coming days due to huge burden of diabetes and hypertension in the Indian population.

3) **Why there was a need for price cap**
   - It was found that huge unethical mark-ups are charged at each stage in the supply chain of coronary stents resulting in irrational, restrictive and exorbitant prices.
   - Rising costs had led to impoverishment of families and litigation demanding regulation.
   - Given the overall dominance of private, commercial, for-profit health institutions, correctives to bring about a balance was inevitable.
   - The Lancet in December 2015 reported that there was irrational use of medical technologies, including cardiac stents.
   - High incidence of coronary artery disease (CAD) in India is a “major public health problem”.
   - That is why stents were ruled to be “essential” for public health, a criterion that is key to the price control principle.

4) **Reaction from the Industry**
   - The medical technology industry is disappointed with this outcome.
   - Indian stents industry is going to face enormous operational challenges in the coming time.
   - This move will reduce the options available for the Indian patients from choosing the most advanced and cutting edge technologies.

5) **Implications**
   - Regulated prices can make stents more accessible to patients who really need them.
   - This helps patients avoid using up the weak insurance cover available.
   - Reduce the incentive for unethical hospitals to use them needlessly.
   - The stents price cut makes angioplasty more accessible.
   - **Negatives**
     a) This pricing has the potential to block innovations and limit access to world class medical care.
     b) Margin compression across the value chain thereby impacting medical device companies, distributors and hospital providers.
     c) Sudden implementation of this order will result in an overall disruption in the supply chain, leading to non-availability and chaos for patients in need.
d) Price cap may lead to the Indian market missing out on some of the newer multinational products

6) **Concerns**
- The singular focus on controlling ceiling price of stents, without attempting to address the inefficiencies in the healthcare ecosystem
- The policy doesn’t address issues such as pricing of special stents and those in inventory.
- Most of the cardiac patients with even 50 per cent blockage in arteries who do not require stents are implanted with stents.
- In the private sector, at least 25 per cent-30 per cent of the stent implants are inappropriate.
- The cost may increase in some private hospitals for stent implants in the form of hospital and surgical charges, to increase their own share of profit.

7) **Way Forward**
- The latest measure provides an opportunity to expand the availability of stents, and by extension angioplasty procedures, in the public health system.
- District hospitals should offer cardiac treatments uniformly. This should be a priority programme to be completed in not more than five years.
- A similar price cap should be done for Pacemakers, orthopaedic implants and intraocular lenses are other medical devices
- Diabetes and hyper tension has to be controlled and treated simultaneously. Then we can have the optimal benefit of stenting.
- The price regulation will only make the stent implants cheaper. The major concern over the practice of irrational stent implants or an angioplasty needs to be looked at.
- The state-level Food and Drug Administration (FDA) authorities have to strictly regulate the hospitals and the complaints filed by patients for overcharging and use of inferior quality of stents.
- The doctors and hospitals involved in these unethical practices should be seriously dealt with under the law.
**General Studies – 2; Topic: Indian Constitution- historical underpinnings, evolution, features, amendments, significant provisions and basic structure.**

**Education and the Constitution of India**

1) **Introduction**
   - Education is an instrument to strive towards excellence in all spheres of life. An investment in knowledge pays the best dividends.
   - Indian Constitution lays special emphasis on education and considers it necessary for the development of good citizens, society and State.

2) **Constitutional Provisions**
   - **Free and Compulsory Education**
     a) Article 45 of the DPSP - “The state shall endeavour to provide free and compulsory Education for all children until they complete the age of fourteen years.”
   - **Education of Minorities**
     a) Article 30 relates to cultural and educational rights to establish and administer minorities educational institutions.
   - **Education for Weaker Sections**
     a) Article 15, 17, 46 safeguard the educational interests of the weaker sections, that is, socially and educationally backward classes of citizens and SCs and STs.
     b) Under Article 46, the federal government is responsible for the economic and educational development of the SCs and STs
   - **Secular Education**
     a) Under the Constitution minorities are given full rights to establish educational institutions of their choice.
     b) Article 28 - Freedom to attendance at religious instruction or worship in certain educational institutions
     c) Article 30 - “The state shall not grant aid to educational institution maintained by the State on grounds only of religion, race, caste, language or any of them.”
   - **Instruction in Mother Tongue**
     a) Constitution has been laid down that the study of one’s own language is a fundamental right of the citizens.
     b) Article 350 (A) - Every state and every local authority must provide adequate facilities for instruction in the mother-tongue at the primary stage of education
   - **Higher Education and Research**
     a) Parliament has the exclusive rights to enact legislation in respect of institutions and Union Agencies mentioned in entries 63, 64, 65, and 66 of List.
   - **Women’s Education**
     a) Article 15(1) provides that the State shall not discriminate any citizen on groups only of sex.
     b) National Policy on Education was concerned about the status and education of women in the country.
   - **Inclusive Education**
     a) Article 337 - Special provision with respect to educational grants for the benefit of Anglo-Indian community

3) **Purpose of Education**
The purpose of education is not limited to subjects being taught and learnt
Education is an effort to help develop good human beings—and so to a better society.
The purpose of education is to develop a feeling and dedication for the country
Constitutional values aim education to help do away with caste.
To inculcate within people the feeling of their duty towards nation, nature and their people
To protect wildlife and nature as emphasised in fundamental duties.
To maintain the social and economic order of the country
To preserve the diverse and composite culture
To achieve excellence in all spheres of life
To develop scientific temper among the citizens
Development of Democratic Values in the People
Education should aim at evolving leadership, because without doing this education cannot make any real contribution to democracy

4) Challenges
- Constitution talks about morality and respect towards women, but in reality we see many instances of violence against women
- Constitution mentions rationality and scientific temper but superstitious believes are present till date.
- Even though Preamble mentions about Fraternity, we here about communalism and intolerance
- More focus on building skills and getting jobs than inculcating wisdom or knowledge.

5) Conclusion
- Our Constitution has touched upon almost every aspect of personal and collective growth.
- It is the duty of the State and the people to adhere to it and make the most of the guidance of our founding fathers.
India's Foreign Policy

1) Introduction

- The foreign policy of the government concerns the policy initiatives made towards other states.
- The Ministry of External Affairs is responsible for carrying out the foreign policy of India.
- Foreign policy is currently focused on improving relations with neighbouring countries in South Asia, engaging the extended neighbourhood in Southeast Asia and the major global powers.

2) History

- Even before independence, the Government of India maintained semi-autonomous diplomatic relations.
- After India gained independence it soon joined the Commonwealth of Nations and strongly supported independence movements in other colonies.
- During the Cold War, India adopted a foreign policy of not aligning itself with any major power bloc.
- However, India developed close ties with the Soviet Union and received extensive military support from it.
- The end of the Cold War significantly affected India's foreign policy, as it did for much of the world.

3) Recent Developments

- Neighbourhood First
  a) New Delhi’s willingness to give political and diplomatic priority to its immediate neighbours and the Indian Ocean island states.
  b) Provide neighbours with support, as needed, in the form of resources, equipment, and training.
  c) Greater connectivity and integration, so as to improve the free flow of goods, people, energy, capital, and information.
  d) India has also become more forthcoming in providing support and in capacity building, whether concluding its biggest ever defence sale to Mauritius, or in providing humanitarian assistance to Nepal or Sri Lanka.
  e) With Bangladesh, the completion of the Land Boundary Agreement, improvements in energy connectivity, and steps taken towards accessing the port of Chittagong have all been crucial developments.
  f) India’s focus on connectivity is also gradually extending outward, whether to Chabahar in Iran or Kaladan in Myanmar.
India has also expressed its willingness to develop issue-specific groupings that are not held hostage to consensus.

For example Bangladesh-Bhutan-India-Nepal (BBIN) grouping – meant to advance motor vehicle movement, water power management, and inter-grid connectivity.

With respect to all of its neighbours, including Nepal, India has taken concrete steps over the past two years to promote goodwill and deepen economic and social connectivity.

- **Bridging diplomacy and development**
  a) One of the major objectives of India’s foreign relations has been to leverage international partnerships to advance India's domestic development.
  b) This includes improving technological access, sourcing capital, adopting best practices, gaining market access, and securing natural resources.
  c) The recently amended tax treaty with Mauritius is one example of how diplomacy can be used to benefit both investors and the government, and potentially increase India’s tax base.
  d) The overall trajectory for India’s development is positive, and the diplomatic momentum has clearly increased.
  e) India still has a mountain to climb to fully harness external inputs to advance economically, socially, and technologically.

- **Acting East as China rises**
  a) with ‘Act East,’ the purpose was to show greater intent in realising what had long been an aspiration for India: to become an integral part of Asia.
  b) The new policy emphasises a more proactive role for India in ASEAN and East Asian countries.
  c) Indian concerns regarding China’s rise and the upsetting of Asia’s delicate balance of power.
  d) Require a greater priority on improving border infrastructure, on overland connectivity to Southeast Asia via Bangladesh and India’s Northeast

- **Pakistan: Engagement and isolation**
  a) Terrorism emanating against India by entities based in Pakistan and supported by elements of the state remains a top priority
  b) Much of China’s historical support for Pakistan has been driven by its desire to balance against India.
  c) The process of both engaging and isolating Pakistan despite repeated provocations will be long, frustrating, and politically unpopular at home.
  d) India’s efforts at internationally isolating it and its offering a viable alternative model of South Asian engagement remain the only real prospect for resolving the Pakistan problem on India’s terms.
India as a leading power: Raising ambitions

a) India is not yet fully in a position to lead, or set the rules of the international order, but it is taking steps to seek full membership of the most important global governance platforms.

b) India is already a member of the G20, the East Asia Summit, and the BRICS coalition, a testament to its status as a large country with a fast-growing economy.

c) New Delhi also naturally aspires for permanent membership on the UN Security Council.

d) India has recently embarked upon institution building of its own. The International Solar Alliance represents one such effort.

Indian Ocean Outreach

a) Through this policy initiative, India started to reach out its maritime neighbours in the Indian Ocean Region (IOR) with proposals of enhanced economic and security cooperation.

b) This policy was unfolded during the Indian Prime minister visit to Sri Lanka, Mauritius, and Seychelles.

c) With this India can project that it commands a strategic supremacy over the IOR and its relations with its maritime neighbours.

Link West policy

a) In an attempt to strengthen ties with India’s western neighbours specially the gulf countries government proposed this policy to complement its Act East policy concerning East Asia.

India’s priorities and strategic objectives

- Prioritizing an integrated neighbourhood; “Neighbourhood First.”
- Leveraging international partnerships to promote India’s domestic development.
- Ensuring a stable and multipolar balance of power in the Indo-Pacific; “Act East.”
- Dissuading Pakistan from supporting terrorism.
- Advancing Indian representation and leadership on matters of global governance.

Shortcomings of India’s foreign policy

- Country’s strategic thinking continues to be guided by bureaucracy rather than strategic thinkers and specialists
- Fundamental lacuna inherent in the country’s strategic behaviour is it functions without a grand strategic blueprint.
Despite its stated global ambitions, India is confined to its South Asian geopolitical space.

New Delhi’s diplomatic efforts is revolving around the issue of Pakistan-backed terrorism and is talking about it at every major international forum instead of larger issues such as foreign direct investment, global partnerships, institutional reforms, economic diplomacy, etc.

Reducing India’s foreign policy focus to terrorism to such an extent demonstrates how tactical we are in our approach.

New Delhi’s relationship with Washington, especially the signing of the ‘Logistics Exchange Memorandum of Agreement’ (LEMOA) is a clear departure from its traditional policy of not getting into military alliances.

Sustained negotiations are necessary for the Nuclear Suppliers Group (NSG) membership: public spats with countries like China is not the solution.

India also does not have a comprehensive national security doctrine which could help pacify insurgencies, manage borders better or fight cross-border terror.

6) **Concerns**

- Even as India is increasing its geo-strategic sphere of South Asia, its influence within it is steadily weakened by Chinese economic and military power.
- New Delhi’s focus on terrorism has compromised India’s strategic relationship with China.
- India's insufficient commercial integration with Southeast and East Asia
- Gaps between diplomatic efforts and agents of domestic implementation
- Political resistance to engagement with Pakistan
- Relative inexperience with leading on matters of global governance

7) **Need of the Hour**

- Long-term strategic thinking requires intellectual depth and an ability to look beyond the tactical considerations
- There needs to be institutional coordination and follow-up action on the government’s key initiatives.
- If there are well-articulated strategic doctrines, institutions will learn to refer to them and adjust their policies accordingly, leading to a lot more coherence in the country’s strategic behaviour.
- A national security doctrine would require a great deal of political consultation, careful scenario building, and net assessment by experts.
- Strategic thinking can flourish when the political class commits to institutional reform, intellectual investment and consensus building.
Implications of Donald Trump’s presidency for India

1) Introduction

- Donald Trump fought a bitter political battle to be elected as the 45th president of the world's oldest democracy.

- India's past experiences with US presidents show that a Republican president is generally better for us than a Democrat one.

- But in recent history, Indo-US relations have broadly stuck to a steady path — starting with Democrat Bill Clinton to republican Gorge W. Bush to Democrat Barack Obama.

- Trump's policy to India is expected to be positive and welcoming, continuing the trends and direction in the relationship established over the last decade.

- His ties with the Indian-American community and his general view that “India is doing great” suggest that he is well inclined to further cement the India-U.S. partnership.

2) Strategic Relationship

- In fact, it is feared that his soft approach towards Russia may force him to reconsider US policy towards China and that can have serious consequences for India.

- Trump has already visited India, announced his enthusiasm for the Modi government and vowed to invest in big projects here.

- Trump also stressed that if his government comes to power, US and India will have strongest friendship.

- Trump criticised China throughout his campaign, described it as one of the US's top adversaries. That could make for an advantage to India.

- He said he would label China a currency manipulator and impose heavy tariffs if China didn't agree to rewrite trade agreements.

- He labelled Pakistan as semi-stable and a safe haven for terrorists.

- This could mean the continuation of US’ Pivot to Asia policy where India is seen as a counterbalance to China.

3) Indian Economy

- Trump promised to lower taxes and increase military expenditure.

- It is assumed that to fulfil these promises, Trump will use government money that may lead to a debt burden and a falling dollar.

- And a recession in US, would obviously adversely affect investment and growth across the world, including India.

4) Terrorism
• Mr. Trump is a proclaimed opponent of terrorism and his approach to Pakistan and its support of terror groups will be no-nonsense and adversarial.

• Trump has openly expressed dislike for Pakistan. He’s really suspicious of the country

• “India is the check to Pakistan,” he once said in an interview, reportedly.

• “You have to get India involved ... They have their own nukes and have a very powerful army. They seem to be the real check.” says Trump

• This distrust for Pakistan can work in India’s and the world’s favour.

• Trump's hard stance on terrorism could also result into deeper Indo-US defence and strategic ties.

• Closer defence ties might give a further push to Indo-US business ties as well.

5) pharmaceutical sector

• Indian pharmaceutical stocks breathed a metaphorical sigh of relief after Donald Trump won the US presidential election.

• Generic drugs account for 88% of prescriptions dispensed in the US

• The US remains a critical market for Indian companies and their profitability in particular is linked to how they perform in this market

• Unlike Hillary Clinton, who has been very critical of drug companies that raise the prices of old drugs to boost profits, Donald Trump is seen as less of a threat to the sector

• they will be very open to free market pricing rather than controlling prices

6) Immigration

• There are numbers of Indian immigrants or new entrants into the U.S. whose status may be called into question.

• He expects to curb both legal and illegal immigration.

• The issue of H-1B visas for IT professionals from India has been a vexed one also in recent years mainly due to nativist politics practised in the U.S. Congress

• The removal of this visa will have a disastrous effect on the Indian software companies which send some of their staff to work on-site with their clients in the U.S. through the H-1B visas.

• Although Trump wants to put stricter immigration rules, he also says he wants to woo Indian entrepreneurs and students to the US.

7) labour and trade

• Trump sincerely believes that the world is robbing the Americans of their jobs and thus, wants to close its doors to trade.
• To do so, he plans to implement tariffs and quotas. Any tariff that Trump proposes to either China or Mexico will affect India as well.

• On issues of labour and trade, Mr. Trump is a protectionist and has come to power on a platform of restoring livelihoods for unemployed Americans

• Also, many a times, Trump has also expressed his displeasure on the work that is outsourced by America to India.

• Trump’s promise to reduce the US corporate tax rate from 35 per cent to 15 per cent could result in companies like Ford, General Motors and Microsoft rushing back to the US.

• This rush of US firms will hit India's Make in India push.

8) The Energy Plan

• Trump has promised to unleash America’s shale oil, natural gas and coal reserves to make U.S energy self-sufficient.

• He has also promised to open onshore and offshore leasing on federal lands and lift the moratorium on coal leasing.

• Opening up of the US oil sector could open massive business opportunities for Indian oil companies

9) Scrapping Obamacare

• Trump has vowed to scrap the scheme aimed at providing affordable healthcare to Americans.

• Pharmaceuticals constitute the second biggest exports of India to the U.S.

• India’s strength in manufacturing affordable generic drugs complemented the objectives of Obamacare.

• Five years of Obamacare more than doubled pharma exports from India to the U.S to $66 billion.

• If Trump implements his promise to junk Obamacare, Indian drug companies could be severely hit.

• Indian IT companies which provide support to the program could also end up losing their business that could lead to job cuts in India.

10) Challenges

• Trump’s views on the most important achievement of India-US ties in the last 15 years, the India-US civilian nuclear deal, are a complete unknown.

• It is not clear if he knows other details about the complex and difficult relationships in South Asia.

• If companies in the US are forced to limit outsourcing, there may be a bigger risk for Indian companies.

• The other risk is that more countries may get protectionist now. For instance, the UK increased the salary threshold for visas to discourage entry-level immigration.
11) Conclusion

- Prime Minister Narendra Modi has to take the initiative to reach out to Mr. Trump so that the American President-elect is sensitised to the strategic interests that bind India and the U.S.

- The ‘golden hour’ to do this may be even before the inauguration of the new President in January 2017.
Insights Mind maps

General Studies – 2; Topic: India and its neighbourhood- relations.

Cementing India - China relations

1) Introduction
- The relations between the two Asian giants have looked tired and worn in recent months.
- There are lot of perception-related issues due to the historic baggage of China-India relations.
- India has actively started engaging with the countries in Chinese Periphery, so as to have some bargaining position on different issues.
- But, all these efforts are too little to deliver any tangible results.

2) Reasons for Strain in the Relations
- China’s position on India’s Nuclear Suppliers Group (NSG) bid
- Its incomprehensible stand on the listing of Masood Azhar under the U.N. Security Council’s 1267 Committee
- Deployment of Chinese military and engineering assets in Pakistan-occupied Kashmir
- Development of the China-Pakistan Economic Corridor (CPEC)
- China’s claim over the state of Arunachal Pradesh, occupation of the Shaksgam Valley in Ladakh

3) Why should India and China repair their ties?
- Strategic
  a) Better relationship between two countries will bring peace in the region and they can fight against terrorism and underdevelopment in the region.
  b) China too faces the tune of infiltration and drug trafficking. So indulging in mutual intelligence sharing and cooperation is required for a more secured border.
  c) Keeping Pakistan under check and getting support for UNSC membership could happen if we have a more sustained and defined relationship with China.
- Economy
  a) With Global uncertainty, growing Protectionism and anti Globalization trend, India and China, both beneficiary of liberal international order must work closely to sustain the same.
  b) Trade between two nations is over $70 billion. Hence both nation’s are markets for each other’s economy.
  c) China has huge forex reserve and India needs foreign investment for projects like Make in India.
  d) Both nation’s are members in NDB, AIIB, BRICS, BCIM etc and hence good relations among them can bring economic prosperity
- Asian Emergence
  a) With Russian economy crumbling, India and China are two of the great powers who would have a greater to play.
  b) Thus a cordial relationship is vital for holistic development of the region
- Terrorism
  a) The two countries have a common interest in curbing religious radicalism and terrorism.
  b) Kashmir and Xinjiang, both contiguous neighbours, have similar challenges posed by terrorism and separatist movements.

4) Why is India reluctant to join OBOR initiative?
- India’s reaction to China’s OBOR has been non-committal, mainly because of the CPEC through Pakistan-occupied Kashmir.
The Chinese have chosen to disregard the sovereignty issues surrounding the dispute between India and Pakistan over the State of J&K.
There is anticipation that it would serve the China’s interest more and can dominate the trade policies.
The legacy of 1962 war and India's crushing defeat still inflicts upon the relations between both.
India prefer US dominated sea lanes of communication(SLOCs) over land routes shows that it has less confidence in China than US.

5) **How can India and China repair their ties?**
- Establishing a friendship and cooperation treaty.
- A free trade agreement (FTA) covering goods and services, cross-border investment, R&D, standards and dispute resolution to boost bilateral relations.
- Resolve the boundary question based on negotiations held so far.
- Both the countries must appreciate and support each other’s regional aspirations, be it OBOR or membership in NSG/ UNSC.
- Both must work closely to eliminate rising nuclear stockpile and proliferation in the region to maintain stability.
- People to people contact, tracing the work of Chinese traveller Huen zang and Indian counterpart Kashyap Matenga in relation with Buddhism.
- Promotion of business and people-centred connectivity, and mutual confidence-building measures.
- Both countries need to show sensitivity and respect for each other’s core concerns and interests.

6) **What can India do as a counter measure to CPEC?**
- India should explore the development of connectivity between Tibet and India, especially through the Sikkim sector into Bengal.
- Opening of ties between India and the Xinjiang region of China is also worth examining.
- Providing for air connectivity between Urumqi, the capital of Xinjiang province and New Delhi as one of the OBOR linkages.
- This would help in people-to-people ties, trade and commercial contact and counter-terrorism cooperation between India and China.
General Studies – 2; Topic: India and its neighbourhood - relations

Common Ground for India - China on Afghanistan

1) Introduction
- Despite differences on a number of issues like NSG, U.N. designation of Masood Azhar as a terrorist, and the CPEC, India and China began to look for a “common ground” on Afghanistan.
- The Indian Foreign Secretary’s visit to China and a Strategic Dialogue is seen as an effort by both sides to “stabilise India-China relations” at a time the world is experiencing a new “volatility.”
- This indicates a shifting global calculus due to the recent surprise foreign and trade policy moves by the new U.S. administration under Donald Trump.

2) Cause for China’s worry
- This development comes against a backdrop of the growing threat of the Islamic State (IS) to China.
- China wants greater global cooperation against the IS, which is also a reason why China has joined ranks with Russia in a bid to engage the Taliban in Afghanistan.
- China is worried about the spill over effect of continuing instability in Afghanistan.
- Afghanistan borders the autonomous region of Xinjiang, home to the largest concentration of Muslim Uighur minority group members in China.

3) Why there is need for cooperation on stability in Afghanistan?
- The impact of Afghanistan’s destabilisation will be felt not only in Kashmir but also in Xinjiang.
- The Donald Trump administration yet to clarify its position on Afghanistan.
- China is keen to engage India that has built a reservoir of goodwill in Afghanistan.
- Afghanistan requested military aid from India and China on top of the billions of dollars from U.S.
- China’s huge investments in the region such as CPEC, under One Belt One Road initiative is heavily dependent on the stability of Afghanistan.
- Both are major aid providers to Afghanistan and have played important roles in the so-called ‘Heart of Asia Process’

India’s stakes
- New Delhi’s stakes in the stability of Afghanistan are huge and have economic and strategic dimensions.
- Economically, India sees Afghanistan as a bridge to Central Asia and a potential hub of regional prosperity.
- From the security prism, Afghanistan is critically important for India as anti-India Taliban networks, suspected to be supported by Pakistan, continue to operate from Afghanistan.

4) Divergences in Sino-Indian positions on Afghanistan
- For India, the main source of terrorism is Pakistan. For China, Pakistan is an important asset in its South Asia policy and an all-weather friend.
- China continued to emphasise that its relationship with Pakistan was far more important than a regional approach on terrorism with India.
- Issues on border dispute and Dalai Lama being invited to Arunachal Pradesh, has the potential to derail the whole process of cooperation.
- New Delhi should not expect Beijing to change its Afghanistan policy significantly to suit Indian interests.
5) **Way Forward**
   - Joint development projects including capacity building could be undertaken by the two countries in Afghanistan
   - Both countries are affected by the new unpredictability, and we must work towards bringing down the volatility, instead of playing up our differences.
   - Stable, substantive, forward looking India-China relationship would inject a greater amount of predictability into the international system
   - New Delhi and Beijing need to strengthen the government in Kabul.
   - New Delhi needs to find ways to make China more sensitive to its concerns on CPEC

6) **Conclusion**
   - China expressed its "admiration" for India's work on developmental projects, including the Salma Dam in Herat.
   - China is interested in working with India on Afghanistan suggests that new possibilities on regional cooperation are emerging, which India should not hesitate to explore.
   - The future of Asia depends on how the two regional giants relate to each other in the coming years.
   - Both have a key interest in Afghanistan and have a different set of relations with Kabul that if handled correctly could be complementary.
Economic and Technological Cooperation Agreement (ETCA)

1) Introduction

- The India-Sri Lanka Free Trade Agreement of 1998 was followed by efforts towards a Comprehensive Economic Partnership Agreement (CEPA) to liberalise trade in services and investment starting in the mid-2000s.

- However, the CEPA negotiations dragged on for nearly a decade in the face of increasing opposition within Sri Lanka, particularly by the business community.

- With the new momentum in closer bilateral ties, India is pushing for a new trade pact called the Economic and Technological Cooperation Agreement (ETCA).

- The Economic and Technical Cooperation Agreement (ETCA) is negotiated as an extension over the existing FTA.

2) The objectives of ETCA

- To strengthen and advance the economic, trade, investment and technology cooperation between the two parties.

- To promote further liberalization of trade in goods, liberalizing trade in services and gradually establish fair, transparent and facilitative trading, investment and investment protection mechanisms.

- To expand areas of economic cooperation and establish a cooperation mechanism.

3) Economic and Technological Cooperation Agreement (ETCA)

- ETCA, which replaces the CEPA will be a crucial reform towards an improved economic partnership with India.

- ETCA will establish an agreement on trade in services and technological exchange (which CEPA failed to do).

- ETCA agreement seeks to boost cooperation in technical areas, scientific expertise and research among institutions.

- ETCA boost standard of goods and services, able to compete on global market and improve opportunities for man power training and human resource development.

- Investments would be in oil farms in Trincomalee, renewable energy, and infrastructure and in other new areas of business.

- India is looking at the ETCA as a mechanism to enable it to participate in the post-war economic development of Sri Lanka through Indian investments in select areas.

- Sri Lankan government wants to use ETCA to become part of the Indian supply chain, exploiting India's “Make in India” movement to boost India’s manufacturing sector.
ETCA will enable Indian manufacturers to set up factories in Sri Lanka to export their products to countries with which Sri Lanka has or is planning to have Free Trade Agreements.

4) **Advantages**

- This would be pivotal in transforming economic relations between the two countries.
- India is taking a proactive approach to Sri Lanka’s post-war economic development and both sides are seeking mutually beneficial, long standing bilateral relations.
- From a Sri Lankan perspective, the ETCA offers an ideal opportunity to boost private investment, and will contribute to the growth of the emerging middle class.
- ETCA is likely to strengthen Foreign Direct Investments (FDIs) by both private individuals and private institutions.
- At a time where Sri Lanka is pressured to achieve the targets set by the IMF under the Extended Fund Facility, FDI could play a major role in helping the country reach these targets.
- The trade agreement is expected to help Sri Lanka gain better access to India’s rapidly growing markets and provide a boost to its economy.
- Indian and Sri Lankan relations are now at its best and the ETCA provides an opportunity for investors who want to invest in Sri Lanka.
- ETCA has the potential to promote growth of USD 500 billion sub-regional economy.
- The agreement would be of mutual benefit to both countries “which will be win-win situation for all.”
- UK’s exit from the EU will impact Sri Lanka’s exports to the 28-nation bloc. so ETCA will mitigate the effect of Brexit.
- India is planning to send professionals into the IT sector and Ship building, where there is a need for expertise and higher levels of training. These are also sectors that could boost Sri Lanka’s exports.

5) **Hurdles and criticism to ETCA**

- Conclusion of ETCA with India is opposed by some interest groups and political parties in Sri Lanka.
- The protest against ETCA is based in huge trade deficit.
- As per official Sri Lankan figures, Indian exports to Sri Lanka was US$ 4,268 million while Sri Lankan exports to India was just US$ 643 million in 2015. This huge trade deficit is not liked by the business community in Sri Lanka.
- They claim that ETCA is to be largely advantageous to India and oppose conclusion of any trade pacts with India.
- Sri Lanka is at present facing a major balance of payments (BOP) crisis. At this juncture, it would be difficult for the Sri Lankan government to push for the economic pact.
• However, India has helped the Sri Lankan government to tackle the BOP problem by boosting the foreign exchange reserves of Sri Lanka by US $1.1 billion with a Reserve bank of India credit swap

• Critics have said the deal would pave the way for Indian professionals and semi-skilled and unskilled persons to “flood” Sri Lanka’s labour market.

• There is a widespread and deep rooted fear among professionals in Sri Lanka, that India will eventually find ways of exporting their services personnel to Sri Lanka and take over local jobs by offering their services as a lesser cost.

6) measures to strengthen economic exchange and cooperation

• Gradually reducing or eliminating tariff and non-tariff barriers to trade between the two Parties

• Gradually reducing or eliminating restrictions on in trade in services between the two parties

• Providing investment protection and promoting two way investment

• Promoting trade and investment facilitation and industry exchanges and cooperation

• Promoting Technology cooperation and transfer of technology and knowhow

• intellectual property rights protection and cooperation, financial cooperation, trade promotion and facilitation, customs cooperation, and e-commerce cooperation

• cooperation in major projects, and coordination of the resolution of issues that may arise in the course of industrial cooperation between the two Parties
India-Sri Lanka Fisherman Dispute

1) Introduction

- The Palk Bay, a narrow strip of water separating the state of Tamil Nadu in India from the Northern Province of Sri Lanka, has historically provided rich fishing grounds for both countries.

- The region has become a highly contested site in recent decades, with the conflict taking on a new dimension since the end of the Sri Lankan Civil War in 2009.

- Multiple issues have compounded with serious ramifications for internal and bilateral relations.

- These issues include ongoing disagreement over the territorial rights to the island of Katchatheevu, frequent poaching by Indian fisherman in Sri Lankan waters, and the damaging economic and environmental effects of trawling.

- However, with the governments of both countries recently affirming their commitment “to find a permanent solution to the fisherman issue,” there is an opportunity to create a win-win scenario, in which the bay becomes a common heritage of mutual benefit.

2) Background

- India and Sri Lanka had concluded a maritime boundary agreement which became effective from 8 July 1974.

- The maritime boundary between the two countries was delineated in the Gulf of Mannar.

- As per the agreement both countries enjoy sovereign rights over the waters, the islands, continental shelf and sub-soil of the maritime area on their respective side of the delineated boundary.

- Indian fishermen and pilgrims have also been permitted access to Katchatheevu Island which falls on the Sri Lankan side of the maritime boundary.

3) Causes for the dispute

- In India, the fisheries dispute chiefly began with an internal debate about sovereignty related to ceding of the island of Kachchatheevu to Sri Lanka.

- The main problem with Indian fishermen is that a large number of them are dependent on fishing in Sri Lankan waters, which is prohibited by the 1976 Maritime Boundary Agreement.

- A large number of Indian fishermen are dependent on trawling which is banned in Sri Lanka.

- There are instances of Indian fishermen being prevented from fishing, facing harassment and arrest by the Sri Lankan Navy (SLN).

- SLN operations involving interdictions and firings on suspicion of the Indian trawlers while fishing in the area.
The problem is relatively acute for the Sri Lankan fishermen because their livelihood is more dependent on the catch from the waters concerned, and, also their means of fishing are comparatively less expedient and effective vis-à-vis Indian fishermen.

The Indians mostly fish at night for shrimp and their use of gill nets and synthetic nets has caused severe damage to the ordinary nets of Sri Lankan fishermen.

4) Implications

- If the underlying issues of the fisheries dispute are not addressed soon, relations between fishermen and their governments, between Tamil Nadu and New Delhi, and between Tamil Nadu and Colombo could worsen and reach a crisis point.

- There have been tensions between those fishermen using traditional methods and those using mechanized methods, as well as increased the infringement of territorial boundaries.

- According to the government of Tamil Nadu, the sufferings of Indian Tamil fishermen is a direct consequence of ceding Kachchatheevu to Sri Lanka and sacrificing the traditional fishing rights enjoyed by Indian fishermen.

- Trawling by Indian fishermen causes damage to marine ecology and, specifically, fish stocks.

5) Solution

- The agreement between India and Sri Lanka on establishing a Joint Working Group (JWG) on fisheries is a small step forward in resolving the dispute between fishermen of both countries.

- The points agreed on are:
  a) a hotline between the Coast Guards of both countries
  b) a meeting of the JWG once in three months
  c) a meeting of the fisheries ministers every six months

- The immediate decommissioning of trawlers is an important prerequisite for this unconventional solution.

- One way of preventing boundary transgression is to find a livelihood alternative for Tamil Nadu fishermen.

- Equipping them for deep sea fishing is an option.

- Sri Lanka can look at a licensing system under which fishermen from both sides can fish on specified days using sustainable methods and permissible equipment.

- Dr APJ Abdul Kalam once opined that an apparent modus Vivendi could be for Indian fishermen and their Sri Lankan counterparts to fish in the Palk Bay and Straits on alternate days.

- Instituting a Palk Bay Authority for devising an integrated solution to the fishermen’s problems encompassing their livelihood issues and commerce in the area.
• A restriction is also required on the number of Indian trawlers that are allowed to operate beyond the median line specifying the maritime boundary.

• Restrictions on the number of fishing craft and their technical capacity as well as the nature of the fishing nets

• Institutional framework in which the fishermen’s cooperatives of both countries must be involved and committed, and there an oversight body empowered with arbitral powers to resolve disputes.

• Special provisions could be made to protect the interests of traditional fishermen.

• The focus should be on the enrichment of marine resources and a qualitative improvement in the lives of coastal people.

6) Conclusion

• Delhi and Colombo have affirmed their commitment to find a permanent solution to the fishermen issue

• Delhi is also making a new effort to build consensus among domestic stakeholders

• Joint measures such as joint naval patrolling, controlling of smuggling and piratical activities, developing fish farming extensively in the Indian waters and strengthening of communication network is the need of the hour.
General Studies – 2 Topic: India and its neighbourhood- relations

India’s conflict with Pakistan

1) Introduction

- Since the partition of British India in 1947 and creation of modern States of India and Pakistan, the two countries have been involved in four wars and many border skirmishes and military stand-offs.
- The Kashmir issue has been the main cause, whether direct or indirect, of all major conflicts
- Several other reasons of conflicts are border dispute, Water dispute and terror controversy.

2) Nature of the Conflict

- Agreements
  a) Various agreements like Tashkent peace declaration 1966, Simla agreement 1972 and Indus water treaty, India's stance remained overly generous, ' conceding more than obtaining much'.
  b) At least 89 security personnel have been killed in Jammu and Kashmir so far in 2016. This is the highest figure since the 2003 ceasefire on the India-Pakistan border began

- J&K problem
  a) Insurgency and promotion of terrorist activities, interference from Pakistani side in J&K further creating problems for India.
  b) Consistent rise of tension along the border and frequent cease fire violation may lead to susceptibility of use of nuclear weapons which can be catastrophic.

- Role of Pakistan's Army
  a) Pakistan's military is the second power centre, its political influence; anti-India stand and instability of regimes in Pakistan are not in favour of India.
  b) Pakistan Army’s support to terror outfits which is a great security concern for India

- Terrorism
  a) Terrorism has been a major setback for the two countries on realising economical benefits
  b) Continuing turmoil and escalating unrest inside J&K is giving Pakistan an opportunity to mobilise international opinion against India on the issue of violation of human rights.
  c) Pampore, Uri and Nagrota terror attacks are examples of increased provocations from Pakistan.

- International Support
  a) China's support to Pakistan and blocking India's move to get Masood Azhar banned by UN.
  b) US financial assistance to Pakistan which is changing lately
  c) Recent Russian military exercise with Pakistan

- China-Pakistan axis
  a) Terrorism emanating from Pakistan and the China-Pakistan axis working against India are two of the major geo-political challenges facing the country

- Counterfeit currency and drugs
  a) Various terrorist groups operating from Pakistan supply fake notes and illegal drugs, which has been an important security concern for India.

3) Present Conflict

- Terror attacks on Indian targets, both military and civilian, have only increased.
- Recent incidents in the region are reminiscent of the Cold War era in the West
- Both India and Pakistan have tweaked protocol to expel not one or two diplomats at a time but in far larger numbers.
- Recent terrorist attacks from across the Line of Control and the International Boundary.
Since the beginning of 2016, several terror attacks have occurred, starting with Pampore to Uri and now Nagrota
Pakistan has resorted to mutilation of the bodies of Indian soldiers killed in terror attacks.

4) **Concerns / Challenges**
- UN refuses to formally declare Pakistan a ‘terrorist state’.
- Comprehensive Convention on International Terrorism, which India has been pursuing in the UN for nearly two decades, is yet to see the light of day.
- Pakistan’s military, identified as anti-India elemental force in Pakistan, remains opposed to any understanding with India.
- Rising influence of radical extremist ideas and ideologies inside Pakistan.
- Terrorism emanating from Pakistan remains a major concern for India as the many efforts made to normalise ties with Pakistan have not yielded any results.
- The two biggest challenges facing India today are Pakistan and China.
- Other geo-political challenges to India include the uncertainty around the incoming Donald Trump-led US administration’s policies vis-a-vis China, Pakistan and India.
- The present crisis has the potential to stall the relations in Trade, Commerce, media, films, people to people contact, etc. in future.

5) **Way Forward**
- It is time to define the nature and scope of our conflict with Pakistan.
- As the dominant power in South Asia and one of the world’s leading democracies, India must find a proper answer to what could otherwise become a serious existential crisis.
- Imposing economic and political sanctions on Pakistan and asking the world to follow suit.
- Creating International pressure on Pakistan to curb state sponsored terror.
- India need to establish a national security doctrine in order to deal with all security issues.
- There is a strong need for India to change its approach from Responsive to Proactive.
General Studies – 3; Topic: Indian economic growth and development

Sustaining India’s Growth Momentum

1) **Introduction**
   - The Indian economy is expanding at a fast pace, boosting living standards and reducing poverty nationwide.
   - Further reforms are now necessary to maintain strong growth and ensure that all Indians benefit from it, according to a new report from the OECD.
   - Maintaining the reform momentum will be critical to boosting investment and creating the quality jobs.

2) **Recent Reports**
   - IMF and OECD conclude that Indian economic growth is robust, propelled by consumption demand and accelerated structural reforms.
   - India’s economy will remain on a strong growth path aided by robust consumer demand, and higher agricultural output driven by a good summer monsoon, says a new Asian Development Bank (ADB) study.
   - India’s recent growth rate of more than 7 percent annually is the strongest among G-20 countries.

3) **Positives**
   - Continued fiscal consolidation
   - A modest current account deficit
   - Subdued inflation
   - Enhanced public and private consumption
   - Declining debt-to-GDP ratio
   - The ease of doing business in India has improved.
   - States are given more freedom and incentives to tailor public policies to local circumstances.

4) **Downside risks**
   - Sharp increases in commodity prices, particularly oil
   - A sudden global slowdown impacting remittances and exports
   - Twin balance sheet problem of both corporates and banks as highlighted in the Economic Survey
   - Inequality in income and in access to core public services between states and between rural and urban areas is currently large across India
   - Low tax to GDP ratio and non tax compliance

5) **Concerns**
   - OECD’s survey raises concerns about India’s large interest payments due to the high levels of public debt as compared to other emerging economies.
   - Although India does not face a challenge with respect to labour supply, the quality of labour has become a big concern
   - Current weakness in investment demand, has emerged as a major challenge for sustaining growth momentum

6) **How to Sustain Growth Momentum**
   - Digitisation
a) Digitisation and reducing dependence on cash transactions will accelerate the pace of financial inclusion and formalisation of the informal economy.
b) GST (Goods and Services Tax) regime and move towards formalisation of the economy using technology would reduce disparities.

- **Public Expenditure**
  a) Improving the quality of public expenditure than enhancing budgetary outlays

- **Governance**
  a) Move to rule-based management of the economy as described by OECD’s Economic Survey and the IMF’s report. The constitution of the Monetary Policy Committee, GST Council, Banks Board Bureau, are robust examples.
  b) Continuing efforts to improve universal access to core public services is essential.

- **Banking Reforms**
  a) Centralised Public Sector Asset Rehabilitation Agency (PARA) represents a systemic solution to the ailments of the banking sector.
  b) Constitution of a Banking Council to facilitate a dialogue with political parties and stake holders

- **Devolution**
  a) Local government entities need greater empowerment beyond the enhanced devolution of resources based on the recommendation of 14th Finance Commission.
  b) Enabling local bodies to impose and realise property taxes and other levies would strengthen their financial viability.

- **Labour Reforms**
  a) If India has to achieve a GDP growth of nine per cent, it will have to raise its labour productivity growth by 73.8 per cent over the rate achieved in FY15.
  b) Sharing of best practices, particularly labour regulations and land laws between states could add to the reform momentum.
  c) Creation of more jobs in manufacturing sector especially in labour intensive industries like apparels and leather industry will help increase exports.

- **Poverty Reduction**
  a) Priority areas for future action, including continuing plans to maintain macroeconomic stability and further reduce poverty
  b) Raising living standard in poorer states will require increasing productivity in the agricultural sector.

- **Tax Reform**
  a) A comprehensive tax reform could help raise revenue to finance much needed social and physical infrastructure and promote corporate investment

- **Infrastructure**
  a) Better urban infrastructure will be needed to fully exploit cities’ potential for job creation

7) **Conclusion**
- The future may look bright but pursuing and deepening structural reforms is the way forward.
- Albert Einstein once said, “We cannot solve our problems with the same thinking we used when we created them.”
General Studies – 3; Topic: Government budgeting; Conservation

Budgetary Approach to Environmental Protection

1) Introduction
   • Environmental protection and conservation has been gaining a lot of ground in the recent past with increased levels of pollution and rapid loss of biodiversity
   • A micro-analysis of the Union budget 2017-18 reveals various lacunae in the budgetary allocations for Ministry of Environment forest and Climate change (MoEFCC).

2) Negatives
   • Budgetary approach to environmental protection appears to be as fragmented with attention paid only at the macro-level.
   • Absence of measures to boost alternative energy sources, place curbs on polluting industries and vehicles
   • Funding for renewable energy forms, solar use in rural areas, etc. has been reduced.
   • Meagre budgetary allocation
     a) In light of the increasing challenges faced by environment in India, budgetary allocation to the Ministry of Environment under various heads is inadequate.
     b) Non-utilisation of funds
        a) Under Centrally sponsored schemes (ex: Project Tiger, Project Elephant, Conservation of natural resources & ecosystems etc.) transfers made to the States and UTs remain grossly under-utilised.
        b) Project Tiger has utilised half the funds allocated to it.
        c) Otherwise these funds could have been used for an effective overhaul of several environmental issues.
     c) Arbitrary allocation of funds
        a) Rise and slump in allocations; not based on receipts and expenditure of previous Financial Year
        b) Abrupt cuts in funding of flagship programs such as Project Tiger and National Tiger Conservation Authority (NTCA).
     d) Less focus on priority issues
        a) The issues of forest management, resource conservation, pollution control and wildlife protection are interconnected, but they are treated in isolation
        b) With climate change and increasing air pollution, allocation to the Climate Change Action Plan and Central Pollution Control Board (CPCB) has been slashed
        c) Budget has “refrained” from stepping up allocations towards meeting India’s Nationally Determined Contributions (NDC) commitments on renewable energy, energy efficiency and additional carbon sequestration.

3) Positives
   • The Union Budget has made an allocation of Rs. 2,675.42 crore to the Ministry of Environment, Forest and Climate Change (MoEFCC)
   • An apparent increase by 18.88% from last year.
   • Renaming of ‘Clean Energy Cess’ levied on coal, lignite and peat as ‘Clean Environment Cess’ with an increase in the rate of levy to Rs. 400 per tonne.
   • Coastal zone management and clean energy funds have been increased
• Certain aspects like Solid waste disposal, biodegradable plants at Delhi and Jaipur, improved management of water resources and forestry though higher allocation of MGNREGA

4) **Way Forward**
• Much greater focus is required to reverse both inadequate budgetary allocation for the Ministry of Environment and its under-utilisation
• Adopt sustainable development approaches to economic growth
• Government has the prime responsibility of providing a safe and stable environment for the private sector to create wealth
• Need to make a balance between rapid industrial growth at the cost of ecological health.
• The model law on contract farming, if adopted by the states, can improve the efficiency in the use of land and reduce waste through the agricultural value chain.
• The Government need to address issues related to aggravated environmental stress induced by intensive input, including water use and monoculture
• The target of additional 2.5-3.0 billion tons of carbon sequestration alone will require an annual investment of about Rs 1 lakh crores
• Linking transfer of grants to states with adhering to environmental targets
• To address the problems of disappearing wildlife, deterioration of ecology and habitat destruction, the scientific, sustained and intensive measures of conservation are required.
• A small step in this regard would be to acknowledge the role of the environment in budgetary allocations and ensure rational dedication of funds.
Demonetisation Scheme

1) Introduction

- The demonetization of Rs 500 and 1000 notes announced on 8 Nov is a key part of the overall battle against corruption, black money and fake currency.

- Historically, demonetisations have been resorted to during hyperinflation, as in Weimar Germany, or periods when windfall profits were made, as in British India during World War II.

- The U.S. stopped issuing $500 notes in 1969, the European Central Bank halted 500-euro notes early this year, and Singapore killed its $10,000 note and Canada its $1,000 note in 2000.

- Rs 500 and Rs 1,000 denominations account for over 80% of all currency in circulation by value.

2) The necessity of Demonetisation

- The move was necessary to stop terrorists and drug cartels “in their tracks.”

- It has long been alleged that terrorists and drug cartels from neighbouring countries have been supplying high-value fake currencies into India.

- The security features of the present notes are weak and there is rampant counterfeiting, there is a need to replace these with new notes that have better security features.

- In India, the problem of fake rupee notes has been noticed for many years.

- India has one of the highest cash to GDP ratios at 12 per cent

- Bulk cash transfer plays a role in more complex drug trafficking and money-laundering schemes.

3) Benefits

- This will result in a reduction of inflation as conspicuous consumption will come down.

- eliminate black money and the growing menace of counterfeit currency notes

- move will benefit the poor, middle class and aspirational middle class by increasing opportunity and bringing real estate and higher education within their reach

- The government’s move will benefit companies in the cashless economy.

- There could have been no bigger catalyst for digital economy and for digital wallets in the country

- wider tax-base, better tax compliance, reduced transaction costs and enhanced efficiencies in various supply-chains

- Macroeconomic indicators are likely to improve too as inflation slows, fiscal balances improve and interest rates soften further on the ground.

- In the long-term, benefits of GDP growth will outweigh the short-term transitional impact.
• Tax collection will increase and accordingly more money will be available to the government for development expenses.

• Surge in digital payments will be seen even for small value transactions.

• Banks will stand to gain in long term as they will attract higher deposit (savings) balances and transaction volumes, lower cash handling costs and strengthening of digital payments ecosystem.

• Funding of political parties through black money will minimize and disbursement of cash benefits to weaker sections of society for influencing voter’s decision may also disappear.

• Funding of terrorist activities including Maoist movements, and Criminalization in politics will also fade gradually.

• Internationally, the country’s index of black money free economy will increase.

• Commodity price fluctuations will be controlled or minimized.

• The international image of the country in terms of FDI, collaboration, investments etc will increase.

• The parking areas of black money like property, gold, bullion, etc will be discouraged and consequently the related business will see sea change in their overall segment.

• An honest businessman who was always struggling with tax evaders engaged in undercutting of prices will now have a level playing field.

4) Impact on Real Estate Sector

• Real estate prices would come down in the short to medium-term as land would become cheaper, say experts

• Land transactions and luxury residential segment would be impacted the most because they employ the maximum black money.

• Land transactions are mostly done in cash. This will put an end to it.

• On a long-term basis government’s decision to curb black money would reduce corruption and bring transparency into the sector.

• bringing down land prices and would thus be beneficial to the organised construction sector

• The demonetisation, coupled with the passing of the Real Estate Regulatory Act, would weed out the black money elements from the real estate sector

5) Demonetisation will hit terror financing hard

• As per a study done by the Indian Statistical Institute, Kolkata, in 2015, at any given point of time Rs. 400 crore worth fake notes were in circulation in the economy.

• Officials in the security establishment expect that crimes like terror financing would be severely hit by the move.
• The fake notes can be detected only when they enter the banking system. If it is in circulation in the open market, then it’s hard to calculate the number

• demonetisation would impact the terror financing, particularly in Jammu and Kashmir

• The terror funding module in place right now, will be affected as the terrorist operatives always store money in the form of big currency notes

6) Short-term pain, long-term benefits

• there will be some contraction in money supply and thus a slight deflationary impact, which will cause some inconvenience in the very short term

• In the longer term, it will lead to a greater proportion of the economy shifting from black to white.

• It may also raise permanently the cost of holding cash by adding a risk premium.

• This may encourage people to take the certainty of paying taxes in lieu of the uncertainty of holding black cash.

• The incentives for honesty have been improved, dramatically, with this reform measure

7) Moving towards Cashless economy

• RBI has been goading people to use electronic modes of payments.

• Such usage will alleviate pressure on the physical currency and also enhance the experience of living in the digital world

• There is mounting interest in electronic payment mechanisms, with mobile payment firms Paytm, Ola Money and Mobikwik reporting increased downloads of their apps.

• India is largely using its plastic cards to withdraw cash, which it spends later

• Mobile wallets which offer ease of transaction to customers are still in the starting phase of adoption as only around one-fifth of India’s population has a Smartphone where these services can be used.

• Unified Payments Interface (UPI) is yet to fully take off

• Only about 20-25% of all transactions that happen in India are cashless.

• With this demonetization drive, we should see this rising and people opting for mobile wallets more

• The infrastructure for acceptance is still an issue that needs to be overcome.

• Another factor that works against cashless transactions is the perceived security problems.

8) Concerns

• If unaccounted money by Indians is held in the form of foreign bank accounts, the present scheme can do nothing about it.
• As long as agricultural income can be used as a route to avoid taxes and indirect tax rates have multiple rates and exemptions, the problem of tax evasion is unlikely to go away.

• On the negative side, the disruption in transactions could hit the emerging growth of consumer demand.

• The impact on the economy of sharp monetary contraction is evident, and the greatest sufferers are the rural population, and the urban poor and middle class.

• The first impact is on the supply chain of goods and services which is disrupted, and this is then feeding back to impact production.

• Traders and retailers have been deprived of the funds to carry on their business

• With the severe loss of purchasing power, the country is being driven into an artificially created recession and the level of economic activity is declining.

9) **Need for Further Action**

• we would need a policy that checks the generation of black incomes at source

• Central government should step in and legislate that all transactions in gold and property go through banks.

• The government should take steps to increase mobile penetration, pre-bundled with cash apps, which will make it easier for those who wish to go digital.
General Studies – 3; Topic: Infrastructure

Infrastructure investments

1) Introduction
   • Infrastructure sector is a key driver for the Indian economy.
   • In our bid as emerging economy graduating into developed economy category, infrastructure is extremely vital for a country with a large population like India.
   • India is the fastest-growing large economy in the world, and the government has set itself a target of investing $377 billion in infrastructure over the next three years.
   • However, Infrastructure is an economic enabler, not a panacea.

2) Global Scenario
   • Infrastructure gaps are an urgent problem all over the world.
   • Initiatives adopted in the aftermath of the 2008 global financial crisis are beginning to promote infrastructure investment.
   • There is greater push for infrastructure investment in emerging economies—especially China, which is pursuing projects both at home and abroad.
   • US economy is suffering from dilapidated infrastructure, and is looking for greater investment in renovating and upgrading the country’s infrastructure.
   • Transportation will quadruple by 2035 in sub-Saharan Africa, India, China and other emerging Asian countries.

3) Indian Scenario
   • India needs over $1.5 trillion in investment in the next 10 years to bridge infrastructure gap
   • The government intends to connect seven hundred thousand villages with roads by 2019 as part of a massive modernisation plan
   • The rural sanitation programme is part of India's current infrastructure programme.
   • The government is seeking private sector participation in converting railway stations into commercial hubs.
   • The government plans to build more airports, sea ports and generate more power, particularly renewable energy

4) Benefits
   • Infrastructure investment can revive flagging economies by galvanizing private-sector activity and fostering economic growth.
   • Infrastructure development will generate growth, employment, pull up number people out of poverty.
   • Developing Renewable Energy sector will help in mitigating climate change.
   • Infrastructure development will benefit Government's Ease of Doing Business

5) 2017 Budget Provisions
   • Government to invest almost Rs4 trillion in the next fiscal in creating and upgrading infrastructure;
   • This is part of the new integrated infrastructure planning paradigm comprising roads, railways, waterways and civil aviation
   • Investment in areas like affordable housing to roads and railways would have a multiplier impact on other sectors of the economy, enhance employment generation and make the growth inclusive.
6) **Government Initiatives**
- The Government of India is planning to boost regional connectivity by setting up 50 new airports.
- Government of India plans to use the new hybrid-annuity model for allocating contracts under PPP projects in highways, Namami Ganga and Railway Projects.
- Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities Mission for developing urban infrastructure.
- National Infrastructure Investment Fund (NIFF) with an initial corpus of at least Rs 40,000 crore.
- The National Waterways Bill, 2015—a central legislation to declare 106 additional inland waterways, as the national waterways.
- 100 per cent foreign direct investment (FDI) under automatic route in the construction development sector.

7) **Concerns / Challenges**
- Public infrastructure spending when done poorly can lead to corruption and waste of tax payer’s money.
- Dispute resolution and land-acquisition processes are other long-standing issues in India.
- Delayed environment clearances continue to stall projects.
- Funding is another major roadblock in the implementation of infrastructure projects.

8) **Solution**
- To reap the benefits of infrastructure investments, strengthen institutional frameworks for procurement.
- Properly executed infrastructure investment requires details of a project’s selection, design, and implementation be closely managed.
- The keys to success are not just professional skill and technocratic expertise. They are also transparency and a free press.
- **Transportation**
  a) Transportation networks in emerging economies will have to expand vastly to keep up with this growing demand.
  b) While advanced economies already have extensive transportation infrastructure, their networks urgently need renovation and repair.
- Sufficient financing for infrastructure by expanding the role of the private sector; pension funds and life insurance companies.
- To attract private investors, governments will need to maintain a stable regulatory environment that is free from arbitrary interference.
- Governments will need to foster a culture of transparency to ensure that financing is put to productive use.
- Tenders and key contract features should be routinely published, and good record-keeping and quality control must be maintained throughout the process.
- **Green Infrastructure**
  a) The world will benefit even more if investments in emerging countries are steered towards green-infrastructure projects.
  b) Advanced countries can support green-technology research and development by providing financial incentives for climate-friendly infrastructure investment.
c) Green bonds can provide a long-term source of debt capital for renewable infrastructure projects.

- When public finances are put into infrastructure investments, we can attract private funds
General Studies – 3; Topic: Agriculture

Contract farming in India

1) Introduction
   - Contract farming, a system of contractual production of agricultural raw produce by the farmer for procurement by private companies who process and sell it further
   - It entered the Indian agricultural scenario in a big way in the early 2000s.
   - Recognising the potential and benefits of contract farming arrangements in the agriculture sector, NABARD took the important initiative of supporting such arrangements

2) Advantages
   - Growers stand to benefit from farm extension programmes of agro-processors
   - Lifting of farmer's entire production by processing units at fair and remunerative prices will be a step to doubling their income.
   - Since the factories will be next to clusters of farms, wastages, now between 35 and 40 per cent, will be very largely eliminated
   - Contract farming will usher the best agri practices from different parts of the world, from Israel to the US
   - This will free growers from middlemen and moneylenders.
   - Rural women, instead of being employed as farm labourers will work in sorting and grading of fruits and vegetables, adding value to the produce.
   - Encourage the new generation to take to farming instead of migrating to cities
   - Farmers will have a guaranteed price and also have access to quality inputs.

3) Need for a model law on contract farming
   - Financial incentivisation of farming through private investment is recognised as a need to support India’s largely stagnant agricultural sector
   - The present contract farming framework available in the country only covers marketing of produce
   - A model law is needed to streamline the system and make it more uniform across states.
   - For addressing the dependency that farmers can develop on the private parties for seeds and farm equipment
   - Idea behind the separate law is to ensure that APMCs themselves do not become arbitrators on contract farming
   - An integrated approach to re-energise farming activity in rural areas and also double farmers income.
   - To attract large investments from within and outside the country in agro-processing units

4) Success Stories of Contract farming in India
   - There are few success stories on contract farming such as Pepsico India in Madhya Pradesh and Andhra Pradesh which helped the growers in realization of better returns for their produce.
   - Amul and National Dairy Development Board (NDDB) for milk procurement and sugarcane cooperative in Maharashtra

5) Model law on contract farming
   - The finance minister announced that a model law on contract farming would be formulated
• The law could encompass all the agricultural commodities and not restrict itself to only one or two commodities.
• A model law on contract farming is expected to help farmers by virtue of better price realisation and reduction of post-harvest losses.
• The law can effectively merge assured markets for farmers with sustainable agriculture.
• Niti Aayog is preparing a model contract farming law to connect farmers with the food processing industry.
• It would cover farming right from distribution of seeds to marketing of final produce.

6) Criticism
• Contract farming might not be suitable for agriculture in India where the majority of farmers depend on small or marginal landholdings.
• It can also be detrimental by encouraging large monoculture farming.
• Dependency of farmers on companies for seeds and equipment also needs to be looked at.
• High incidence of conflicts in some places between the farmer and the procuring entity on quality/quantity of produce as well as a high risk of post-harvest losses.

7) Way Forward
• Integrate farmers who grow fruits and vegetables with agro processing units for better price realisation and reduction of post-harvest losses.
• The existing trust deficit between millions of growers on one side and politicians, bureaucrats and corporates on the other has to be bridged.
• Facilitate import of varieties / hybrids for contract farmers. Growth will be led by productivity enhancement & market focus.
• Required - a quasi judicial system of contract enforcement.
• Collect no taxes from food processors involved in contract farming. Compel them to invest in lieu in rural infrastructure & farmer upliftment.
• No taxes or duties on import of agri equipment to be used in a registered contract farming program.
• India, given the diverse agro climatic zones, can be a competitive producer of a large number of crops. Contract farming offers one possible solution.
Food and Nutritional Security in India

1) Introduction

- Food security exists when all people, at all times, have physical, social and economic access to safe, nutritious and sufficient food that meets their dietary needs and food preferences for an active and healthy life.

- Article 47 of the Constitution of India states that, “the State shall regard raising the level of nutrition and standard of living of its people”

- Over decades, though there has been reduction in severe acute food insecurity, the under-nutrition and micronutrient deficiencies are widespread.

2) Present status

- National Food Security Act (NFSA), 2013 was to be fully implemented across India by July 2016.

- As of now, only five States have fully executed it as per the provisions of the Central Act and the progress in other States has been tardy.

- Poor quality of food lacking essential micronutrients and no diet diversity, and unhygienic conditions of storage

- AAY households have a greater access to PDS but the problem of undernourishment is more serious among them.

- The expansion and intensification of agriculture, including crops, livestock and forest-based systems, has led to soil degradation and loss of biodiversity, and greatly affecting environmental and human health.

3) The Challenge of Food Security

- The crux of India’s food problem today pertains not so much on increasing food availability or production but with the distribution of food.

- Meeting the demand for food to feed this growing population from scarce land resources is one of the major challenges of the new century—a fact that was highlighted in World Food Day.

- Estimates show that each one degree rise in temperature will cause grain yields to decline by 5%, posing a serious threat to food security.

- Rising levels of atmospheric carbon can influence the growth and productivity of agricultural crops.

- The soil-plant/crop-atmosphere continuum poses serious challenges under changing climate scenarios with reference to scale, scope and magnitude.

- According to the IPCC, reduction in the quality of soil, compounded by climate change, will lead to a worldwide decline in agricultural production, thereby threatening food security.

- In the next 25 years, land degradation and desertification may lead to a decline in global food production by up to 12 per cent, which might trigger a rise in food price by 30 per cent.
4) **Food security in India can be achieved by**

- Guarantee coverage of farmlands with crop insurance
- Ensure procurement of produce at the right time with minimum support price (MSP) for rice and wheat
- Include minor millets and promote the same through the public distribution system
- Restructure the entire Food Corporation of India by efficient management and enlarged storage capacity so that precious food grains are not left to rot in the open and sold as cattle feed at half the price
- Encourage urban agriculture using biodegradable municipal solid waste to grow rice and vegetables near urban centres to reduce transportation cost.
- Example: Produce from East Kolkata Wastelands covering 1,200 hectares provides 25-35 per cent of fish and vegetables at affordable prices
- Promote salt-tolerant rice varieties in coastal regions
- Promote sustainable agriculture under the National Action Plan on Climate Change through organic farming using farmers’ seeds

5) **The Odisha study**

- Better accessibility to food and hence energy intake of poor people, especially those under AAY, has been made possible due to concerted efforts initiated by the government.
- Abolition of private procurement and storage system, and a greater role for public agencies in controlling diversion of food grain from the godown to the millers
- proper recording of procurement, storage and distribution of grains across the departments
- distribution of food through self-help groups and gram panchayats and its regular monitoring at the block and ward levels
- The efforts of the State government in ensuring food security should be replicated in States that are yet to fully implement the National Food Security Act and reform their respective distribution systems.

6) **Pulses and Nutrition**

- Pulses, because of their role in improving sustainability, notably through soil management, also impact food security.
- Pulses are part of a healthy, balanced diet and have been shown to have an important role in preventing illnesses such as cancer, diabetes and heart disease.
- In addition to contributing to a healthy, balanced diet, pulses nutritional qualities make them particularly helpful in the fight against some non-communicable diseases.
• The WHO estimates that up to 80% of heart disease, stroke, and type 2 diabetes and over a third of cancers could be prevented by promoting better eating habits, of which pulses are an essential component.

• Encouraging awareness of the nutritional value of pulses can help consumers adopt healthier diets.

7) **Role of Government in Food Security**

• The country has adopted multi-sectoral, multipronged strategy to combat these problems and to improve the nutritional status of the population.

• Over the years, there has been improvement in access to food through the PDS.

• The ICDS programme aimed at providing food supplementation for pre-school children, pregnant and lactating women.

• The Mid-day-meal programme aimed at improving the dietary intake of primary school children and reduction in the school dropout rates has been operationalised.

• National programmes for tackling anaemia, iodine deficiency disorders and Vitamin-A deficiency are being implemented.

• The Soil Health Card scheme of the government is a laudable effort that has reached out to approximately 30 million farmers to improve agricultural productivity and soil health.

• The Government of India has also initiated a project called the National Initiative on Climate Resilient Agriculture.

• In a step towards universal food fortification to combat malnutrition, the government is planning to make the process mandatory for all staple food items like rice, wheat flour, edible oils and milk sold in the open market.

8) **Solution**

• National Food Security Act (NFSA), 2013 if fully implemented, is likely to benefit 720 million people through availability of 5 kg per capita per month of subsidised food grains. This would ensure food security and enhance nutritional status.

• Provision has been made under the NFSA to provide one additional coarse cereal viz. millet along with wheat and rice, which can further enhance the nutritional security of the poor households.

• Though wheat and rice contribute significantly to energy intake, the time has come to increase our focus on coarse cereals and pulses to improvise adequate intake of protein.

• The States must gear up to work on adequate logistics for digitisation of ration cards, computerisation of off take and delivery of food grains, and effective monitoring of fair price shops, possibly through involvement of communities or other feasible ways.

• FAO places high priority on restoring degraded soils, sustainable management of land and water resources and the promotion of agricultural systems and agro-ecological practices that nurture soil biodiversity.
• FAO promotes the adoption of sustainable agricultural practices tailored to local contexts

• Strategies on agricultural production should focus on sustainable production, enhanced natural resource management, reduced soil emissions, and mitigating the risks of climate change

• In a recently released report on Desertification, Land degradation and Drought, the UNCCD (United Nations Convention to Combat Desertification) observed that food security can’t be achieved without looking into the issue of desertification and land degradation.

• Aquaculture, along with crop production and dairy and livestock farming, has an important role to play in promoting a balanced nutrition.
Palm Oil Cultivation

1) Introduction

- Oil palm crop is one of the highest oil yielding crops among all perennial crops.
- This oil palm is considered as golden palm due to its high yielding capacity.
- In India, oil palm crop provides the excellent substitute of importing the oil.
- In India, oil palm is cultivated in more than 15 states by covering about 50,000 hectares under irrigated conditions and this crop also cultivated under rain fed conditions.
- Major Oil Palm Production States in India:- Andhra Pradesh, Karnataka, Assam, Kerala, Gujarat, Goa, Tamilnadu, Maharashtra, Tripura, West Bengal and some areas of Andaman.
- Indonesia and Malaysia are the two major palm oil producers globally, producing nearly 85 per cent of the global output.

2) Advantages of Oil Palm Cultivation

- Oil palm yields highest edible oil among the other oil crops.
- Farmers can get extra income by intercropping in pre-bearing period of oil palms.
- There is no risk of theft and provides local employment.
- This crop assures monthly income and good market price throughout the year.
- Farmers can expect high returns which results in uplift of economic status.
- Palm oil substitutes import of edible oil by saving valuable foreign exchange.
- Palm is generally the cheapest commodity vegetable oil and also the cheapest oil to produce and refine globally.
- Oil palm is among the most productive and profitable of tropical crops for bio fuel production.

3) India’s Scenario

- India spends over $10 billion on imports of edible oil every year, and this bill is only next to the one incurred on crude oil and gold imports.
- Attempts to increase the area under oilseeds in India have not been very successful, but demand has been rising perennially.
- Imports will continue to rise, going by the current Indian crop scenario.
- Palm oil imports constitute nearly 75 per cent of the total edible oil imports.
- The Government of India has been trying to reduce its dependence on imported edible oils, by encouraging farmers to take up palm cultivation.
• In 1992, the Oil Palm Development Programme (OPDP) was launched.
• This was followed by an “Oil Palm Area Expansion” (OPAE) programme in 2011-12
• The government also allowed 100 per cent FDI in palm oil plantations
• Expansion not easy
  a) lack of large land tracts is a major constraint
  b) A second limitation is the weather. Palm requires humid weather throughout the year.
  c) The harsh Indian summer impacts both crop development and yield.
  d) A third constraint is the lack of infrastructure.
  e) there’s the lack of trained and experienced farmers who can successfully make money out of this crop

4) Oil palm in India’s northeast
• India is pushing for palm cultivation in the north-eastern states of Assam, Mizoram and Arunachal Pradesh to increase production of oil, a commodity that costs the country millions in imports annually.
• While expanding oil palm in India’s northeast will serve the larger purpose of oil security, experts fear that organised plantations may harm biodiversity in the region.
• To reduce its import bill on edible oils, government of India is building capacity for local production.
• Ecology at stake
  a) Oil palm is a long-term monoculture crop, replacing shifting cultivation landscapes with oil palm will definitely be detrimental to biodiversity.
  b) oil palm requires major chemical inputs, that will increase pollution, especially water pollution
  c) oil palm will destroy forests, and is likely to alter social structure and dynamics on tribal communities, enhancing socio-economic inequalities

5) Impacts of the palm oil industry
• Impact on Environment
  a) More and more environmentalists are opposing the rapid expansion of palm plantations at the cost of rainforests
  b) a third of all mammal species in Indonesia are considered to be critically endangered as a consequence of this unsustainable development
  c) Deforestation for palm oil production also contributes significantly to climate change.
  d) The removal of the native forests often involves the burning of invaluable timber and remaining forest undergrowth, emitting immense quantities of smoke into the atmosphere
e) Fertilisers and pesticides pollute groundwater and soils.

f) Large areas of tropical forests and other ecosystems have been cleared to make room for vast monoculture oil palm plantations – destroying critical habitat for many endangered species, including rhinos, elephants and tigers

- **Social impacts**
  
a) Conflict can occur between communities and companies over rights to land.
  
b) Displacement of rural farmers can lead them to move on to new areas of untouched forest to clear land for farming.
  
c) Culturally important sites can often be lost due to the development of plantations.
  
d) Deforestation destroys essential ecosystem services like the provision of clean water and fertile soils, leading to the loss of farming and other livelihood opportunities, such as fishing and hunting for food.
  
e) Uncontrolled burning for plantation expansion can have widespread health and socio-economic impacts.
  
f) The expansion of plantations has lead to the eviction of forest-dwelling peoples.

- **unsustainable production also has potentially negative economic consequences at local and global levels**

6) **Towards sustainability**

- Mapping and monitoring, supported by an appropriate regulatory framework are necessary to achieve sustainable management of oil palm production.

- Analysis of spatial data, including from remote sensing, is a key tool to improve monitoring of legal and sustainable plantations

- protect the tropical forests by designing new strategies that connect forest carbon and bio fuel markets in order to reduce GHG emissions, conserve biodiversity and promote economic growth
**Antibiotic Resistance**

1) **Introduction**
   - The WHO defines antibiotic resistance (AMR) as a condition wherein microbes survive when exposed to the drug which would have normally caused them to die.
   - Antibiotics that once cured ailments across the spectrum are now turning into a potential source of prolonged illness, disability and death.

2) **Reasons for Antibiotic Resistance (ABR)**
   - ABR in certain cases occurs through the natural evolution of resistance in bacterial pathogens
   - The rising consumption of antibiotics is a major contributor.
   - Free movement of ABR across boundaries, with serious consequences.
   - Domestic factors such as a weak public health system, cheap antibiotics available in the market, and their unregulated use, have created ideal conditions for superbugs.
   - Poor regulation of pharmacies and large number of unqualified personnel into the supply chain.
   - Lack of awareness among patients regarding the appropriate use of antibiotics has led to self-medication
   - Non-adherence to the prescribed course of antibiotics, further intensifying the problem.
   - The misuse of high-end antibiotics for treatment of common health conditions gives rise to these bacteria.
   - Other reasons include the use of antibiotics in animals, and environmental factors.

3) **Concerns / Challenges**
   - The absence of a good statistical model to show the relationship between antibiotic consumption and associated resistance makes it difficult to frame usage guidelines for these antibiotics.
   - Absence of any great success even post the Chennai declaration of 2012.
   - WHO has published its first ever list of antibiotic-resistant ‘priority pathogens’ — a catalogue of 12 families of bacteria that pose the greatest threat to human health and most of these 12 superbugs have presence in India.
   - Anti-microbial resistance threatens the effective prevention and treatment of an ever-increasing range of infectious diseases like tuberculosis, malaria, urinary tract infection (UTI) and even HIV.
   - Antibiotic-resistant neonatal infections claim the lives of 60,000 newborn babies each year
   - Many hospitals, nursing homes and family doctors continue to over-prescribe antibiotics, fuelling drug resistant infections
   - Recently an American woman who had travelled to India died of a rare superbug
   - Lack of regulatory provisions for the use of antimicrobial in cattle, chickens and pigs raised for domestic consumption

4) **Government Initiatives**
   - National Programme on Containment of Antimicrobial Resistance was launched under the 12th Five-year Plan.
   - The Union health ministry is set to roll out prescription audits as part of a multi-pronged strategy against anti-microbial resistance (AMR).
• The health ministry, along with WHO, has worked out a national action plan to combat antibiotic resistance.
• The campaign — 'Medicines with the Red Line', which involves packs of certain medicines carrying a 'red line' to differentiate them from other drugs
• Indian Council of Medical Research has issued new national guidelines on the use of Antibiotics.
• Public awareness messages on state-run radio channels cautioning patients against taking antibiotics without a prescription.

5) Battling superbugs with Big Data
• Tackling the superbug problem requires massive data collection and analysis.
• Studies can provide a clearer picture of the prescribed doses of antibiotics and their pattern of use
• Health departments of the Central and state governments must work in coordination with nodal bodies in the technology space to develop an information-sharing grid.
• Data analytics to track the correlation between antibiotic consumption and induced drug resistance
• Access to this online database can help physicians track ABR patterns; predict health outcomes; and prescribe drugs suitable for patient needs.
• Big Data and analytics promise a significant step towards personalized medicine.

6) Way Forward
• Promote research and development of new antibiotics to address the problem of growing global resistance to antimicrobial medicines.
• Digital prescriptions prove to be an apt solution to the menace by enabling right medicine for the right patient in the right amount.
• The ministries of environment, animal husbandry, agriculture and the department of pharmaceuticals should jointly strategise to contain AMR
• The use of bio-enhancers with drugs can also be explored as a solution to solve the problem of drug resistance
• Behavioural change plays an important role, stricter rules, effective enforcement and not mere penalty is the solution.
• Widespread media advocacy and building of public opinion and awareness, where do’s and don’ts are communicated to larger stakeholders.
• A new national policy paradigm is needed which takes into consideration the various viewpoints of different stakeholders; say from the industry, civil society, medical professionals and policy makers
• Research on nano technology and quantum dots to attack these superbugs.
Artificial Intelligence

1) Introduction

- Artificial intelligence is the branch of computer science concerned with making computers behave like humans.
- It is the study of ways in which machines can be made to have sufficient creative reasoning power to perform mental task.
- Examples of problem that falls under the area of Artificial Intelligence include understanding of language, recognising scenes, finding a way to reach an object that is far overhead etc.
- In addition Artificial Intelligence includes expert tasks, such as diagnosing diseases, designing computer system and planning scientific expedition.
- AI can be used in places where you have to take a decision and recommend products.

2) Application of AI

- Heavy Industries & Space
  a) Through AI an entire manufacturing process can be made totally automated, controlled & maintained by computer system.
  c) They carry out dangerous tasks like handling hazardous radioactive materials.
- Finance
  a) Banks use intelligent software application to screen & analyse financial data.
  b) Software that can predict trends in stock market have been created which have been known to beat humans in predictive power.
- Aviation
  a) Air lines use expert system in planes to monitor atmospheric condition & system status.
- Weather Forecast
  a) Neural Network is used for predicting weather condition.
  b) Previous data are fed to a neural network which learns the pattern & uses that knowledge to predict weather pattern.
- Microsoft develops AI to help cancer doctors find the right treatments.
- Google uses machine learning to auto-complete search queries and often accurately predicts what someone is looking for.
• Facebook and Amazon use predictive algorithms to make recommendations based on a user’s reading or purchasing history.

• AI is the central component in self-driving cars—which can now avoid collisions and traffic congestion

• **Banking sector**
  
  a) Banks may look at using AI for enhancing customer experience, security, and risk management
  
  b) Intuitive and personalised customer experience is one of the benefits that AI can provide
  
  c) With the use of AI, banks’ call centre work could get reduced to a certain extent.

• **Repetitive Jobs**
  
  a) Repetitive jobs which are monotonous in nature can be carried out with the help of machine intelligence.
  
  b) Machine intelligence can be employed to carry out dangerous tasks

• **Difficult Exploration**
  
  a) Artificial intelligence and the science of robotics can be put to use in mining and other fuel exploration processes.
  
  b) These complex machines can be used for exploring the ocean floor and hence overcoming the human limitations.

• **Error Reduction**
  
  a) Artificial intelligence helps us in reducing the error and the chance of reaching accuracy with a greater degree of precision is a possibility.
  
  b) Artificial intelligence is applied in various studies such as exploration of space.
  
  c) They are created and acclimatized in such a way that they cannot be modified or get disfigured or breakdown in the hostile environment

3) **political use of Artificial Intelligence**

• Artificial intelligence (AI) system called MogIA was used to predict winner of presidential elections in the United States

• Unveiled in 2004, the system apparently got it right in the last three presidential elections.

• It also predicted that Trump and Hillary Clinton will be the nominees of the Republican and Democratic Parties respectively.

• MogIA’s judgement is based on the analysis of millions of interactions on Facebook, Twitter, Google and YouTube relating to the two candidates.
the fact that the technologies underlying MogIA — the ability to process vast amounts of information in quick time and the capacity of computers to learn and improve their performance from practice — are transformative

These judgements helped campaigns to better deploy time, energy and resources in reaching targeted audiences with the right message.

concern

a) AI is amplifying the negative dimensions of modern political processes and sharpening polarisation by spreading falsehoods, demonising opponents, promoting tensions between different social groups

b) opinion polls created by artificial intelligence can artificially create distorted opinions and can negatively impact candidate chance of winning

4) Disadvantages

• Fourth Industrial Revolution, built around AI, eliminates jobs, both blue and white collar, at a rapid pace

• AI could drive global unemployment to 50%, wiping out middle-class jobs and exacerbating inequality.

• Unlike the industrial revolution, “the AI revolution” will not be a matter of physically powerful machines that outperform human labourers, but rather a contest between human wit and mechanical intelligence and strength.

• In China the question has already affected thousands of jobs, as electronics manufacturers; develop precision robots to replace human workers.

• automation’s effect on unemployment would have huge political consequences

• High Cost:

  a) Creation of artificial intelligence requires huge costs as they are very complex machines. Their repair and maintenance require huge costs.

  b) They have software programs which need frequent up gradation to cater to the needs of the changing environment and the need for the machines to be smarter by the day.

• No Replicating Humans

  a) Intelligence is believed to be a gift of nature. An ethical argument continues, whether human intelligence is to be replicated or not.

  b) Machines do not have any emotions and moral values. They perform what is programmed and cannot make the judgment of right or wrong.

  c) They cannot take decisions if they encounter a situation unfamiliar to them. They either perform incorrectly or breakdown in such situations.

• No Improvement with Experience
a) Unlike humans, artificial intelligence cannot be improved with experience. With time, it can lead to wear and tear.

b) Machines are unable to alter their responses to changing environments.

c) In the world of artificial intelligence, there is nothing like working with a whole heart or passionately.

d) There is no sense of belonging or togetherness or a human touch.

- **No Original Creativity**
  
a) They are no match for the power of thinking that the human brain has or even the originality of a creative mind.

b) The inherent intuitive abilities of the human brain cannot be replicated.

- If the control of machines goes in the wrong hands, it may cause destruction.

- Machines won't think before acting. Thus, they may be programmed to do the wrong things, or for mass destruction.

5) **The Challenges Facing India’s AI Development**

- AI-based applications to date have been driven largely by the private sector and have been focused primarily in consumer goods.

- The emergent scale and implications of the technology make it imperative for policymakers in government to take notice.

- Early lessons of AI success in the United States, China, South Korea, and elsewhere offer public and private funding models for AI research that India should consider.

6) **Recommendations**

- For India to maximally benefit from the AI revolution, it must adopt a deliberate policy to drive AI innovation, adaptation, and proliferation in sectors beyond consumer goods and information technology services.

- Policymakers should make AI a critical component of the prime minister’s flagship Make in India, Skill India, and Digital India programs.

- Offering incentives for manufacturers, creating regional innovation clusters for manufacturing automation and robotics in partnership with universities and start-ups.

- The National Education Policy must make radical recommendations on alternative models of education that would be better suited to an AI-powered economy of the future.

- The government should identify public sector applications like detecting tax fraud, preventing subsidy leakage, and targeting beneficiaries, where current advances in AI could make a significant impact.
India must view machine intelligence as a critical element of its national security strategy and evaluate models of defense research in collaboration with the private sector and universities.
General Studies – 3; Topic: Conservation

Protecting Olive Ridley Sea Turtles

1) Introduction
   - The olive ridley sea turtle, also known as the Pacific ridley sea turtle, is found in warm and tropical waters, primarily in the Pacific and Indian Oceans.
   - They can also be found in warm waters of Atlantic Ocean.
   - Although still abundant compared to other sea turtle species olive ridleys are susceptible to anthropogenic threats.

2) Main Threats
   - Habitat loss and degradation
   - Wildlife trade
   - Collection of eggs and meat for consumption
   - Incidental capture (by catch)
   - Climate change
   - Marine pollution (including oil spills) and debris.
   - Beach erosion and weather

3) Reasons for Decline in population
   - The endangered species was found dead in large numbers after getting trapped in illegal fishing boats and nets
   - Several environmental factors, including chemical factors like salinity of the beach and the sea near the coast
   - There is a corrosive effect of salinity on egg shells
   - The ports being planned along Odisha’s coast line could endanger turtle nesting.
   - Suspicion of the fishing community involved in the illegal trade of turtles
   - Threat from cyclones. ‘Phailin in 2013 and Hud-hud in 2014 significantly contributed to a loss in the breeding grounds.
   - Trawlers come from Thailand and Myanmar and use smaller boats to smuggle turtles

4) Breeding Grounds
   - The olive ridley sea turtle nests at several sites in the western Indian Ocean, Indian subcontinent and Southeast Asia.
   - The single most important breeding area for olive ridleys in the Indian Ocean along the Bay of Bengal is Orissa.
   - The mouth of Rushikulya River is the location of one of the largest mass nesting sites of olive ridley sea turtles in India.
   - A record-breaking mass nesting by 3.8 lakh endangered olive ridley turtles took place at the Rushikulya rookery coast in Ganjam district of Odisha

5) Conservation status
   - The olive ridley is classified as Vulnerable according to the International Union for Conservation of Nature and Natural Resources (IUCN)
   - It is listed in Appendix I of CITES.
These listings were largely responsible for halting the large scale commercial exploitation and trade of olive ridley skins.

The Convention on Migratory Species and the Inter-American Convention for the Protection and Conservation of Sea Turtles have also provided olive ridleys with protection

Preserving the olive ridley sea turtle population is carried out in Chennai and Odisha coast.

6) **Protecting the Turtles**
- Olive ridley turtles feed on invertebrates and may play important roles in both open ocean and coastal ecosystems.
- Local communities should be trained in order to continue a long-term conservation program.
- Educating villagers in coastal regions adjacent to Rushikulya rookery and in schools
- Establishing observation camps near the coasts and protection of the turtles and their eggs during the mass nesting
- Security personnel in speedboats must ensure that the coast is guarded to prevent the entry of illegal trawlers.
- Check on smuggling rings involved in selling the turtles in the international market.
- Reducing by catch and promoting smart fishing.

7) **Role of local community**
- Worldwide, the most successful conservation efforts have been made by local communities.
- Green Light Rural Association (GLRA), a non-profit based in Astaranga in Odisha managed to stall a state government move to acquire land for ports in the fragile nesting area.
- GLRA started a project called “Turtle Friends” to identify strategic sites and fishing communities along the coastline.
- Communities were involved in beach clean-up programs
- Participation by locals not only provides useful hands-on assistance; it gives people a stake in the fate of the animals they spent time trying to help.
**General Studies – 1 Topic: Urbanization – problems and remedies**

**Biomethanation**

1) **Introduction**
   - Biomethanation is a process by which organic material is microbiologically converted under anaerobic conditions to biogas.
   - Microorganisms degrade organic matter via cascades of biochemical conversions to methane and carbon dioxide.
   - Biomethanation has strong potential for the production of energy from organic residues and wastes.

2) **Biomethanation**
   - Biodegradable component of India’s municipal solid waste is currently estimated at a little over 50 per cent.
   - Biomethanation offers a major solution for processing biodegradable waste.
   - Biomethanation process degrades biological or organic compounds to generate biogas and manure.

3) **Uses of Biomethanation**
   - The energy from waste is a crucial element of waste management because it reduces the volume of waste for disposal and also helps in converting the waste into renewable energy and organic manure.
   - Decentralised plants provide a major energy saving from reduced transportation and also generate additional annual revenue from electricity generation besides meeting their own demand for electricity.
   - The gas that is obtained can be used as an alternate fuel for natural gas vehicles or can replace other fossil fuels such as LPG/CNG and diesel.
   - Organic Manure generated by it can be utilised for regenerating soil health & will also provide additional income to municipalities by sale of manure.
   - Reduction in waste volume also reduces land requirements for dumping of wastes.
   - Reduced Greenhouse Gas Emissions - Stopping release of Methane in to the atmosphere per day per plant which is 22 times danger than CO2 for Global Warming.
   - Modular construction of plant and closed treatment needs less land area

4) **Challenges**
   - Energy generation though this process is less economical & efficient.
   - Process requires maintenance which may increase financial burden on municipalities.
   - Segregation of wastes at households is highly neglected practice.
   - Maintaining adequate safety standards is important failing which can lead to dangerous effects because leakage of methane gas will boost global warming
   - It is more capital intensive compared to composting and landfill
   - Not suitable for wastes containing less biodegradable matter.

5) **Waste Management**
   - Ministry of Environment and Forests has notified the new Solid Waste Management Rules, 2016 with clear responsibilities assigned to various classes of consumers.
   - Urban governments should show the political will to rein in bulk generators of municipal solid waste.
• Segregation of waste need to be rigorously enforced.
• Cess funds collected for the Swachh Bharat programme could be deployed to scale up infrastructure for composting, Biomethanation and recycling
• The central monitoring committee under the Ministry of Environment and Forests should ensure that local bodies do not continue functioning in business-as-usual mode.
• The Ministry should also enlist the services of rag pickers under formal systems such as cooperatives.

6) Problems in waste management
• In India, the segregation of waste at source is rare.
• Recycling is mostly with the informal sector, although some municipalities are trying to integrate this sector into their waste management systems.
• More than three-fourths of the municipal budget on solid waste management goes into collection and transportation, which leaves very little for processing/resource recovery and disposal.
• Lack of awareness, in our cities, of the hugely adverse impacts of poor waste disposal on the air we breathe and the water we drink.
• Less than a third of the collected waste is being processed.
• Even where environmentally conscious citizens segregate at source, the chain of management dumps it all in landfills.

7) Need of the Hour
• Segregating municipal solid waste (be it households or commercial establishments) is the first step in ensuring the success of waste-to-energy plants.
• Ensure that the waste goes through the different streams of recycling and resource recovery till the much reduced final residual is deposited scientifically in sanitary landfills.
• Decentralised small-scale Biomethanation cum power generation plants

8) Conclusion
• If India could start with the separation of its ‘wet’ waste from the rest and produce good compost that could transform cities and towns into clean and green havens filled with trees, gardens, lakes and rivers.
• Garbology studies confirm that landfills swallow precious wealth every day. The time has come to recover it.
Role of Agriculture in Delhi Air Pollution

1) Introduction

- Delhi has registered its worst air quality in recent times.
- Pollution in different parts of the capital has touched hazardous levels with potentially serious health effects, especially on children, the elderly and physically vulnerable people.
- Government should take urgent measures to prevent air pollution in order to stem the current impact as well as the future cost of healthcare.

2) Reason for Delhi Air pollution

- Paddy stubble burning in neighbouring Haryana and Punjab is a major reason for affecting air quality in Delhi during the onset of winter.
- Burning of petrol, diesel, coal, wood, dry leaves and of garbage at a waste disposal ground led to pollution in Delhi.
- Burning of crackers can be added to that list as well
- sources of pollution such as road dust, vehicular pollution and open burning
  - exhausts from automobiles, industry and thermal power plants
- Winter is also the time when generally the westerly winds prevail and a giant plume of smoke covers north India.
- Intensive agriculture is also a contributor to greenhouse gases like carbon dioxide, methane and nitrous oxide causing climate change
- Only 20 per cent of the pollution in NCR is accounted for by this outdated farm methods. A whopping 80 per cent of air pollution in the capital is because of sources within the city and NCR.
- Lack of political involvement in solving the pollution crisis and its residents to not compromise on their lifestyle choices.
- The capital has the highest level of high-emission vehicles in the country and it has more cars than it can handle.

3) Reasons for Stubble burning

- Stubble burning is a common practice followed by farmers to prepare the field for sowing of wheat in November as there is little time left between the harvesting of paddy and sowing of wheat.
- Burning of wheat residue is not necessary for the farmers because of the availability of technology and its higher economic value as dry fodder.
- Rice straw, however, is not used as fodder as it is found to be non-palatable to animals due to its high silica content.
Because of its little economic value as animal feed and other general uses, farmers are prompted to burn it on the field instead of incurring a high cost on collecting it.

Even though farmers are aware that the burning of straw is harmful to health, they do not have alternatives for utilising them effectively.

The farmers are ill-equipped to deal with waste because they cannot afford the new technology that is available to handle the waste material.

4) The rice-wheat rotation

- Extensive development of irrigation, assured price and secured market has induced farmers to grow paddy and expand the area of cultivation considerably over time.
- Farmers in this traditionally wheat-growing belt started cultivating rice and wheat in rotation year after year.
- Various studies have shown that the rice-wheat rotation has put land and other resources under severe strain, resulting in depletion of soil nutrients, decline in water table, build-up of pests and diseases, and micronutrient deficiency.
- Crop diversification with vegetables and fruits hit a roadblock due to marketing problems.
- Farmers have been lured into cultivating more and more from their fields mainly because of faulty agriculture policies followed for many decades.
- Organic matter is the life blood of any top soil but in regions of north western India organic carbon content is constantly being depleted at a rapid rate.

5) Solution

- It is important to diagnose and address the fundamental problems that force the farmers to burn the paddy straw on the field and not utilise it for any productive purpose.
- blaming only the farmers may not solve the problem of air pollution and there is a need to find sustainable technological solutions
- The available paddy straw can be effectively used for power generation, which will go a long way towards overcoming the problem of disposal of crop residues and power deficit in the region.
- There is great potential for making investments in paddy straw-based power plants which can help avoid stubble burning to a large extent and also create employment opportunities.
- Incorporation of crop residues in the soil can improve soil moisture and help activate the growth of soil microorganisms for better plant growth.
- suitable machinery for collection, chopping and in situ incorporation of straw is required
- Convert the removed residues into enriched organic manure through composting.
- New opportunities for industrial use — such as extraction of yeast protein — can be explored through scientific research.
• cooperation from the Centre and states to fight pollution

• A comprehensive restructuring of the agricultural economy is required

• Focus on sustainable agriculture and a programme of decentralised waste management.

• Government should prioritise public health and take an active interest in improving farm practices across India.

• A new variety of arhar (pigeon pea) has the potential to be grown in the paddy-growing regions of Punjab, Haryana and Uttar Pradesh and eventually in all of India.

• Most important, arhar straw, unlike paddy straw, is green and can be ploughed back into the soil.

• pulses will use less fertiliser, less water, and fewer emissions, and in addition will replenish the soil with nitrogen unlike paddy which depletes the soil

6) Conclusion

• There is also a need to develop rice varieties that are both rich in grain yield and high in straw quality.

• Use of such dual-purpose rice varieties will help to maintain food security, farm income and improve environmental sustainability.

• The burning of rice stalks affords an opportunity to implement a major shift in policy that can reduce pollution while also promoting indigenous research and science, incentivising pulses production, and rationalising pricing more broadly. Converting crises into opportunities is the hallmark of good public policy.
Impact of Climate Change on Indian Agriculture

1) **Introduction**
   - Climate change is any significant long-term change in the expected patterns of average weather of a region (or the whole Earth) over a significant period of time.
   - Increased anthropogenic activities such as industrialization, urbanization, deforestation, etc. lead to emission of greenhouse gases due to which the rate of climate change is much faster.
   - From ancient times India’s agriculture has been dependent on monsoons. Any change in monsoon trends drastically affects agriculture.

2) **Indian Agriculture**
   - Large country with diverse climate
   - Two thirds area rain dependent
   - High monsoon dependency
   - Diverse seasons, crops and farming systems
   - Close link between climate and water resources
   - Small holdings, poor cropping mechanisms and low penetration of risk management products
   - Agriculture is also contributing a significant share of the greenhouse gas (GHG) emissions that are causing climate change

3) **Weather Impacts on Agriculture**
   - Crops are impacted by rainfall variability and heat stress.
   - Milk yield in livestock to be impacted during heat waves
   - Changes in breeding season in marine fisheries with shift in seasonal catch
   - Significant negative impact on commercial poultry due to heat stress
   - High rainfall leads to greater loss of top soil due to erosion
   - Rise in sea level may lead to loss of farmland by inundation and increasing salinity of groundwater in coastal areas.
   - The major impacts of climate change will be on rain fed or un-irrigated crops, which are cultivated on nearly 60 percent of cropland.
   - Increase in the mean seasonal temperature can reduce the duration of many crops and hence reduce final yield.
   - Climate change has a direct impact on crop evapotranspiration.

4) **Consequences**
   - Higher temperatures and changing precipitation patterns will severely affect the production patterns of different crops.
   - All these changes will increase the vulnerability of the landless and the poor.
   - In many parts of India Farmers committed suicide from stress-related issues arising from the vagaries of monsoon.
   - The World Bank report warned that by the 2040s, India would see a significant reduction in crop yields because of extreme heat.
   - Depleting water availability due to changes in precipitation levels and falling groundwater tables
• Water for agricultural production in the river basins of the Indus, the Ganges, and the Brahmaputra will shrink further and may impact food adequacy for 63 million people.

5) **Government Initiatives**
- Subsidies for micro-irrigation
- Drought Prone Areas Programme and the Desert Development Programme
- National watershed development project for rain fed areas
- The present government has brought all watershed management programmes under the ambit of the Pradhan Mantri Krishi Sinchai Yojana (PMKSY).
- Pradhan Mantri Fasal Bhima Yojana along with unified package insurance scheme and restructured weather based crop insurance scheme.
- National Mission for Sustainable Agriculture under National Action Plan on Climate Change (NAPCC)

6) **Strategy to Adapt to Climate Change**
- Strategic research to address long term climate change
- Farmers can adapt to climate changes by shifting planting dates, choosing varieties with different growth duration, or changing crop rotations.
- Capacity building of different stakeholders for greater awareness and community action
- Interventions related to soil health, water harvesting, improved drainage in flood prone area, artificial ground water recharge and water saving irrigation methods.
- Drought / temperature tolerant varieties, water saving paddy cultivation methods (SRI, aerobic, direct seeding).
- An Early warning system should be put in place to monitor changes in pest and disease outbreaks.
- Preventive measures for drought that include growing of pulses and oilseeds instead of rice
- Investment in R&D is needed to spur innovations in sustainable climate-friendly and climate-proof productivity, and the private sector can help.
- Financial incentives can encourage farmers to adopt measures that have high costs, or that are socially beneficial but costly at the private level.
- Develop climate-smart agriculture practices
- To cope with the impact of climate change on agriculture and food production, India will need to act at the global, regional, national and local level.
Anti Naxal Strategy

1) Naxal Movement in India

- In its initial stages, the movement had strong ideological moorings, receiving guidance from leaders like Charu Majumdar, Kondapalli Seetharamaiah, Nagabhushan Patnaik and others.
- Over the years, the trajectory of the movement, as also its character, changed and it became more brutal and sanguinary.
- It still maintained a veneer of being true supporters of the poor and the downtrodden, especially the tribal people.
- It did lose some of the support of the urban intelligentsia, but Maoism still resonates with some of the more ideologically oriented elements in universities and colleges.
- In Chhattisgarh, Dantewada, Bastar, Bijapur and Sukma are the main centres of Maoist activity currently.
- Between the first phase of Naxalism (1967 to 1972) and today’s Maoist movement, vast changes have occurred in the taxonomy of Naxalism.
- Today, it has metamorphosed into a highly rigid and militaristic movement, more intent on terrorising segments of population than on supporting people’s causes.
- Recently the Communist Party of India (Maoist) lost around 30 of its cadres in a covert operation jointly organised by the Greyhounds of Andhra Pradesh and the Special Operations Group of Odisha.
- Many claim that it marked the beginning of the end of the Naxalite movement in the country.

2) Factors Responsible for Growth of Naxalism in India

- Political Factors
  a) Emergence of the movement coincided with the formation of the first United Front Government in West Bengal (1967) with CPI (M) as its main constituent.
  b) The movement was influenced with the political ideology of Chinese Communist Party and Mao Zedong.
  c) They used slogans such as “China’s path is our path; China’s Chairman is our Chairman”. However, this ideological inclination to China faded away later.
  d) The Naxalbari movement began as an armed peasants uprising.
  e) The insensitive nature and apathy of the political system towards tribals remained one of the most important factors that led to such uprisings.
  f) inability of the legitimate political authority in India to provide avenues for structural uplift to the deprived sections of society in the affected states.

- Economic factors
a) Problem of poverty and economic inequality and underdevelopment in the naxal affected regions

b) Skewed distribution of land and economic growth.

c) Encroachment of forest lands by and wealth controlled by contractor-politician nexus.

d) Entry of mining companies in Tribal lands and forests, posing threat to the livelihood of the tribals.

e) Indigenous tribal population deprived of their lands, uprooted from their traditional source of livelihood.

f) The benefits of the resource exploitation are not passed on the tribals.

3) Government's approach

- The Government’s approach is to deal with Left Wing Extremism in a holistic manner, in the areas of security, development, ensuring rights and entitlements of local communities, improvement in governance and public perception management.

- an integrated approach aimed at the relatively more affected areas would deliver results

- 'Police' and 'Public Order' being State subjects, action on maintenance of law and order lies primarily in the domain of the State Governments.

- Role of Central Government

a) providing Central Armed Police Forces (CAPFs) and Commando Battalions for Resolute Action (CoBRA)

b) sanction of India Reserve (IR) battalions, setting up of Counter Insurgency and Anti Terrorism (CIAT) schools

c) Modernisation and Upgradation of the State Police and their Intelligence apparatus under the Scheme for Modernization of State Police Forces (MPF scheme)

d) re-imbursement of security related expenditure under the Security Related Expenditure (SRE) Scheme

e) filling up critical infrastructure gaps under the Scheme for Special Infrastructure in Left Wing Extremism affected States

f) assistance in training of State Police through the Ministry of Defence

g) assistance in community policing and civic action programmes

- a new multi-pronged ‘National Policy and Action Plan to address Left Wing Extremism’, aimed at eliminating the menace in the shortest possible timeframe

- In a move to curb Naxal menace, the new anti-left-wing extremism (LWE) policy has proposed to enhance the deployment of central forces in the Naxal infested areas in the state.
4) **Left Wing Extremism (LWE) Division**

- The LWE Division of Ministry of Home Affairs implements security related schemes aimed at capacity building in the LWE affected States.
- The Division also monitors the LWE situation and counter-measures being taken by the affected States.
- The States of Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh and Uttar Pradesh are considered LWE affected, although in varying degrees.

5) **Ways to end Naxalism in India**

- **Good governance**
  
  a) The presence of Naxals in the country also reveals the loopholes in the law and order of the country which has failed to curb the menace.
  
  b) Central government needs to implement a coherent national strategy to end Naxalism.

- **Dialogue**
  
  a) Dialogues between the Naxal leaders, and the government officials can be a way work out a solution.
  
  b) The government should initiate sincere dialogue with Naxalites.

- **Generate more employment and increase wages**
  
  a) Insecure livelihood and unemployment in the areas have left the people with no option but to join the Naxals.
  
  b) If we are actually thinking of ways to end Naxalism, we’ll first have to provide the people of the area with proper employment opportunities with increased wages.

- **rehabilitation and resettlement**
  
  a) mining grounds, irrigation areas, industries, etc., in the area without any provision for the resettlement of the displaced people has only added to the woes of the poor
  
  b) There needs to be more emphasis on rehabilitation of these affected population

- **prevent environmental degradation**
  
  a) Environmental degradation in the form of destruction of land and water resources due to mining and industrial activates
  
  b) The locals are left with disrupted lives and adversely affecting tourism

- **Stop the political marginalization of weaker sections**
  
  a) Weaker sections of the society, the schedule casts and schedule tribes still face discrimination from the upper class.
b) These downtrodden sections don’t enjoy equal participation in casting and contesting politically, making them soft targets of Naxals.

- **Remove disparity**
  a) Economic disparity and the growing distance between rich and the poor is one of the main problems that has contributed to the growth of Naxalism
  b) This distance needs to be filled to an extent hastily to stop Naxalism

- **Let ordinary citizens have access to basic resources**
  a) One of the major reasons for unrest is the exploitation of forest and lands of the tribal people for industrial purposes.
  b) The loss of land and the lack of basic facilities like education, freedom, sanitation and food

- **Take steps for welfare of the tribals**
  a) The socially backward tribals form the major support base for Naxalites because of inequality, illiteracy and lack of opportunities.
  b) It’s important to prevent these people from falling in the Naxal trap.

- **Modernize law enforcement agencies**
  a) The major policing lies in the hands of the state governments.
  b) At federal level, many agencies are under the command of Union Ministry of Home Affairs.
  c) Central government must inroads into these disturbed states with their agencies well-equipped with modern artillery and assist the usually poorly-equipped agencies of the state.

6) **Need of the Hour**

- Central and State governments, the administration and the security establishment need to recognise that the movement cannot be approached from a purely law and order point of view.

- The process of improving the conditions of the poor and the tribals clearly need to be speeded up if the movement is to be effectively checked.

- Winning the hearts and minds of the tribal population and other marginalised groups will lie at the core of the counter-insurgency strategy,

- Development of road and rail infrastructure will not only enhance economic growth and development but will also help in countering Maoist propaganda

- The improved road connectivity will also have a multiplier effect on the effectiveness of the security forces in carrying out operations.

- Providing incentives and alternate life support system to those surrendered

7) **Conclusion**
• Through a holistic approach focussing on development and security related interventions, the LWE problem can be successfully tackled.

• Civil society and the media should build pressure on the Maoists to eschew violence, join the mainstream and recognise the fact that the socio-economic and political dynamics and aspirations of 21st Century India are far removed from the Maoist world-view.

• An ideology based on violence and annihilation is doomed to fail in a democracy which offers legitimate forums of grievance redressal.