

2015

General Studies Paper-3: Insights Secure Compilation December 2015

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Topic: *Indian economy – resource mobilization*

1Q. Singapore has replaced Mauritius as the top source of foreign direct investment (FDI) into India during the first half of the current financial year. Examine why. Also explain why these small nations contribute more FDI to India compared to large economies such as China and USA. (200 Words)

Singapore and Mauritius are top sources of FDI in India. However, recently Singapore replaced Mauritius to become the topmost source of FDI. Such a happening took place because of the following reasons:

- 1) India and Singapore inserted “Limitation of Benefits” clause in Double Tax Avoidance Agreement to ensure that benefits are extended only to foreign investors based in India. This move brought certainty and reduced chances of litigation
- 2) Since the Vodafone Tax case where money was routed through Vodafone Mauritius, the Ministry of Finance is closely monitoring the flow of funds from Mauritius

There is no one to one relation between small size of countries and high investment in India. This phenomenon is taking place because of the following reasons:

- 1) Mauritius and Singapore are tax havens and have signed DTAA with India which allow investors to make investments at very low transaction cost
- 2) Certain other countries are also falsely availing the benefits of such agreements, a phenomenon known as treat shopping
- 3) Black money is also brought back into India through this route to show it as white money-round tripping
- 4) Geographical proximity of Singapore and Mauritius
- 5) Long historical ties with India
- 6) Big countries like China and USA do not prefer India because of tough business environment
- 7) USA invests in “outsourcing” services which doesn’t require much investments as compared to a full-fledged company

2Q. “The recent gold bond scheme and gold monetization scheme can help deepen the financial sector.” Discuss. (200 Words)

The share of financial savings in the total savings in India has reduced from 51% in 2008 to 30% at present. This means that majority of savings in India are non financial savings that can not be easily liquefied and are non productive.

Also in the last 10 years India's gold imports have amounted to around 176 billion dollars. This has led to a considerable spending of foreign exchange which could have been used for other productive purposes.

The recently launched gold monetization scheme can help to deepen the financial sector in the following ways-

Under the Gold Monetization scheme, the gold mobilized by the banks from the holders of the scheme can be used for-

- a. Fulfilling the CRR/SLR requirements which free up the capital which can be lend to the industries.
- b. Generate foreign currency by selling the gold and lend it to exporters/importers.

- c. Buying and selling on domestic commodity exchange.
 - d. Lending to the jewellers and thus reducing dependence on imported gold.
- Thus, this will bring 20000 tonnes of idle gold into the financial system.

The gold bond scheme will help to reduce the import of gold by reducing the demand for physical gold. Under this scheme sovereign gold bond linked to the price of gold will be issued on payment of money. This will provide an attractive investment option to the consumers who buy gold for investment purposes as it will also return a nominal rate of interest along with the face value of gold on maturity. Thus, this will help to save the precious foreign exchange earnings of India.

3Q. Do you think it is the shortage of money that causes most interventions such as infrastructure and social sector schemes to fail? In the light of recent developments, critically comment. (200 Words)

The success of infrastructure projects and social security schemes has relatively been poor and in this regard it is pertinent to explore whether availability of finance or some other roadblocks hinder their progress.

Money crunch can be said as the major problem because:

- 1) Post 2008 crisis, developers of infrastructure projects defaulted in re-payment of loans which lead to rise in bad assets in banking system. Banks have grown weary from that time to extend any finance to such infrastructure projects
- 2) Government has reduced the funding for social sector schemes under Union budget
- 3) The number of central schemes has been reduced and the onus lies on state government to implement now but the latter themselves face finance crunch

However, shortage of finance may not be the real reason because:

- 1) Lack of trained administrative personnel who are capable of implementing projects
- 2) Bureaucratic hurdles resulting into red-tape thus delay the implementation in practice
- 3) Corruption and mismanagement of funds hamper effective functioning
- 4) Huge number of government ministries involved in implementation of a single project e.g. NOFN (National Optic Fibre Network) is being managed by telecom, power and railways
- 5) Land and environment clearances
- 6) Protest by NGOs like Green India

In the present scenario, a number of projects like bullet train and smart cities have been initiated. In my opinion, such projects can't become a true success unless efforts are made to introduce a culture of transparency and accountability. Following measures can be taken to ensure their success:

- 1) Empowering local governance to have a grass root involvement
- 2) Introducing Management Information System to ensure that funds are used for the purpose they had been intended for
- 3) Exploring innovative finance mechanisms like Municipal Bond
- 4) Using Big Data analytics to judge the success of social security measures

The infrastructure and social security schemes have the potential to propel economic growth and help realize better future generations and thus should be implemented on a fast-track basis.

4Q. What do you understand by Money Bill? Recently Bankruptcy Bill was introduced in Lok Sabha as a money Bill. Examine the important features of this Bill and its benefits for Indian economy. (200 Words)

A money bill is defined as a bill which consists of provisions dealing with matters mentioned under Clauses (a) to (g) of Art 110 of the Constitution. Additionally, the Speaker of Lok Sabha is the final authority to determine whether a bill is money bill or not.

The salient features of the Bankruptcy Bill as based on the Vishwanathan Committee Report are –

1. Create a specialized class of insolvency professionals to assist companies through bankruptcy process
2. Time bound insolvency resolution with proposal for dealing with applications within 180 days
3. Greater voice to creditors by allowing insolvency resolution process to be executed if 75% of creditors approve
4. Will subsume numerous provisions which currently deal with bankruptcy like Presidency Town Insolvency Act, Provincial Insolvency Act etc.

The possible benefits which the Indian economy can accrue are –

1. Improve ease of doing business vis-à-vis OECD countries –
 - (i) Improve the average time taken for resolving insolvencies
 - (ii) Improve the recovery rate to ensure greater creditor confidence
2. Improve the insolvency resolution process –
 - (i) Reducing delays which are often associated with court/tribunals
 - (ii) Efficient corporate rescue and liquidation regime
3. Protection of the rights of borrowers and lenders –
 - (i) Clarify the risks associated with borrowing and lending
 - (ii) Make the collection of debt through bankruptcy proceedings attractive instead of court cases/illegal means

5Q> “The essential hope of the early 2000s – that fiscal responsibility could be assured through legislation – remains unfulfilled.” Examine the challenges that India is facing in fiscal consolidation. (200 Words)

Since 2000s, the FRBM Act is working a guiding principle for fiscal consolidation. It has laid down the target of bringing down the fiscal deficit to 3 per cent of the GDP and eliminating the revenue deficit by 2008-9. But except 2007-8, the stipulated targets were not satisfactory and in 2012 the FRMB act was amended to bring the revenue deficit within the 2% limit.

There are certain impediments which acts as a hindrance in fiscal consolidation:

- a) The delays in implementation and poor management leads to cost and time overruns, impacting likely benefits accruing from capital investments in the form of higher per capita income and increased revenues of the governments.
- b) Disinvestment receipts have fallen short of the estimates, mainly due to the highly uncertain conditions prevailing in the financial markets.

c) There is a steady increase in expansionary measures, like the universalisation of MGNREGA, which creates an environment of fiscal imbalance and populist mechanisms works as the last nail in the coffin.

d) The Government of India is unable to address the issue of Non Performing Assets(NPA) or bad loans which further increases the burden on fiscal management.

c) The decline in the tax-GDP ratio has been accompanied by a decline in non-tax revenues and fluctuation in non-debt capital receipts as a percentage of GDP, over the same period.

The problem should be tackled with appropriate rules complemented with institutional reforms. Rationalisation of tax structures on the direct taxes side and implementation of GST on the indirect taxes side would help in enhancing revenue receipts of the Government. A balanced strategy rather than blind adherence to irrational rules in the face of patent output gap would be conducive to both growth as well as fiscal correction.

6Q. Discuss the merits of government's decision to bar taxpayers earning more than Rs 10 lakh per annum from availing of subsidy on LPG cylinder sales. (200 Words)

Government has finally changed its status quo of voluntary "Give it up" slogan to mandatorily debarring citizens who have income above 10 lakh per annum to avail LPG subsidy. This is said to be a major step to restructure the overall method of subsidy.

Few merits are:

- 1) Beginning of progressive structure for subsidies.
- 2) Fund saved can be used for other basic necessities of life like Health, Agriculture whose share in Budget has been low.
- 3) Would lead to lesser consumption of LPG & subsequently lesser wastage in households devoid of subsidy.
- 4) Nearly all LPG is through imports, CAD can be expected to go further low.
- 5) Misuse of subsidized cylinders to be stopped.
- 6) Will make the government to think on other subsidies which may also be removed like electricity, etc.

Apart from this, Government should take more steps to reduce the reliance on LPG & switch to cleaner forms of fuels whose funds can be taken from the cash subsidy saved in the new scheme. Creating a team for R&D should now be the immediate step by Government as the LPG prices are not expected to stay low in years to come, and with the growth of GDP along with depreciation of rupee, 10lpa income slab might not be sufficient in years to come

Topic: *Indian economy – growth and development*

1Q> Recently the financial stability report warned of a currency war amid competing central bank policies, and harped on the need for India to carry out crucial reforms amid the uncertainties. What do you understand by currency wars and what reforms India should take in this regard? Examine. (200 Words)

Currency wars are seen as deliberate attempts by countries to devalue their domestic currencies compared to other currencies to promote exports. Competitive devaluation poses a risk for India as it follows the policy of full Current Account Convertibility. Reforms which can be taken by India to address this issue are –

1. Structural –

(i) Unification of CBDT and CBEC as per Shome Committee recommendations to enhance tax collection allowing India to address the issue of ‘twin deficits’ of CAD and Fiscal Deficit

(ii) Quick implementation of the GST bill to provide impetus to manufacturing sector in India and attract foreign investments

2. Procedural –

(i) Speedy resolution of coal block allocation, refinancing banks for loans to steel industries etc.

(ii) Promote domestic consumption of Indian goods by improving rural demand through agricultural reforms(e.g. land reforms)

3. International –

(i) Build up forex reserves to buffer any shocks due to capital outflow

(ii) Promote joint exploration of resources with foreign countries and signing agreements for settling dues in rupees vis-à-vis Iran

4. Immediate measures –

(i) Decreasing the limits on cash outflow limits under Capital Account norms

(ii) Implementing higher import duties on manufactured goods like Steel, electronics etc.

Although, these measures may prevent large-scale volatility in rupee, India’s fundamental macroeconomic conditions have to be strengthened by focusing on technology upgradation, raising per-capita incomes etc.

2Q. If early 1990s heralded business and economic reforms, the early 2000s were crucial in bringing trade, tax and fiscal reforms in India. Critically examine. (200 Words)

The broad macro-economic changes in the spheres of economy and business in 1990s were brought as a result of Liberalization-Privatization-Globalization reforms that seek to scale down the barriers in trade and helped India integrate into the international economy. However, major push to such efforts was provided through the economic reforms in field of trade, tax and fiscal. Some of the major reforms included:

1) Signing of Free Trade Agreements and Comprehensive Economic Partnership Agreement in order to give boost to trade through focus on complementarities

2) Introduction of Value Added Tax and Service Tax in order to remove the cascading

effect and provide better price to producer

3) Enacting Fiscal Responsibility and Budgetary Management Act to aim for a tight fiscal discipline

4) Establishing Competition Commission of India to replace Monopolies and Restrictive Trade Practices Act in order to ensure a level playing field for all

5) Opening up various sectors like telecom, infrastructure and real estate for Foreign Direct Investment

6) Enacting Finance Act, 2001 in order to promote investment through provisions of SEZs and introducing transparency in transfer pricing issues

Thus, early 2000s were particularly important to spur up economic growth through a variety of reforms. The recent deliberation over GST Bill further testifies the fact that such reforms would continue to take place in order to take Indian economy to new heights.

Topic: Inclusive development

1Q. “Too much of financial inclusion push can hurt banking sector.”

Critically comment. (200 Words)

In mixed economy with stated goal of inclusive development, if we start with financial inclusion (FI), our goal becomes easier to achieve. Strong push to PMJDY, initiative by RBIs like payment and small banks etc fit in this context. But somewhere in the process, its being claimed that our banks particularly PSBs is getting hurt.

A simple logic in financial institutions is that they generate profit (& hence sustain) by their financial operations. If we examine PMJDY, we find that :

- > Many accounts which were opened freely are lying dormant
- > PSBs which head most of FI initiatives are not getting adequate compensation
- > Too much pressure adversely affects their efficiency in their normal operations

But at the same time we must examine other side as well :

- > Government is continuously pushing DBT in various sectors. The accounts which are lying dormant now would become comfortable cushion in near future
- > Government has launched Mission Indradhanush, a most comprehensive reform in banking sector since independence thereby solving many of their problems

Hence it can be concluded that, banks must treat driving these initiatives like investment which does hurt in short term but will be profitable in future.

2Q. A Reserve Bank of India (RBI) committee on financial inclusion headed by Deepak Mohanty has suggested that the government should transfer cash directly to persons instead of giving subsidies, and should replace interest subvention on agriculture loans with affordable universal crop insurance scheme. Explain with examples how these recommendations, if implemented, will bring about financial inclusion. (200 Words)

Even after 60 years of independence, a large section of Indian population still remain unbanked. This malaise has led generation of financial instability and pauperism among the lower income group who do not have access to financial products and services. However, in the recent years the government and Reserve Bank of India has been pushing the concept and idea of financial inclusion. One of its branch i.e. direct cash transfer could prosperous masses plus strengthen the banking system too:-

- Plug gaps and leakages in public subsidies and welfare program – e.g. :-
- success in direct cash transfer for LPG reduce the loopholes and seems fit in targeting beneficiaries.
- pilot programme in Rajasthan, Karnataka, Tripura, Orissa and Gujarat successfully implemented DCT to streamlined the fund flow for MNREGA.
- even urea and fertilizer subsidy through DCT help in increasing alternative income of the farmers.

Thus DCT allows victory in three-fold: money must reach beneficiaries on time, in the full amount, and at their doorstep. On the other hand to replace interest subvention scheme with universal crop insurance scheme provided income protection to the farmers by

insuring production and market risks.

- Crop insurance for groundnut in Gujarat, cotton in Maharashtra, sugarcane in Punjab seems highly beneficial during pre sowing/prevented sowing and post harvest losses .

Linkage of JAM trinity with DCT and universal insurance schemes will definitely bring real progress in terms of direct income support to the poor and provide safeguards to economy from external vulnerabilities

Topic: Government Budgeting

1Q. Do you think budget making process in India is a participatory one? Discuss its shortcomings. (200 Words)

The Budget making process is passed through the following four different phases - Formulation of Budget, Budget enactment or approval by the legislature, budget execution, and auditing of the implementation on behalf of the legislatures. All the four stages involve participation of law-makers, industrial big-shots, academicians and economic experts. None of the stages involve even the third tier governance i.e. the local governments of Panchayats for the rural and Municipalities for the urban, public participation being a far-off thought.

The following are the shortcomings of the budget-making process:

- The time required is humongous. Starting from August, the process terminates

only in February end

-- Once passed, the Appropriation Bill cannot be made amendments to. Same goes with the cut, supplementary or reduction tools

-- Generally, the motions are passed in accordance with the majority government or the party that forms the cabinet. The amendments by the oppositions can be neglected.

-- Lack of participation and consultations from the common public. Even federalism goes missing though states get a significant amount of tax allocations to spend upon

-- No impact assessment of any previous budgetary policy takes place with the new budget focusing on new issues and forgetting the previously implemented policies. Post-event auditing can be blamed for the same

Thus, the budget making process, if not completely participatory, has to be made more consultative at least.

Topic: Awareness in biotechnology

1Q. A new technology for gene editing, that is, selectively inserting and removing genes from an organism's DNA, is spreading around the world. Should humans take control of their genetic fate, and rewrite the DNA of future generations? Discuss. (200 Words)

Advancements in the field of Genetic engineering is marvellous and this opens many avenues for treating untreatable diseases and to introduce novel genes to make future generations healthy and disease free. But there should be some limit upto which changes in genetic makeup of an organism is to be done and it becomes more important if we are dealing with human race.

Without any doubt selective addition and removal of genes from DNA makes human population healthy , reduces burden from those families where some diseases are running down generations example Tay sach disease , boon to parents whose child is suffering from life threatning disease Ex Thallesimia , helps to cure many cancers and other metabolic disorders .

But it is completely unfair if we take control of genetic fate of our future generations . This is against nature's law and this will create lot of problems for the coming generations. Baby's whose DNAs are modified according to will of there parents to create perfect baby with all good traits and features of there own choice eg. height , complexion , weight are called Designer babies. This will led to spread of more competition ,more inequalities between rich and poor as only rich people are able to carry out such procedure and poor are denied . It leads to class of superior and inferior persons .

Hence it is desirable not to use this novel technique to shape future generations rather use this procedure to cure diseases and let the future generation takes its own way .

2Q. Write a note on the PRAVDA (Proton Radiotherapy Verification and Dosimetry Applications) project and proton therapy. (200 Words)

PRAVDA is a team of leading instrumentation engineers and scientists, medical, high-energy and nuclear physicists and oncologists from the Universities of Birmingham, Lincoln, Liverpool that are working to develop radiotherapy using proton to get detailed three-dimensional images of a patient's anatomy which was not possible using X-rays (producing two-dimensional images). The team is currently working near Cape Town at the South African National Cyclotron — a type of particle accelerator.

Since proton therapy (PT) is a type of particle therapy that uses a beam of protons to irradiate diseased tissues, most often in the treatment of cancer/tumour; its chief advantage over other types of external beam radiotherapy is that as a charged particle the dose is deposited over a narrow range without disturbing the anatomy of nearby cells. This allows more accurate targeting of dose, even if deep inside the body, reducing the side effects of radiation therapy.

With its promising potential to cure tumour, it is likely to become the preferred radiotherapy method for most childhood cancers, as the unwanted exposure to radiation of healthy tissue is much reduced and so the risk of second cancers later in life is also reduced enormously.

However, PT is more sensitive to uncertainties in both treatment planning and delivery than conventional x-ray treatment. To overcome these limitations, PRAVDA must develop new concepts and instrumentation to provide accurate information about the proton beam's dose, energy and profile before and during treatment.

3Q> What are 3D bio-printed tissues? How they are printed? Examine their advantages and clinical applications. (200 Words)

3D bio-printed tissues are tissues printed by 3D printers. In such printers a bio-material made up glucose, proteins and living cells extracted from insects is fed as ink and the printer prints according to the dimensions fed to the computer. The layers of this ink keeps depositing on each other and after cooling the complete tissues gains shape.

Advantages and applications-

1. These tissues can be used to manufacture organs that function just like original human organs.
2. These organs can be used in transplantation reducing the dependency on donors and reducing both cost of transplantation and deaths.
3. New medicines and vaccines can be tested on these tissues directly reducing animal and human trials which indeed reduces the R&D costs of testing. This will be reflected in the reduced cost of the medicines.

This is a novel technology with a lot of potential and advantages which would make treatment of poor viable. It should also be introduced in public hospitals in the future to distribute the fruits of advancement in technology.

4Q. What do you understand by Big Data? How can it be useful to biotech sector? Discuss. (200 Words)

Big data technology refers to processing very large set of complex information to extract a meaningful inferences from that, For example, performance and behaviour analysis of student in a year can predict his future actions, and behaviour of large set of people can be predicted from CCTV video footage informations.

Applications of Big Data in Biotechnology

1. Gene sequencing : Big data provided essential tools for analysing the characteristics of different genes.
2. Personalised drug delivery : Analysing patient diagnostic information along with genetic data can provide valuable information for developing personalised drug delivery.
3. GMO : Applications in R&D of Genetically Modified Organism (GMO) and toxicity analysis of GMO using data acquired through field trails and clinical trails.
4. Agriculture : Better pest resistant varieties, High yielding varieties could be developed by analysing the genetic data from diverse crops.
5. Animal husbandry : Applications in hybrid breed development, cloning technologies, etc.
6. Climate change and biodiversity : Better climate resilient crops should be developed, analysing plants, seeds, crops from biodiversity hotspots can't be done manually.

Apart from biotech Big data has wide range of applications in intelligence, security, education. All these can help in good governance if utilised for bonafide purposes

Topic: *Science and Technology- developments and their applications and effects in everyday life*

1Q. Crypto currency bitcoin is gaining popularity in India, especially among companies and high-net worth individuals, for buying and selling, or as an asset. How does bitcoin function? Why is it gaining popularity? Examine. (200 Words)

Bitcoin is a digital currency which offers the promise of lower transaction fees than traditional online payment mechanisms; operated by a decentralized authority, unlike government issued currencies. It is a virtual currency system which is kept on a public ledger, along with all Bitcoin transactions, verified by a massive amount of computing power.

As it uses sequence of numbers cryptographically entered in the transaction process, it is hard to conduct any fraud; making it a safe means of transaction.

It is gaining popularity due to following reasons:

--- Privacy: transactions using bitcoin can happen without the details of sender and receiver, for instance no bank account details is passed on, as happens in other bank

transactions. Hence, if one wants to deal in electronic payments, typically one needs a Debit or Credit Card or a bank account whereas Bitcoin Network eliminates that.

--- Open to All: it does not create borders among different countries and anyone with internet connection can get involved with Bitcoin network.

--- Decentralised: it reduces the requirement of third party inclusion, making it a two way process between sender and receiver. Traders who do not undertake online trade due to fear of online frauds can be assured of no frauds as bitcoin network makes it very hard to reverse the transaction.

Problem:

1) No name or address of the person is asked so it could lead to gambling, money laundering, terror finance.

2) No regulator to govern the whole process.

3) Very flexible exchange rate with other currency, so investing is a risky business.

4) No central bank is supporting, so consumer courts could not help in case of any cheating or currency loss etc

Although, bitcoin has promising future, it is required that a central authority is created for regulation purposes, otherwise world economy will again see pre-Breton Woods era, during which gold was considered as a commodity of transaction.

2Q. “At its heart, Digital India is an ambitious vision that has the potential to be an equaliser for Indians by driving inclusive growth for the economy.” Do you agree with this view? Critically analyse. (200 Words)

Technological revolution in the form of Digital India will definitely help government in better penetration of services across all divergent regions as well as better governance through two way communication.

1) It will connect villages with broadband highways, thereby bringing access to financial inclusion, Make in India (designed to spur local manufacturing and job creation) as well as education and skill development in remote areas.

2) In agriculture sector, it'll help in precision farming using sensors, access to market information, facilitation of e-mandi, and efficiency in crop insurance through satellite imagery.

3) In manufacturing sector, it will establish right linkage between right technology, raw material and manpower.

4) It'll also augment delivery of health services such as - low cost portable diagnostic devices e.g. Netra-G, delivering expert consultation over digital network, provision of low cost healthcare etc.

5) Lastly, it'll improve governance by removing layers of red tapism and bringing citizens-government closer via citizen charters.

However, technology alone is not a magic wand to mend all the ills of our country. More so because, India still hasn't attained adequate literacy level. Secondly there's a huge rural urban digital gulf, infrastructural lag and issues regarding digital security. Moreover, it needs to be acknowledged that India is a multi-lingual country and spread of information and technology should also be in accordance.

Therefore, digital india will surely help in substantial economic progress, but it has to be implemented in a responsible way

3Q. In recent months, technology giants such as Google and Facebook are aggressively trying to make internet available to every person on the planet at an affordable rate or for free of cost. Critically examine who will benefited more by increased internet connectivity. (200 Words)

Facebook's 'Free Basics', Google's Project Loon, Railwires, etc are moves to give data access to every individual at reasonable cost. Who will be benefitted more due to this increased internet connectivity? Let's analyse -

1. Poor- Google started initiatives like 'Internet Saathi' to train women on internet usage. This would make them more aware and empowered. But the absence of compatible devices due to less income would render this useless. However, to increase connectivity, infrastructure building is capable of generating jobs which may give some sort of purchasing power.
2. Farmers and other sellers- Would get access to Commodity markets. They will have the liberty to sell their produce and recognize the agricultural trends and better farm practices. Absence of device and usage know how again a deterrent.
3. Sellers of compatible devices would be benefitted but this depends upon the purchasing power.
4. Government- e-governance would be achieved. Success of DBT, PDS, NREGA would reduce corruption. Online complain portals could be used for Swachh Bharat Abhiyan, reporting polluting factories, etc.
5. Banks- Increased internet banking would make transacting simplified resulting in demand of new accounts.
6. Businesses- Will get a platform to advertise and increase income.
7. Disaster management authorities – with Projects like Loon will be able to connect more with disaster struck people, co-ordinate, weather forecast would be communicated in time. However, lax functioning and delays in implementation would bring them back to square one.
8. Middle Class or the rich who opt for plans like 3g, 4g, the OTT after paying the Giants will make these customers bleed.
9. Telecom Companies would lose revenues due to VOIP services provided by OTTs.
10. Tech Giants themselves – They will earn revenues from advertisers, in case of Zero Rating initiatives will make huge profits from Over-the-top(OTT) players, partnership with Government would bring in more projects, revenues and a good reputation which act as free advertisement.

Evidently, the benefitting of everyone except these giants is dependent on some or the other factor. If those factors are not worked upon there would be no benefit.

It can't be denied that these giants are private firms and won't invest until they get benefitted. In any case they will be benefitted slightly more but than others. But this should not act as a deterrent and the Government should be ready to tap the potential of such initiatives.

4Q. How is Bt cotton created? Examine why Bt cotton's merits and demerits. Also examine in which parts of India it is cultivated and its impact on farmers income. (200 Words)

Bt cotton is created by transferring certain genes from Bt bacterium to cotton seeds, to make them pest resistant. Bacterium (Bt) produces such toxins which are pest resistant.

Merits of Bt cotton -

- (a) It reduces the amount of insecticide required in cotton crops.
- (b) It is environment friendly due to less use of insecticide.
- (c) It almost doubles the yield. India is now largest global export and second largest producer of cotton in world.
- (d) It helps in development of friendly pests which used to be killed earlier, due to use of insecticides.
- (e) Bt toxin is highly targeted toxin and thus kills only those bugs which harm cotton.

Demerits -

- (a) Bt cotton seeds are expensive thus increasing the cost of production
- (b) Bt resistant pests develop after few generations of Bt-production
- (c) Bt cotton seeds can't be used directly from farm and thus necessitates purchase of seeds from market, thus reducing self-sufficiency of farmer.
- (d) Requires more water, and needs irrigation
- (e) Promotes monoculture.

Maharashtra, Andhra Pradesh, Gujarat and Telangana are major states where Bt-cotton is produced. There has been mixed results due to introduction of Bt-cotton. Bt-cotton results in increased yields, thus helping farmers to augment their income. But, at the same time Bt-cotton requires irrigation which results in more expenses. Bt-cotton seeds are also needed to be purchased every year by the farmer. Earlier, farmers used to grow food (Jowar and Tur Dal) along with cotton, with less input costs, thus getting less income, but at the same time getting both food for consumption and cotton for sale in market.

Now, Bt-cotton promotes monoculture, since it requires irrigation which was not needed for food crops such as Jowar and Tur Dal. So, if yield gets low due to any reason, farmer is neither left with food, nor with capital to pay his/her debts and thus gets into debt trap. This has led to lot of suicides in cotton growing regions.

It is high time that a balanced and sustainable policy regarding growing, production and marketing of Bt-cotton be developed so that no farmer is compelled to commit suicide in future.

5Q. What do you understand by cloning? Explain the technology involved and examine ethical issues that cloning gives rise to. (200 Words)

Cloning is the technique of creating genetically exact copies of the organisms (may be plant, animal or any other). The Copies which we get are called Clones having Every single bit of their DNA identical.

Science of Cloning:-

1. Artificial Embryo Twinning:- it is carried out in a Petri dish instead of inside the mother. A very early embryo is separated into individual cells, which are allowed to divide and develop for a short time in the Petri dish. The embryos are then placed

into a surrogate mother, where they finish developing. Again, since all the embryos came from the same fertilized egg, they are genetically identical.

2) Somatic Cell Nuclear Transfer:- Isolate a somatic cell from an adult female, remove the nucleus and all of its DNA from an egg cell. Then transfer the nucleus from the somatic cell to the egg cell. The egg cell, with its new nucleus, will behave just like a freshly fertilized egg. It developed into an embryo, which is implanted into a surrogate mother.

The various forms of cloning, particularly human cloning, are controversial.

Ethical Issues Involved with Human Cloning:-

1) Human cloning might change the shape of family structure by complicating the role of parenting within a family of convoluted kinship relations.

2) There is no guarantee that the first cloned humans will be normal. The fetus might suffer from some disorder that is not detectable by ultrasound. They may be born disabled. Disorders may materialize later in life.

3) Large scale cloning could deplete genetic diversity. It is diversity that drives evolution and adaptation. It prevents an entire species from disappearing because of susceptibility to a disease.

4) Proponents of animal rights argue that non-human animals possess certain moral rights as living entities and should therefore be afforded the same ethical considerations as human beings.

5) There may be expectations that the cloned individuals would act identically to the human from which they were cloned, which could infringe on the right to self-determination.

6) Most pro-life supporters believe that a fertilized ovum is a full human person. When its nucleus is removed during cloning, that person is, in effect, murdered.

7) It might affect relationships. For example, a child born from an adult DNA cloning from his father would be, in effect, a delayed twin of one of his parents. That has never happened before and may lead to emotional difficulties.

6Q. It is found by scientists that evaporating water can be used to generate power (Evaporation engine). How it can be done? Explain. (200 Words)

The generation of energy by evaporating water rests on the principle of utilizing mechanical energy of soil-bacteria spores to electrical energy. The method followed is as follows –

1. Certain soil-bacteria spores are embedded on layers of tapes which are elastic
2. These spores are sensitive to moisture and expand and contract with the presence and absence of moisture
3. The elastic tapes on which they are embedded move with them due to expansion and contraction and can be used as source of mechanical energy to be converted in to electrical energy vis-à-vis turbines which use dynamos

Probable areas where this technology may find useage –

1. Reservoirs where the rate of evaporation is high
2. Rivers flowing through arid regions

Benefits –

1. Taps into the natural process of evaporation to generate energy and hence is environment friendly
2. May prevent excessive loss of water from reservoirs in arid areas

Drawbacks –

1. Large scale field trials have not been conducted
2. The gestation period is 10-15 years while the need for alternative sources of clean energy is immediate due to Climate Change

Uses in India –

1. May address the issue of seasonal water availability of water in peninsular rivers
2. Since it indirectly depends on amount of solar energy, it holds immense scope for India as India experiences sunshine throughout the year

7Q. Write a short note on the following in not more than 100 words:

a) Biosimilars – their potential and applications

b) Biomarkers & companion diagnostics

c) Immuno-oncology

BIOSIMILARS

A biosimilar is a biologic drug which is almost an identical copy of the original manufactured by a different company. They are officially approved and can be manufactured after expiry of patent.

Potential -

In 2016 patents worth \$48 Billion on biologics are set to expire, implying rapid growth for biosimilars market. It will not only provide affordable access to citizens but will also be hugely beneficial for Indian pharmaceutical companies that develop high quality biosimilars.

Application -

They provide affordable healthcare especially in developing + least developed countries.

BIOMARKER

a biomarker is something that can be used as an indicator of a particular disease state or some other physiological state of an organism. They provide biological data which can be used to predict drug failures and also allow scientists to identify patient pools that would respond favourably to a particular drug.

COMPANION DIAGNOSTIC

A companion diagnostic is a medical device (often in vitro), which provides essential information for safe+effective use of a corresponding drug or biological product.

IMMUNO-ONCOLOGY

Immuno-oncology is a targeted therapy that activates our immune system, enabling it to selectively recognise cancer cells and destroy them. They do not focus on tumor/cancer cells itself. Rather, they give long-lasting memory to the immune

system, so that it can continually adapt to the cancer over time and provide durable, long-term response.

Topic: *Indigenization of technology and developing new technology*

1Q. “India is probably the only large democracy without a robust military-industrial complex and India accounted for 15 per cent of the volume of global arms imports in the previous five years.” Critically examine why India is failing to indigenise defence production and the role of Make in India initiative in this regard. (200 Words)

India is one of the largest importers of conventional defence equipment and spends about 40% of its defence budget on capital acquisitions. Self sufficiency and self reliance remains distant. Self-reliance Index (SRI) of 70% has now been pushed to 2020 (earlier it was 2005).

Reasons for failing indigenisation:

- 1) Series of announcements like Defence procurement procedure in 2002, Defence offset policy 2006, Long term integrated perspective plan 2009. Defence production policy 2011 have not achieved expected outcomes of defence production and self reliance.
- 2) Defence offset policy promoted private sector and SMEs by government R&D funding for product development. However it failed to create a military capable manufacturing technology base.
- 3) Technology sharing by leading pioneers seemed difficult for India, as India is a not a member of Wassenaar agreement, which controls all the technologies.

However, it is time for India to focus on the reforms for strong defence production.

- 1) Reform in the Defence Offsets Management wing of Ministry of Defence to leverage defence capital acquisitions to develop Indian defence industry.
- 2) Identify the issues encountered by the SMEs and private sector and provide resolution mechanisms.
- 3) Technology sharing routes by possible means have to be identified (for eg, China and Israel are not members of Wassenaar agreement, yet they aligned their export controls with Wassenaar list).

Self - reliance in defence sector is most important for India as we are strategically placed between the self-sufficient defence powers. Only indigenous defence manufacturing base could secure us in the long run. 'Make in India' should be the mantra in the defence sector as well.

Topic: *Awareness in the fields of IT, Space, Computers, robotics*

1q> It is said that Artificial Intelligence will make smartphones redundant and it would take up mundane tasks in the future. Discuss. (200 Words)

The technological revolution of the world, is one of slow progress, rather than swift jumps. Evidence of this, can be seen, in various fields. Concept of mobile phones

were alien to us once upon a time, then the phones could achieve basic capabilities of telephony to present day smart phones, whose capacities rival super computers of yester years. But a common element in the evolution so far, has been the necessity of Human intervention, to get things done. Artificial intelligence, the next step in the technological revolution seeks to replace this.

Artificial intelligence does not require human input, as it is an inherently intelligent system, capable of decision making, keeping in mind the best interests of the user. Hence it could completely replace everyday smartphone tasks. Examples of its functioning would include;

1. Setting up an alarm, without input from the user, by analysing his/her work schedule.
2. Reminders to take medicines and nutrition, periodically, by analysing health reports of the user.
3. Home automation systems, which understand the moods of the residents and function accordingly.

Such examples sound enticing, but there is a very real probability of compromise of data and privacy of the users. Also, in instances of danger, no robots can replicate the instinct of a human being. Investments in AI have been steadily increasing. Though artificial intelligence is the future, it must not grow to replace humans, but grow to aid them.

2Q. “Trai is right to ask telecom operators to put Facebook’s Internet.org on hold. The platform violates net neutrality.” Critically discuss. (200 Words)

[Internet.org](#) is a platform to afford few selected internet services and websites at free of cost using the app ‘Free Basics’ to those who cannot afford internet access. As data fees are relatively expensive in India, this initiative aims to prevent this being a deterrent. However, it brings out some notable negative implications.

- 1) It does not offer equal and unbiased access to all services.
- 2) Internet should be free and equal for all users. Users should be able to access all services and content in the internet without any discrimination. Selective and preferential access by ‘Free Basics’ violates the cornerstone of net neutrality (means access to free and unbiased internet for all).
- 3) Apps in ‘Free Basics’ would be mainly subjected to Facebook and also discretion of telecom operator to make differential pricing for different kinds of contents widens the inequality.
- 4) Having smartphones as a prerequisite to access these services limits opportunities.
- 5) Public outcry on similar initiatives like Airtel Zero and services by Clear Trip and NDTV

In a country like India, where internet reach and scope has just started to penetrate the corners of the country, restrictions and biased internet access would not render fruitful results.

3Q> Recently Google announced multiple India-specific projects – “Project Loon”, “Tap to translate”, “Offline mapping” and “Asus Chromebit”. Will these projects have a transformational and disruptive influence on India? Critically discuss. (200 Words)

Google recently launched India specific projects namely Project Loon, Tap to translate, Offline Mapping, Asus Chromebit which can be a game changer & change the way technology sector works in India, let us look closely:

- 1) Project Loon will revolutionize the way ISPs operate, following a more robust mechanism which will lead to lower cost, better connectivity & less disruptions.
- 2) Tap to translate will greatly favour a multi-lingual country like India where the population in inner penetrations have low level of literacy in either Hindi or English.
- 3) Offline mapping will be highly beneficial as most people work with Wifi at home & office, thus while travelling they are devoid of internet which makes journey troublesome.
- 4) Asus Chromebit will fulfil the objectives Aakash tablet failed to achieve, by offering a low cost CPU at 8000 INR leading to wide E-Literacy.

But, there is note of caution India must adhere to while agreeing for such schemes:

- 1) These revolutionary technologies might lead to monopoly of Google in India's market.
- 2) Telecom operators who have purchased spectrum at exorbitant prices might suffer huge losses.
- 3) Initial years it might be difficult to keep in track the way these technologies work which might lead to data piracy.
- 4) Influx of technology without IPR constrains might lead to long term damages.

The huge potential of India where the median population is 23 has become a global market since 1991 & the major source of revenue for companies investing in India. India must go ahead with caveat to change its face in years to come by living upto the ambitious mission “Digital India”

4Q. Critically analyse the merits and demerits of Facebook’s “Free Basics” service offer in India. (200 Words)

Free basics is an initiative by Facebook where certain Internet services will be provided free of cost to everyone. In India, reliance Telecom has partnered with Facebook where Facebook will act as a gatekeeper and Reliance will be the service provider.

Demerits of Free basics:

- Free basics covers selected websites and ignores other websites and content providers. Thus it goes against principle of net neutrality.
- In the long run free basics can be misused for price manipulation for providing same services which once used to be free.
- It also helps one particular service provider, for example Reliance telecom will use it for promoting its services thus discriminating other service providers like BSNL, Aircel, Airtel etc.
- The nexus between "service providers" and "content providers" might be misused for anti-state propaganda.

Merits:

- Its not neutral internet if majority doesn't have access to it.Free basics will work on

this principle.

-India is a large country where basic internet services are still to be made available to millions and especially to the rural India. Hence free basics will make an inclusive internet regime. This ultimately will lead to people empowerment.

-Recently GoI launched Digital India program. Free basics will help in making this programme effective by providing last mile connectivity.

Thus the debate boils down to "access" vs "neutrality". In absence of "access to internet" there is a lack of "internet inclusiveness" where as violating net neutrality will ultimately create a "digital caste system". Given India's current digital ambitions free basics certainly augments the government work, besides being pro-poor.

However it goes wrong on many commercial and regulatory fronts. Hence first a strict regulatory regime, periodic government scrutiny over contents being provided and having a say over the websites selection should precede before allowing any such initiative

Topic: Cybersecurity issues

1Q. What do you understand by 'cybersovereignty'? Critically examine if it is good to have cybersovereignty in the age of globalization of internet. (200 Words)

Cyber-sovereignty is a modern phrase which describes the Governmental control over Internet restricting websites whose content may harm the sovereignty of the nation.

With the advent of technological advancement, liberalization & globalization, this has become a bone of contention between public & authorities.

Views supporting Cyber-sovereignty:

- 1) Countering the radicalization of youth through social media as all around the globe, terrorism through widely available diverse content is becoming a menace.
- 2) Controlling cyber terrorism, thus keeping secure the important & undisclosed data.
- 3) Audio & video piracy which makes Entertainment industry lose billions of dollars every year.
- 4) Obscene & vulgar content leading to wrongly sexual influence on children & adults.

View against:

- 1) Cyber-sovereignty in actual terms become Cyber-bullying, & many unnecessary websites are blocked due to improper monitoring of content.
- 2) If the filter is not done properly, it results in violation of Art 19(2) and has a chilling effect on Right to speech, dissent & Right to Know.
- 3) Growth in technology has led to proxy sites & various other means which give an easy access to the blocked sites. These proxy sites instead are a much larger threat to national security.
- 4) More circulation of black money as piracy business gains flow through underground market.

Various measures can be adopted instead of taking the extreme route like placing a statutory body to monitor & track content, forming a committee of experts from

different nations to evolve a common consensus, treaties among nations protecting each other's sovereignty.

The 21st century vision of "Digital India" with restrictions on internet would be like a travel agent who books only bus ticket & not others. Thus, few rational measures are the need of the hour.

Topic: *changes in industrial policy and their effects on industrial growth.*

1Q. Why did AMUL model succeed? Can it be replicated in other sectors? Examine. (200 Words)

The factors responsible for Amul's success can be seen under the following heads:

1. Organizational setup –
 - (i) Reorganization of dairy farmers into cooperatives to prevent monopolization
 - (ii) Recruitment of professional managers and experts for effective management of the supply-chain
2. Social factors –
 - (i) Appointment of farmers at key positions to ensure accountability
 - (ii) Focus on the education of dairy farmers on best-practices
3. Economic factors –
 - (i) Adoption of a low-price strategy to attract consumers
 - (ii) Fair prices given to farmers to maintain their faith
4. Technological factors –
 - (i) Usage of embryo-transfer tech to develop high yield cattle breed
 - (ii) Usage of 'just-in-time' approach in the distribution network to lower wastage

The Amul model can be replicated by following some of its strategies which are as follows –

1. Advertising - Innovative advertising campaigns like that of the Amul girl
2. SCM - Strong supply chain management by allowing farmers the freedom of decision-making. This needs to be implemented in APMCs through expeditious establishment of a National Agricultural Market
3. Brand value - Branding of produce with high quality assurance to ensure customer loyalty
4. Cooperatives – Reorganizing farmers into cooperatives and encouraging them to pool land and cash and collectively invest in technology
5. Technology – Usage of modern techniques of farming and scientific management of good distribution to minimize wastage

2Q. Karnataka plans to become the first state in the country to allow start-ups to pitch for local government contracts. What are the possible benefits of this move? Examine. (150 Words)

Start ups will be a key factors for our make in India and digital india campaigns. Today's giants in the market were once start ups who got the push from the government and society in their transformation.

With the increase in start ups theres a increase in the competition to prove their credibility and capacity. This would push them to travel an extra mile to provide better services and would be beneficial society and governments.

Start up would also help in the decentralization of the industries and services . This can aid as an effective tool to overcome regional imbalance.

The start up would provide a wider pool to choose from to the government in awarding contracts.

The start ups can be also be a tacticle option for empowering the youths through the skill India campaign.

Start ups will also provide for better distribution of resources and bridging the economic gaps in the Indian society.

Startups can gain substantially from the Imprint India initiative and can make a big change in the society by taking innovations to the people.

With india emerging as a ray of hope in the times of sluggish global economy, India must take the advantage to push for our start ups which can build a new identity to the country. The Karnataka which led the country in the IT revolution has a great potential to boost the start up India campaign and the government must fast track its efforts.

3Q. The new alternative investment funds (AIF) rules lay down the red carpet for foreign investors to make a grand front-door entry into the booming Indian start-up space. But these rules have been criticised as too liberal. What is your opinion? Discuss. (200 Words)

After relaxing FDI rules last month, Govt took a slew of measures with respect to AIFs(Private equity and venture capital funds):

1. The AIFs will no longer have to take approval from Foreign Investment Promotion Board(FIPB) for bringing in investment from overseas
2. NRIs, who contribute almost 8 lakh crores in remittances, have also been allowed to bring in investment without approval from FIPB
3. Another major change is with regards to previous ambiguous definition of trusts, which created a lot of confusion when the AIFs had an Indian asset manager or were sponsored by an Indian entity but had a majority foreign holding. It has been made clear that if an AIF is sponsored or managed by an Indian, no matter how much foreign holding it has, FDI rules won't apply on it. It will be free of the rules laid down in the Foreign Exchange Management Act and will thus be free to invest via automatic route in all sectors including the critical ones like defence, e-commerce etc

Critics have pointed out that the new rules basically allow foreign investors a back-door entry to the critical Indian sectors and thus may be harmful both for economic and strategic reasons.

1. It has to be said that such criticism may not be much warranted especially when the Indian start-ups and older companies have been unable to procure the domestic capital and the foreign capital finds it hard to reach Indian shores and has to be rerouted via Singapore and Mauritius in most of the cases. In order to invest in India, AIFs had to somehow portray themselves as making "decisions" out of India. Data from SEBI shows that Indian asset managers had to reroute almost two-thirds of the total investment of \$2.45 billion via Singapore and Mauritius. These facts, supplemented by problem of lack of domestic capital, reveal the dire need to bring in foreign capital to help our start-up ecosystem.

2. With regards to safety, AIFs, unlike FIIs, park their money usually for at least 5-7 years and thus are not as mercurial as FIIs who are very reactive to any changes in currency valuation and market fluctuations. Thus, AIFs stay despite risks from currency depreciation and market volatility

Instead of criticism, The Govt of India should be focussed on removing any tax hiccups to complement recent reforms. AIFs were given "pass-through" in the budget but they are still concerned by 10% withholding tax which has to be paid at the time of distribution of income by the fund to the investor. Caution is good when dealing with FDI norms but it should not let down the hope and optimism which the much needed foreign capital brings.

4Q. Critically examine how the new Sebi insider trading code of 2015 has affected companies in India. (200 Words)

With a view to do away with the lacunae and inadequacies of the 1992 Regulations, SEBI has revamped the entire framework governing insider trading in India.

1. The scope of 'insider' / 'connected person' is significantly widened.
2. Applicability of the Regulations shall extend to UPSI in relation to a company as well as securities listed or proposed to be listed on a stock exchange.
3. For the purpose of legitimate business transactions, access to UPSI, for instance of due-diligence, with appropriate safeguards has been explicitly provided for which shall avert the risk of any regulatory scrutiny in relation to such transactions.
4. Introduction of definition of a 'company'; inclusion of public servants or persons occupying statutory positions within the definition of 'connected persons and certain valid defenses have not been incorporated in the Regulations.
5. Legislative notes interspersed within provisions will be an effective tool for interpretation of these Regulations going forward.

However some provisions are too restrictive leading to virtual freeze of communication-

1. The Securities and Exchange Board of India (Sebi) now expects companies to adopt a 'need to know' strategy while communicating on key business issues.
2. The bar on communication by itself without any trading or wrong committed has been brought in the new regulations.
3. Companies would need to maintain a record of information to refute any allegations of misuse of such information.
4. Sebi has outlined the treatment for deals that culminate but the regulator has been silent for deals that fail to happen

Though there are problems for companies initially to adjust according to the new restrictions but the move by SEBI will provide a much-needed filip to Indian capital market and facilitate further economic buoyancy in the longrun.

Topic: *Energy; Conservation, environmental pollution and degradation, climate change*

1Q. Recently India launched an International Solar Alliance (ISA) at the CoP21 Climate Conference in Paris. Examine the significance and objectives this Alliance. (200 Words)

India launched an International Solar Alliance (ISA) at the CoP21 Climate Conference. In order to bring revolution in the field would bring power to all citizens, and create unlimited economic opportunity.

SIGNIFICANCE OF ISA

India has a super ambitious target of producing 100 GW pf solar energy by 2022. If things gone with plan India will be world leader int the solar energy sector. It will be a matter of prestige for India to have an International organisation for solar energy with her. By this India will be setting a role model for not only other developing but also developed countries who are still heavily dependent on highly polluting fossilised fuel. Will also ensure energy security and climate sustainance for world.

OBJECTIVES

1. To help all countries located fully or partly between the tropics of Cancer and Capricorn to develop solar energy .
2. To share collective ambitions to reduce the cost of finance and technology that is needed to deploy solar power widely
3. To develop generation and storage technologies as per the individual countries' needs.
4. Cooperation in training, building institutions,
5. Addressing regulatory issues, formulating common standards
6. Procuring investment including joint ventures.
7. Discovering ways to bring down the cost of soalr power at par with other powers.

If managed properly ISA would be a beam of sun light to lead the energy hungry India and the world in the direction of clean energy and green development.

2Q. What do you understand by the concept of differentiated responsibilities in ongoing climate change negotiations? Why some argue that India must resist the attempt by developed countries to dilute this concept? Discuss. (200 Words)

Differentiated Responsibility is a part of Common but Differentiated Responsibilities (CBDR), which is Article 3 of the United Nations Framework Convention on Climate Change (UNFCCC). Common Responsibilities refer to the belief that the world and its

atmosphere is sharable by all and thus all have an equal responsibility to maintain it. However, more emphasis on differentiated responsibilities is being given by India. Differentiated responsibilities simply implies to the responsibilities of all the countries according to their economy, their technology and their contribution in climate change in the past.

Now, the western world wants that much emphasis should not be laid on the Differentiated Responsibilities as it have contributed huge amount of GHG gases during its industrialization, and due to this, much responsibilities would be given to it. However, India must resist this stand of the developed world to dilute this concept because:

- 1) Developed countries should act more responsibly as they have already given their contribution of GHG gases.
- 2) Much more pressure is on developing countries to reduce their carbon emission by western world.
- 3) The need of the developing countries like India to meet their energy demands.

It is the need of the hour to save the climate by reducing carbon emission and hence, all are equally accountable for it. Neglecting responsibilities, as western world is trying to do it by putting its burden on developing economies is of no use to anyone as they too have to later deal with the climatic disasters as climate is of all humanity, together.

3q. Discuss the feasible measures that are urgently needed to be implemented in Indian cities to curb worsening air pollution. (200 Words)

A major 13 cities of India have seen their place in the top 20 most polluted cities of the world, with Delhi being at the top place. Certainly there is a need to adapt measures to make a change :

Already taken :

- 1) Green spots in and around the cities which can make sure that fresh air is available to breath.
- 2) The AIR-Quality Index to communicate the public how much currently the air is polluted. (A way of spreading awareness)
- 3) Bharat stage IV emission norms have been in place in 13 major cities.
- 4) Green Cess to be levied on the heavy duty vehicles.
- 5) 15 years validity of a government vehicle (Buses) and which is hence dumped.

WhAT needs to be done?

- 1) Shift towards better, reliable and more efficient CNG fuels and CNG based engines.
- 2) INspetion/check on the sale of leaded petrol, a major cause of air pollution.
- 3) Increase awareness among people to shift to public transport.
- 4) Burning of straw/stubble by the farmers outside the cities should be controlled plus control on the open burning of non-biodegradable substances like tires, plastics.
- 5) Making it compulsory for the industries or the factories to have pollution control equipment.
- 6) Ways to control indoor pollution (About 1.5% of people in chattisgarh have LPG cylinders as fuel, still 99% use wood as fuel, most vulnerable are tribals)

While the moves can make a major change, it has been noticed that leakages, corruption and manipulation of data exist. There is also a need of attitudinal change as more nad more people are shifting towards personal vehicle which have been a major culprit of the air pollution.

4Q. Odd-even road rationing, which was recently announced by the Delhi government to reduce pollution in the capital city is said to be a short-term measure. Examine its effectiveness and suggest what long-term measures are needed to address pollution problem. (200 Words)

Recently WHO declared Delhi to be the most polluted city in the world. In this backdrop of public health emergency, Delhi government has chosen to implement a temporary system of odd even road rationing. It is certainly a good measure theoretically, but its effectiveness in a city like Delhi can be hampered in following ways :

- 1) Delhi has a lot of traffic, and delhi police shoulder a lot of responsibility. Additional responsibility to check number plates of each car and the effect this checking would have on the traffic movement is unimaginable. Previous such measure of BRT foundered on police non-cooperation.
- 2) If implemented, after giving challan once for a day the person can use his car.
- 3) A lot of people stay in NCR (UP or Haryana) and travel to Delhi on a daily basis for work. It's not worked out how would they be included in system.
- 4) Delhi has relatively rich population, people are already talking of buying another car if this comes into force. This has already happened in Mexico, which resulted in net increase in pollution.

Measures taken:

Environment Compensation Charge(Green Tax) on commercial vehicles has been implemented.

Shutdown of coal fired plant in Badarpur (to be implemented)

National Air Quality Index(real time monitoring)

LONG TERM MEASURES ALREADY IN PLAN OF ACTION

- 1) shut down smoke spewing industrial plants in neighbouring areas.
- 2) Implementation of Euro-VI emissions norms for cars
- 3) Streets will be cleaned using vacuums to suck up dust

MEASURES THAT SHOULD BE TAKEN

- 1) improve public transport, especially the last mile connectivity. Increase in number of metro feeder buses and regulated reintroduction of electric rickshaw is a welcome move.
- 2) Better network of environment friendly taxis.
- 3) Safety of women at all hours in public transport.
- 4) Behavioural change of public, nothing would help more than this. Raahigiri and Car free days is a good start in this direction.

Encourage car pooling

Create low emissions zones

Congestion pricing

Thus the realistic measure would be a mix of strengthening public transport and behavioural change of public.

5Q. Discuss the important findings of latest report of the Forest Survey of India (FSI), 2015. (200 Words)

The report of the Forest Survey of India has brought about both cheer and despair. There's been a net increase of 112 sq. km. in mangroves forest, with 31% being very dense, 29% of moderately dense and 39.6% of open mangroves.

Its findings include:-

- 1) An increase in very dense forest category that had remained static since 2007.
- 2) Few non-forest areas have become very dense or mid-dense.
- 3) There has been a significant increase in mangrove forests.
- 4) complete wipe out of very dense and mid-dense forests in some areas .
- 5) increase in forest cover in Andaman and Nicobar islands, Tamil Nadu and Uttar Pradesh
- 6) Many other states show a decline .

Positive takeaways :-

1) increase in mangrove forests show that we have learnt our lessons well. Mangroves could have mitigated the damage caused by tsunami, 2004 or Cyclone Aila of 1998. A significant increase would help us in disaster management, would act as the most effective carbon sinks and help the coastal ecosystem 's survival , as it is vulnerable to climate change.

However, there are things to worry about such as

- 1) Increase in forest cover has been due to inclusion of plantations which were not recorded until now.
- 2) Many states have shown a decline in forest cover.

The report, though provides some hope also indicates that a lot still needs to be done such as

- 1) allocation of 2500 crores to National Afforestation Programme as per 12 Five Year Plan's recommendation.
- 2) Implementation of Green India Mission and other such schemes
- 3) Proper use of compensatory afforestation fund.
- 4) Media awareness about benefits of social forestry and agro-forestry

6Q. India is home to 1,800 species and subspecies of butterflies that are increasingly being valued for aesthetic reasons. But their survival is threatened by variety of factors in India. Write a note on these threats. (150 Words)

The following are the threats to butterflies affecting their evolution as well as survival:

- Parasitoids, their natural enemies, feed on their egg in the larval stage and co-evolve, leading to the death of the host eventually. The former can also lay its own egg preventing the butterfly to move on with its next stage of development
- Pesticide drifts involve harmful chemicals that affect their metabolism and can lead to deaths
- Deforestation and encroachment of their natural habitats exposes them to ecosystems they cannot adapt to and are indirect threats to their survival
- Lack of appropriate flora is another outcome of human activities that prevents them to breed and evolve
- Illegal butterfly trade has been growing since time immemorial due to aesthetic beauty of the organism in its latest stage of development

India is home to more than 1800 species of butterflies and is being increasingly valued for aesthetic reasons. Research can and is aiding to the conservation of these beautiful species.

7Q. “The voluntary pledges made by countries, called INDCs, are totally inadequate for the task of cutting carbon emissions significantly.”

Examine. (200 Words)

The reasons for the inadequacy of the INDCs to cut emissions can be cited by following statements:

- 1) INDCs are submitted keeping in the mind, the 2 degree rise limit from pre-industrial temperature but it is believed that three fourth of the carbon space has already been used.
 - 2) Countries like USA and India have submitted INDCs having almost same amount of emissions reduction claims while India is far behind in per capita emission from USA. this means developed countries have not taken their fair share.
 - 3) while LDCs and Island nations bet for only 1.5 degree rise, China aspires for peak emission by 2030.
 - 4) the dependence on coal for energy needs is going to rise in upcoming years for India's and other similar emerging economies despite their adaptations to renewable sources.
 - 5) some claims in the INDCs would have to be realised by financing under adaptation and mitigation funds but developed countries do not have consensus on funding provisions. Funding has also been the major roadblock in the current COP21.
 - 6) some claims in the INDC also seem contradictory eg. how India is going to full fill its sequestration pledge when the current schemes and programs have not been successful in increasing forest cover substantially.
- 2) though it has been decided to curb temperature rise to 1.5 degree , but no concrete roadmap has been laid down.
 2. countries like USA and China have declared the respective years of peaking but the time span of peaking is far too long.
 3. no system of evaluation been laid out.
 4. not much emphasis on CBDR and technology transfer.

However what the countries have pledged is a great advances in their movement towards emission reduction, the need is to implement them in letter and spirit.

8Q. Critically examine how the Paris Agreement on climate will impact India. (200 Words)

The recently concluded Paris Agreement is considered as not just a road map but a new chapter of hope in the live of 7 billion people of the world. Let's look at the plus and the minuses of agreement for India.

THE BENIFITS

- 1) Though it is not a legal framework, the principal of CBDR (that India had been lobbying for) is operational in the sense that
 - a) developing countries are not forced to make more emission cuts than developed
 - b) developed countries are encouraged to take economy-wide emission reduction targets, and countries like India can decide the nature of their targets
- 2) No forcible periodic ratcheting up of emission target.

- 3) India does not have to compulsorily provide climate finance.
- 5) No reference to decarbonisation of economies against fixed deadlines
- 6) It lays substantial stress on other elements such as finance, adaptation, loss & damage.

financial and technological support will be provided by developed countries. India is not bound by sector specific mitigation, but overall energy efficiencies

THE DRAWBACKS

- 1) Transparency mechanism brings equivalence between developed and developing countries. Global financial flows for thermal power in India will shrink with time, so India will face problem of finance.
- 2) Climate justice is vague, no mention of Carbon budget and no reference to reducing cost of IPRs.
- 3) Submission of NDC every 5 years.

It might not be ideal, but something is better than nothing. We have come a long way in retrieving lost ground since Copenhagen.

9Q. "The Paris Agreement on climate change marks a milestone in preserving the earth's environment and provides a floor on which to build ambition and action.

Discuss. (200 Words)

The recently concluded Paris agreement on climate change that brought together the leaders of 195 countries has been termed as nearly and revolutionary in nature. The reasons behind such an enthralling response are:

- 1) Provision of \$100 billion/year of climate finance post 2020
- 2) Inclusion of corporate like Bill Gates ensures that private sector would participate too
- 3) Transparency mechanisms makes it mandatory for countries to report on emissions and their sources
- 4) Review meetings provide an instrument to move towards stringent mechanisms
- 5) Adequate developmental space to developing countries and thus respecting the principle of "common but differentiated responsibility"

However, such huge praises may be unfounded because of the following reasons:

- 1) Provision of 'loss and damage' compensation by developed world has been made voluntary
- 2) Issue of Intellectual Property Rights in case of technology transfer has not been dealt
- 3) Non-inclusion of concept of 'carbon budget' gives leeway to countries to continue to pollute environment
- 4) Differential share of commitments e.g. studies indicate that commitments by US and Europe are below their fair share while India has committed more than the requirement
- 5) The INDCs are 'intended' in nature and not 'promised' or 'committed' which implies that there is no punishment in case targets are not met
- 6) The INDCs are not enough to restrict the increase of temperature pre industrial levels to 2C

such finance is not enough for scale of catastrophic event world wide
-no discussion on "climate refugee" issue

Looking at both sides of the agreement, it can be said that though it mired with challenges but the agreement provides a framework under which countries can collaborate together to achieve 'sustainable development'.

10Q. Do you think the notion of differentiated responsibilities has changed post – Paris Agreement on climate? Examine. (150 Words)

The notion of differentiated responsibility first appeared in the Kyoto protocol as "Common but differentiated responsibility", a principle that fixes responsibility to reduce emissions by greater amount on the shoulders of developed world because they were the major polluters.

This principle doesn't find an explicit mention in the Paris agreement but the idea has been retained as is evident by the following provisions:

- 1) Developed countries have been asked to cut emissions in absolute terms while developing countries are only encouraged to do so
- 2) Developed countries have to mandatorily provide funds for climate finance while this is voluntary for developing world
- 3) Developed countries have been asked to provide technological and capacity building support in developing countries

However, the developed world has shed off the responsibility of compensation for 'loss and damage' in case of disasters in developing world. Further, studies carried out by scientific bodies reveal that commitments made by US and EU-developed- are less than their fair share while India- a developing country has committed more than its share.

Thus, in this sense, it can be said that the new agreement though retains the principle of differentiation but in a slightly diluted form.

11Q. It is argued that the Eco Sensitive Zones (ESZ) marginalise local interests and would prove detrimental to conservation in the long run. Critically examine. (200 Words)

ESZ's are created around Protected Areas to prevent ecological damage caused due to developmental activities around National parks and wildlife sanctuaries. Setting up of protected areas and further ESZ cause socio-ecological changes in the region.

How they affect Local population:

- 1) Wild animals often encroach in nearby areas and destroy crops or kill cattle. No compensation is given under the ESZ guidelines.
- 2) Buffer zone of the Protected areas already restrict activities affecting the traditional practices of locals worsening their sustenance.
- 3) Forest villages (treated as encroachers) are denied of developmental activities. There are no schools, healthcare facilities, electricity etc. They are denied to claim for crop loss or making fences around their 'kuchcha' houses.
- 4) Hotels and metro politan resorts leave the locals for low paying jobs. Locals don't find interest in ECOTOURISM because of tough competition from mass tourism.

Detrimental to conservation:

- 1) Villages around ESZ's are converted into resorts for tourists. They get profit from this and unsustainable practices are followed.
- 2) Mass tourism has led to more ite and gateways being opened.
- 3) Current ESZ guidelines have no restrictions over vehicular pollution also.

Instead of preferring outsider (tourism) interest over local interests policies are required to regulate tourism and promote Ecotourism.

Scrapping ESZ will not resolve local socio-ecological issues. There is a need to re-think about the impacts of Environmental policies at local level and conservation of our biodiversity. Local level participation and their alternate income generating opportunities are important for successful conservation initiatives.

12Q> Do you think low oil prices will adversely impact efforts to mitigate climate change? Examine. (200 Words)

Plummeting oil prices due to global overproduction, oligopolistic behavior of OPEC countries and US shale gas bloom has mixed consequences for different countries. Impact of low oil price on efforts to mitigate climate change is also a mixed one:

1. Low price will nullify to some extent the shift toward renewable energy which are generally costly.
2. The overproduction is causing unnecessary consumption of fossil fuel that could have been judiciously extracted for prolonged consumption.
3. It may denude the R&D focus on clean energy.
4. The oil producing countries will push hard on diluting the future climate negotiations as they have been doing in CoP21. Eg. Saudi Arabia's stand in Paris CoP

However it is a boon for oil importing countries if they are seriously 'environment conscious' as:

1. Lower oil prices will help them in diverting more funds toward clean fuel.
2. They can continue increasing their strategic reserves for consumption later without being affected by hike in oil prices later.
3. The low prices if passed on to the consumers will help them tackle hardship in times when the poor are worse affected by climate change.

Abiding by the Paris CoP21 agreement to move from carbon to clean technology and shielding away from greed can only ensure positive result from lower oil prices.

13Q. During the recent Paris Climate Agreement governments agreed to limit warming to well below 2°C and pursue efforts to limit it to 1.5°C. However, it is said that there is scanty evidence of the technological pathways that can deliver the higher ambition. Critically analyse the issue. (200 Words)

- The recently concluded Paris summit was a landmark, as it brought all the nations on to a single page of limiting the emissions. One of the important way to limit the GHG emissions is technological interventions. But it is argued that the current technological headways are not supporting this.

- Why technological pathways cannot deliver higher ambitions:

1. Partial willingness of the developed country to share the technological breakthrough in renewable and clean energy to developed countries.
2. The limitations by TRIPS, by which countries like India are not able to fully develop their non-renewable technological capacities like solar energy.
3. The WTO agreement wherein cleaner technology would be transferred in turn of carbon credits is seen by more a trade than to an approach towards cleaner earth.

- In spite of all these, many analysts are also optimistic in this regard as:

1. The huge capacities tapped for cleaner energy in all the continents especially Africa and Asia.
2. Continuous endeavour of all the nations to move towards a cleaner energy in near future, especially by the developing countries like India.
3. With the recent advancements and the INDCs of individual countries it is very likely that the investment in R&D in technology would be on an increase for every country.

- The Paris agreement is just a start for the long marathon that each country has to run. The mutual support and continuous effort in this regard would only determine the glory. Lastly, this race should not be seen as a competition, because even if a single country loses, the entire world would be impacted.

14Q. Write a note on India's strategic crude oil reserves programme. (200 Words)

India's Strategic crude oil reserves are storages in addition to the existing storages of crude oil and petroleum products with the oil companies that would serve as a cushion in response to external supply disruptions or energy crisis, for around two weeks.

-- Phase-I of the programme involves setting up three caverns including a 1.3-million-tonne (mt) capacity storage facility at Vizag In Andhra Pradesh and two other facilities at Mangaluru and Padur in Karnataka with a combined capacity of 4 mt

-- The Karnataka facilities will be filled by ISPRL, a special purpose vehicle under the petroleum ministry, only after two pipelines of 12.8 km and 36 km length are laid connecting them to the port

-- Local unrest over land acquisition has delayed the laying of the pipelines by more than six months. The deadlock was, however, recently resolved after the company agreed to pay high compensation

-- In Phase-II, India plans to set up four additional reserves with a combined capacity of 12.5 mt

-- Phase-II will start from Chandikhole in Odisha

With the prices of oil prices crashing down by a 60 percent slump, India, which imports 80 percent of its oil requirements, has a golden opportunity to build its strategic reserves as any price below \$50 per barrel is considered decent enough to fill up the caverns.

15Q. Critically analyse the role of NGT and Central Pollution Control Board in protecting environment. (200 Words)

Fundamental role of institutions like NGT and CPCB is to maintain balance between growth and development on one side and protection of environment on the other.

Its been 6 years since National Green Tribunal Act-2010 was passed with objective of speedy and effective disposal of environment related cases. Continuous media reports testifies that NGT has performed its duties vigourously. But because of

following issues we are compelled to be critical while analysing its role in environment protection :

> NGT is located in 5 big cities and moreover has taken power of lower courts in environment matters. This has undermined access to justice. People living in environment sensitive areas often complain that institution like this are out of their reach.

> Sometimes its judgement is also criticised on technical grounds. Experts associated with Judge at every bench is considered not erudite

> Although NGT has been fast in disposing cases, there is still huge backlog and many high profile cases are pending which has substantial impact on environment

Now if we see CPCB, it provides a kind of 'feeder' service. Providing technical assistance, statistics, generating awareness and advise the governments on pollution related matters are some of its important duties. A role which has to be proactive in nature in order to be effective. If we analyse this against backdrop of current environment scenario of country, we may conclude it as failure. But its not so.

Both NGT and CPCB struggle from resource crunch. They carry effective vision of environment protection but are unable to perform. So its better if government strengthen their infrastructure then hope for results.

16Q. Like in the West, is there a possibility for interest groups to form a political party advocating environmental rights and conservation in India? If yes, what should be its nature and objectives? Analyse. (200 Words)

Political parties advocating environmental concerns were started in the 1980's in the West. They have been successful in entering their respective parliaments. Yes, with abundant diversity and increasing role in World politics (especially representing the developing world in global arena) there is necessity to form such a party in India.

Possibility:

YES:

- 1) The development model and corporate interests have caused extreme loss to nature with respect to groundwater depletion, deforestation etc. India's majority still living in rural areas and their needs falling on deaf ears, certain political groups have come up with urgent need to establish a green party
- 2) As it will help us to widen democratic space by considering need based assessment and integrate ecological conscience. Parties have understood that developmental agenda alone cannot win vote base.
- 3) NGO's, environmental activists, civil societies demand for preserving environment. Movements like Narmada Bachao Andolan, Chipko movement, Kittiko Hachiko etc prove this fact

NO

- 1) Political and corporate interests might dominate rural needs. Money, Power can act as deterrance
- 2) Very difficult to form such a party with prominence of existing parties
- 3) Regional politics, low levels of development, poverty etc cannot find place in India where development and globalization needs are on the rise

Nature

- 1) Consider the needs of all groups(farmers,tribals etc) and not urban alone as in the west.
- 2)Revolve around necessities and not corporate interest.This
- 3)Integrate development by conserving nature.Green chemistry , focus on renewable energy can be focused.
- 4) It must have participatory democracy as its foundation that will help to nullify recent rise of radicalism
- 5) Must put strict measures against industrialization of natural resources that cause division among people

With current political scenario and global agenda(Paris talks), there is absolute possibility and necessity to establish a green party.

Politics is the art of controlling your environment-Hunter S thompson

Topic: *e-technology; development in S&T; liberalisation*

1Q. As India is becoming a major destination for start-ups, sectors like e-commerce or mobile payments are attracting strong interest among entrepreneurs and investors whereas health, clean-tech, agriculture and education sectors are neglected. Examine why and also suggest what type of start-ups can contribute in these sectors. (200 Words)

The second decade of second millennium is turning out to be an era of technology startups. These startups can contribute immensely to sectors such as health-care, agriculture and education sectors owing to the link that technology can create between them as explicated by the following:

- These sectors are least developed in terms of technology. Startups can fill the gaps
- Sectors such as education have huge scope and are multidimensional. A tech startup can enter into tasks such as providing MOOC projects to digitizing the education curriculum
- Sectors such as health-care have tremendous money involved and the startups can burgeon using the same
- The government is providing the incentives in the form of facilities and concessions for startups to jump into such sectors

Following are the type of startups that can contribute:

- Aggregator apps in healthcare that can bring doctors or hospitals on the same platform for customers
- Systems that can digitize the education curriculum saving time and paper of the various stakeholders
- Platforms that disseminate information of various aspects including seeds, fertilizers etc. to the farmers
- Companies that can partially automate the cleaning process of municipalities hashing all the data on an online platform

Technology startups along with government incentives will no doubt pave the path to a better future for India in all respects

Topic: Disaster management

1Q. Analyse the role of social media in disaster management. (200 Words)

Disaster management is one which plan is made to reduce the vulnerability and impact of disaster. Social media is a tool which can reach millions within a second helps both before and after disaster occurs.

Role of social media before disaster:

==>Disseminating forecast level through social media like in Twitter (hashtags), Facebook(Trending News)

==>Spreading precautionary measures like steps to follow (As seen during phalin cyclone in orrisa)

==>Mapping more disaster prone zone in google map and facebook so they can relocate to different place

==>Change from traditional warning system (like in radio,tv) to social media makes less vulnerable

==>Mapping intensity of crowd in public place to social media can prevent stampede incidents like in MP,AP

Role of social media after disaster

==>Rescue: During Uttarakhand disaster, Whatsapp is used by stranded people to locate a spot

==>Rehabilitation: During Chennai flood, social media plays a major role in disseminating information like boat vehicle available (ola cab) , for animals rehabilitation.(to Bangalore special vehicle available)

==>Relief: Mapping in Facebook about lack of medicines, food and this helps in NGO and public spirited individual to supply relief materials

==>During recent Yemen crisis, tweeting to Ministry of external affairs helps in sudden relocation

Thus Social media enables us quick respond and rescue measures and helps in adapting to vulnerable situation

2Q> What steps should be taken by concerned authorities during post-flood relief measures? Enumerate. (200 Words)

The steps that should be taken by the authorities as post flood relief measures are-

- 1.Availability of clean drinking water through tankers and distribution of chlorine tablets in all the affected areas to reduce the diarrhoea cases.

- 2.Proper identification of the deceased through DNA finger printing and immediate disposal of dead bodies to prevent the spread of epidemic and environmental pollution.

- 3.The district and state authorities should coordinate with the army personnel so that it is easy to prioritize for the the army and the most affected areas receive immediate attention.

- 4.The state authorities should make proper arrangement for distribution of food packets, tents and blankets in the affected areas.

- 5.Vector control measures should be taken up by spraying of shelters with residual insecticides.

- 6.Mobile field hospitals should be set up close to the relief camps to serve the evacuated population.

- 7.Loss and damage surveys should be taken up and adequate compensation should be provided to the victims.

- 8.The sanitary workers should come into action immediately after the floods to clear the piled up garbage.

- 9.A team consisting of a social worker, psychologist and psychiatrist should be made available by the state to counsel the victims.

- 10.The power transmission lines should be repaired and come into operation as soon as possible.

- 11.The authorities should remain in contact with the public through various media platforms and provide them proper guidance.

12. The Government should involve the corporate sector in the relief and rehabilitation process.

3Q. Critically evaluate the National Disaster Management Authority's (NDMA) role and responsibilities in disaster management. (200 Words)

The NDMA deals with disaster management and preparedness of the nation.

Important roles of NDMA-

1. Lays policies and guidelines for agencies of State and Union Government.
2. During disasters supplements the State Government in evacuation.
3. Responsible for prevention, mitigation and capacity building for disasters.
4. Monitors underlying agencies viz. National Institute of Disaster Management and National Disaster Response Force (NDRF)
5. Deploys NDRF on state request.
6. Disaster related research and development.
7. Facilitation of Early Warning mechanism
8. Recommendation of funds for disaster stricken States.
9. International co-ordination on disasters ex. workshops.
10. Risk assessments for disasters.

NDMA played an important role in Andhra Pradesh during 2009 floods. However, the Kashmir and Uttarakhand crisis have shown the flaws of NDMA.

1. CAG criticized NDMA on failure of fund recommendation and incompleteness of most of the projects taken like – disaster risk assessment.
2. Failure in creating awareness and capacity building specially in rural areas.
3. No proper early warning issuance and communication to respective agencies.
4. Failure in creating hazard maps deterring the identification of high risk areas by the Government.

Extreme weather conditions will increase with climate change and India needs to strengthen its institutions. Absence of a strong leadership and committed members plagues the Organization. There are many States with no proper disaster management mechanism. More communication and co-ordination is needed between Centre and State to fight disasters.

4q. Critically analyse the impact of natural disasters on elderly and disabled people, and preparedness needed to reduce impact of disasters on these vulnerable section of population. (200 Words)

Elderly and disabled people are indeed greatly vulnerable to such natural disasters, which cause huge loss of lives and property.

Impact on elderly people:

- weak body and poor resistance make them a major sufferer of heat and cold waves.
- poor strength makes them incapable to escape disasters like cyclones and tsunamis in coastal areas.
- most of the elderly living in rural areas and dependent directly on agriculture are more prone to sufferings inflicted by drought and flood.
- majority of them holds little property which when lost by disasters make their lives much miserable.

Impact on disabled:

- lacks strength-mental or physical-to cope with disasters in a way a common man can do. So they succumb earlier to disasters.

Steps to be taken:

- dedicated relief, rescue and rehabilitation measures.
- enhancing their social bonding: most of them are socially disowned and seen as burden. This creates psychological pressure on them weakening their willpower to fight challenges like disasters.
- empowering them economically- welfare and assistance programs so as to mitigate the loss of their property during disasters.
- creating awareness among such sections on tackling disasters.
- effective use of social media in their relief and rescue operations.

It is our responsibility to protect the vulnerable sections from natural or non-natural challenges as they are not only socially and economically but also physically deprived-poor strength in elderly and disabled.

Topic: Infrastructure

1Q. Examine the problems faced by steel industry in India and measures needed to revive the industry.(200 Words)

The Indian Steel Industry has always been a promising one , creating umpteen jobs and a foreign exchange earner.

However , the industry is facing the following problems –

1. Human Resources – Most trained and educated professionals prefer lucrative service sector jobs isolating the industry.
2. Capital –
 - a. Huge investment is needed and the industry has a long gestation period. India , a developing nation would require foreign aid which would only happen if our administration and clearances improve.
 - b. Indian banks are grappling with bad loans.
3. Raw material and Infrastructure bottlenecks –
 - a. Shortage of coking coal reserves and the import is expensive.
 - b. All the reserves are concentrated in the East and lack of proper transportation and connectivity acts as a deterrent.
 - c. Mines have become fairly deep increasing the mining cost.
 - d. Further , the Government fixes the price reducing the profit margin.
 - e. Coal industry is still not revamped.
4. Technology –
 - a. Obsolete technology in PSUs manufacturing inferior quality products.
 - b. Need for environment friendly technology.

- c. The recent decision of the Government to not finance R&D would further aggravate the condition.
5. Under-utilization of labour due to frequent strikes, lockout, raw material shortage, inefficient management (slow land acquisition, environment clearances, etc).
6. China –
 - a. Devaluation of Yuan
 - b. Overproduction
 - c. Slowdown in domestic economy increasing exports

These factors facilitate dumping in the market decreasing the global prices hitting the domestic producers and their exports.

7. Global economic slowdown decreasing demand

Reforms needed –

1. Anti dumping duties on cheap import to protect domestic producers.
2. More focus on infrastructure and automobile industry to increase domestic demand and job creation to counter-balance global slowdown.
3. Servicing bad loans by Government to provide capital and reviewing the credibility before dispatching the loans.
4. Increased foreign investment.
5. More emphasis on Green Climate Fund to procure environment friendly technology.
6. Decrease iron ore exports to ensure raw material supply.
7. Efficient governance.

The 'Make in India' initiative is heavily dependent on the steel industry. The aging steel industries globally provides India a great opportunity to be a leader in this arena which it should readily avail.

2q. Inland waterways in India makes up a paltry 3% of the total transport, compared with China's 47%. Examine the potential and importance of inland waterways sector in India and measures needed to increase their length. (200 Words)

India has a potential of 14500 Km of navigable waterways but so far only around 4000 Km has been developed for commercial transportation. The potential to develop waterways is available because:

- 1) Great number of rivers present in the country
- 2) River linking project would ensure that southern rivers do not go through dearth of water
- 3) Presence of good customer base
- 4) Growth of infrastructure in port areas like power stations and ports

Importance:

- 1) Suitable for movement of bulk cargo and hazardous goods
- 2) Environment friendly economic mode as compared to road and rail thus helping to

deal with climate change

- 3) Total costs of internal navigations is very low
- 4) Least risk of accidents and breakdown
- 5) Ensuring seamless connectivity across hinterlands
- 6) Huge potential for employment
- 7) Attracting tourists and generating local income
- 8) Ending the geographical isolation of northeast with rest of India
- 9) Balanced regional development because of availability of good infrastructure

Measures:

- 1) Efforts should be made to develop deeper stretches of river for navigational purpose
- 2) Technical feasibility of reduced the IWT route transportation length by straightening the meandering rivers should be studied
- 3) Raising bridges with low vertical clearance to allow big vessels to move without any hindrance
- 4) Setting up IWT terminals to ensure intermodal connectivity and greater reach into isolated regions
- 5) Encouraging states to develop waterways on tributaries of main rivers
- 6) Strengthening of IWT institutions in order to provide the required expertise and resources

The projects like Sagarmala, Dedicated Freight Corridors, Diamond Quadrilateral further necessitates the development of inland waterways in order to ensure a seamless connectivity required to spur economic growth.

3Q. A recent report says that solar power prices are now within 15 per cent of thermal power, and by 2020, the prices will be approximately 10 per cent lower. Examine the factors that have contributed to lowering of solar power prices and its implications for Indian economy. (200 Words)

The factors that have contributed to lowering of solar power prices are-

1. The production of solar cells has shifted to Asia where the input costs are low.
2. Efficiency of the cells has improved and the weight of material used has been reduced.
3. The fall in prices has led to increased demand which has resulted in economies of scale.
4. The funds are available easily as RBI has included renewable energy under the priority sector lending norms.
5. The Government has allowed tax free bonds in the renewable energy sector.
6. The proposed changes in the regulation such as the amendments in the National Tariff Policy of 2006 has provided a fillip to the sector.

IMPLICATIONS FOR INDIAN ECONOMY-

1. It will lead to a fall in demand of coal and gas. Their prices will fall and it is likely that sources of energy will become cheaper to compete with the solar sector.
2. It will also have an impact on the transport sector as cheaper solar energy will lead to increased usage of electric vehicles and thus reduce the demand of oil which India imports extensively. This will reduce the current account deficit.

3. The economic losses due to the environmental costs will be significantly reduced.
4. This will help India to meet its INDC's without sacrificing its economic growth.

4Q. Discuss the objectives of introducing the Real Estate (Regulation and Development) Bill, 2015. (150 Words)

The Real Estate (Regulation and Development) Bill envisages the following objectives:

- Establish state level RERAs (Real Estate Regulatory Authorities) in order to regulate the market and ensure fair play for everyone
- Establish State Level Appellate Tribunals and adjudicating officers, thereby relieving the civil courts off some burden, in to solve disputes and speed up the related procedures
- Mandatory disclosure of registered projects and every detail related to it to ensure transparency
- Deposit a specified amount by consumer in a separate bank account for construction purpose only, in order to ensure timely completion of the projects
- Registration of commercial as well as residential real estate projects with the regulatory authorities in order to implement a uniform system with no discrepancy
- Barring promoters from changing design without having the consent of consumers in order to avoid any confusion on the latter's end

The bill essentially rectifies the problems ailing the real estate sector. If implemented strictly, it can boost the same.

5Q. In India, electricity and telecom sectors provide a contrasting picture when it comes to profitability and debt management. Examine why telecom sector has done well in India and what electricity sector can learn from telecom's experience. (200 Words)

The Electricity sector is lagging behind telecom sector in terms of –

- (1) Reach-In India presently 20% of the population still lacks access to electricity, whereas telephony has reached even to the remote locations.
- (2) Debt management - The telecom companies too are carrying huge debts on their balance sheets due to bids in the spectrum auctions and continuous capital expenditure but they are able to service their debts, keep prices low and remain profitable.

The reason of success of Telecom sector in India can be following-

- 1) progressive regulatory regime, favourable demographic features and conducive business environment.
- 2) significant reduction in initial set up cost, increased consideration in infrastructure sharing.
- 3) Improved service quality, faster roll out of services in rural and remote areas.
- 4) introduction of newer technologies such as 3G and WiMax, the acceptance of value-added services.

5)Ease of changing the tariff plans anytime coupled with the notion that prepaid connections help in limiting expenses within a fixed budget are likely to have made prepaid connections an attractive proposition for the customers in telecom sector.

The Major learning for Electricity sector can be as following-

1)Bringing the concept of prepaid cards for electricity which may need some support from regulation and law enforcement.

2)Bringing more and genuine competition, especially in distribution with open access policy in distribution.

3)Better use of technology which can lead to reduction in initial set up cost, increased consideration in infrastructure sharing,Improved service quality,faster roll out of services in rural and remote areas etc.

4)Paying for electricity is a habit that needs to be inculcated and reinforced by a publicity campaign and small incentives.

5)Regulators need to be sensitized to the challenges faced by the sector and policy framework needs to

be crafted and enforced to ensure a win-win situation for all the stakeholders.

6)Awareness among public for optimizing the use of electricity.

6Q> Write a note on the objectives of and sources of funds for National Investment and Infrastructure Fund. (200 Words)

National Investment and Infrastructure fund is a fund created by the Government of India for enhancing infrastructure financing in the country. The primary objective of NIIF is to maximize economic impact mainly through infrastructure development in commercially viable projects, both greenfield and brownfield, including stalled projects. It could also consider other nationally important projects, for example, in manufacturing, if commercially viable. Other objectives may include:

-- Overseas ties and materializing Make in India scheme as it attracts foreign investors

-- Service provisions to the investors

-- Structuring and framing the investment models and their monitoring

-- Advisory objective to provide guidance to infrastructure projects

NIIF is not a single entity, it may contain more than one fund set up as Alternate Investment Funds. Following are the sources of this fund:

-- Government can provide upto 20000 crore per annum into these funds making 49% share of the total corpus

-- Sovereign/ quasi-sovereign/multilateral/bilateral investors

-- Cash-rich Central Public Sector Enterprises

-- Domestic pension and provident funds, National Small Savings Fund

Topic: *Agriculture, food security*

1Q. Discuss the contentious issues related to agriculture and food security that India is negotiating with WTO. What will happen if India dilutes its stand on these issues in upcoming WTO meeting? Examine. (200 Words)

The most contentious issue related to Agriculture in WTO is the Agreement on Agriculture (AoA), for India's negotiation on subsidies under Amber Box.

>>The Amber box subsidy limit specifically limits the total subsidies on food to be not more than 10% of total procurement on the basis of 1985-1986. India, in its current situation is exceeding the limit with a substantial margin and hence the issues in negotiations are cropping up.

>>India's stand on the matter is very clear. As developing country with a large population, govt. has its obligation towards the large strata of the society which are unable to earn food for themselves on market prices and hence subsidy, in current scenario, is the only option possible to save them from starvation and poverty.

>>If India heeds to the demand of developed countries such as USA to dilute its stand on this issue, following repercussions can be expected.

- Vast majority of the population would not be able to get the benefits of PDS or the Direct Benefit Transfer which the govt. is envisioned through its Jan Dhan Yojana.
- The large influx of cheap agricultural products from USA and other countries would cripple down the indigenous production of the same, as govt. would not be able to increase the MSP on grains due to the conditions of 10%. It means, more migration - > but no employment and infrastructure in manufacturing and services.

The issue on Agriculture hence require a firm stance from India in view of its welfare policies which are absolutely essential for now.

2Q. Discuss the features of National Policy on Farmers, 2007 and examine if its is time for India to have a new policy on farmers. (200 Words)

NPF 2007 policy implemented by govt with the aim to improve economic viability of farming and increase net income of farmers. Main features of National policy on farmers, 2007 are -

- > Formation of asset in respect of land, water, livestock, fisheries and bio-resources.
- > supply of good quality seeds and disease-free planting material.
- > Region and crop specific implements and machinery.
- > Adequate and easy reach of institutional credit at reasonable interest rates and farmer-friendly insurance instruments.
- > Support services and inputs like application of frontier technologies, agricultural bio-security system, use of ICT and setting up of farm schools to revitalize agricultural extension.
- > Effective implementation of Minimum Support Price (MSP).

Need for recent steps taken by govt to re examine the NPF, 2007 have been arouse due to following reasons -

- > Day by day deteriorating condition of farmer and increased suicidal rate
- > Need to take measure in the direction of increasing farmers income through direct transfer of subsidies, incentives and differential prices.
- > Policy should also take into account the changing equation of climate change and frequent extreme weather condition.
- > Aggressive and assured implementation of digitization of agricultural services.
- > Agri Uni Curriculum proven to be incompatible w.r.t changing demands of farmers and weather which need to be revamped.

Interlinking and assertive implementation of various ongoing scheme like PMKSY, Soil Health Card, Mriduparikshak accompanied by ensuring last mile connectivity to send updated valuable information to farmers, extensive reach of banking and credit system, availability of alternate employment opportunity etc will be helpful to tackle the plight of farmers.

[seed bank, fodder bank, digitalisation of land records, land reforms, tenancy rights in forest areas, lab to land connectivity, farmer social networking platform, direct connectivity with the farmers to dissipate the information related to monsoon and pest attack, promotion to frugal agricultural support technologies, etc]

3Q. In spite of the sustained efforts made by central and state governments, the adoption of micro-irrigation (MI) in the country is tardy. Discuss its benefits and causes of its poor adoption. (200 Words)

Micro irrigation(MI) mainly includes sprinkler and drip irrigation. Some of the benefits are as follows:

- 1.) Water savings: by reducing loss of water in conveyance, evaporation, run off and deep percolation.
- 2.) Energy savings: system can be operated by a smaller power units hence less energy consumption.
- 3.) Weed and disease reduction: inhibit growth of weeds by limited wet areas.
- 4.) Can be automated. Fertilisers and chemicals can be applied with water supply hence reducing labour requirements.
- 5.) Improved production on marginal lands like hill areas as there would be no run off and no need for levelling.

Though having all the above advantages, MI hasn't been adopted satisfactorily where it has been adopted on only 14% of the potential land for this. Some of the causes for the non adoption can be seen below:

- 1.) Poor governance: lack of implementation of subsidies to incentivise adoption against high initial cost remains the main obstacle.
- 2.) Greater maintenance required as soil particles, algae or mineral precipitates can clog emission systems.
- 3.) Potential for damage: Animals, rodents and insects can cause damage to the components.
- 4.) Willingness: Farmers in some areas having sufficient water resources don't show willingness to spend money.
- 5.) Awareness: gaps in information regarding benefits of the MI among people.

In the age of globalisation where stress is given more upon productivity and efficiency in every walk of life to sustain cut throat competition, India can't remain behind. MI systems are the need of the hour to increase productivity in a country where yield gaps vis-a-vis other countries are high and the same has been stressed in objectives of our macroeconomic policy. For that government needs to adopt proactive policies and alternate models so that two thirds of population which depend upon agriculture can have better living.

4Q> It is often argued that the Food Corporation of India (FCI) is a highly inefficient organisation. Do you agree? Substantiate and suggest reforms. (200 Words)

FCI was established to provide price support to farmers, distribute food grains, provide storage facilities to ensure food security and price stability.

FCI, an inefficient Organization?

Arguments for –

1. Increased food grains procurement prices.
2. Rotting of grains in unscientific FCI godowns.
3. Failure in procurement since large number of farmers uncovered.
4. Leakages in distribution system.

Against –

1. Procurement prices are divided into – Acquisition, responsibility of Central and State Governments and account for 80% of the prices and Distributive prices (20%) under FCI control. These distributive prices have fallen due to the FCI's efforts.
2. State Government's increase MSPs to gain votes and these extra grains are channelized to FCI. Moreover the decision of quantity to be stored and sold is of the State and Central Government.
3. FCI via PPP has constructed scientific godowns reducing the crop damage.
4. Departmental labour salaries have a huge drag on finances. The Central Government has to solve this problem.

The FCI has shown a lot of improvement so tagging it inefficient would be incorrect.

Reforms needed to streamline the Organization -

1. More autonomy to sell crops above the buffer stock and to refuse collection above these stocks.
2. PDS tracking should be computerized.
3. GPS tracking of vehicles transporting food grains.
4. More scientific godowns on PPP lines.
5. Labour reforms.
6. States well equipped to run their own PDS should be allowed and FCI should focus on States in East and NE.

Concerted efforts by the Government, its agencies and the private players would be needed to provide food security to India which will make Indian agriculture a lucrative market.

5Q. “The time has come to review the utility of not just Minimum Export Prices (MEPs), but also other restrictions on movement, storage and marketing of agricultural produce.” Do you agree with this view? Substantiate. (200 Words)

Agriculture sector has been riddled with many problems relating to ad-hoc policies and inefficient systems that handle the movement, storage and marketing of food grains and appropriate steps are required on each of these fronts. Such an argument is being made because:

1) Minimum Export Prices-An ad-hoc policy is followed for hiking or reducing the MEP which affects farmer in adverse way because of poor realization of prices. A long term policy keeping interests of farmers in mind and the international market prices should be the way forward

2) Movement- The inter-state restrictions on movement of food grain prevents moving the grain from surplus to distress regions and thus affect the social security of people. Such barriers should be eliminated through use of Article 301 to 307 in Indian constitution that promotes free movement

3) Storage-FCI is under the hands of central government and has no autonomy. Decisions with regard to storage of excessive food grains or emptying the warehouses with rotten food grains are not in hands of FCI. Government should provide adequate autonomy to FCI to take such decisions in order to prevent pilferage of food grains.

4) Marketing-Farmers face problems of low price realization in Agricultural Produce Marketing Committees 'Mandis' and are not able to sustain themselves. The model APMC act that promoted the participation of private sector has not been implemented by all the states and the monopoly of APMC continues. Placing thrust on contract and direct farming to allow the farmer to fetch better process should be the way forward.

Agriculture sector promotes the food security of every individual in the nation and need to be provided with adequate care and support to keep it sustainable.

[apart from poor realisation proces, it affects

1) loss to export market

2) discourages farmer to grow that crop

plus issue of hoarding also leads to shortage and govt. unnecessarily increases the export price. hoarding is the biggest problem.

utility of MEP is to ensure food security at home, but it fails due to this hoarding.

Solution me can suggest "curb hoarding--involvement of State Govt required.

problem of cold storage, is another issue.

lack of mechanized transport (transportation issue) ----food wasted

]

6Q. A task force on agriculture, set up by the National Institution for Transforming India Aayog or NITI Aayog, has suggested a number of measures intended to raise agricultural productivity and make farming lucrative. What are these suggestions? Critically comment on them. (200 Words)

The task force on agriculture set up by the NITI Aayog has suggested the following to reform the agriculture sector-

1. Careful use of GM technology to produce varieties of pulses and oil seeds.
2. Replacing MSP mechanism with a deficiency payment system.
3. Easy land leasing to allow farmer with non viable land holdings to exit the farming sector and consolidating these non viable land holdings to make them viable.
4. Encouraging ' contract farming'.
5. Adopting a cooperative model for fruits and vegetables similar to that adopted in case of milk.
6. Deregulating the urea subsidies and providing direct subsidies to the farmers.
7. Enabling farmers to frequently upgrade their seeds.
8. Judicious use of Essential Commodities Act so that investment in storage facilities is not deterred.
9. Making food processing industry a major export industry.
10. Encouraging agriculture research with the help of private investment.

However-

1. Reservations about the GM technology still exist and their impact on ecology has still not been fully brought out.
2. Deficiency Payment system may act as a disincentive for farmers to work hard and its impact on tribals and casual labourers will be limited.
3. Providing cash subsidies to the farmers will not be viable unless each one of them has a bank account.
4. Leasing land from small farmers without proper rehabilitation will make his survival difficult as agriculture is a livelihood issue in India.
5. Contract farming may lead to exploitation of the illiterate farmers if the contracts are made to the disadvantage of farmers.

Topic: *Economics of animal rearing*

1Q. Unabated shrinkage of grazing lands and rapid deterioration in their vegetative cover have adversely affected livelihood of small and marginal farmers and landless people. Examine the causes, implications and what government can do to address this problem. (200 Words)

Animal husbandary and cattle rearing is an important and resilient part of Rural economy for which grazing land is imminent.

Causes of Deterioration

- ~Overgrazing, no replenishment of land, no fallow time for rejuvenating of grasses, encroachment of land, real estate boom,
- ~Rich people acquiring the land for agriculture with Panchayat consent.
- ~Grazing land doesn't come under purview of Panchayat and also not under PESA(Panchayat Extension to Scheduled Area) Act 1996. Hence, Panchayat has no motivation to take care of it.

~ Forest rangers and guard often consider Grazing land as buffer between national parks, forest or scheduled forest and village. Hence, often not let villagers to let their cattle graze to avoid man-animal conflict and cattle preying.

Implication

~Affects rural economy, animal husbandary.

~A deteriorated grazing land also reduces plant or grass cover which leads to soil eroding and fast silting of river bed.

~Reduces grass quality and forage quantity.

~Once land becomes barren, encroachment becomes easy as no community protests against encroachment.

Measures to be taken by Government

~Include Grazing land management under Panchayat Act of 73rd Amendment. Also in case of adjacent Protected Area, let it be cooperative management of Panchayat and National Park or Sanctuary.

~Spread awareness of planting nutritious and drought resistance grass in grazing land. Provide subsidized grass seeds in initial years.

~Empower Panchayat to settle encroachment cases in Gram sabha. It will give common holding feeling to eligible voters of villagers.

Like Agricultural land, Grazing land is also important to Rural economy, it's replenishment and usage should be closely monitored.

Topic: Investment models

1Q. Governments use a variety of public procurement methods. Few of them include LCM (least cost method), QCBS (quality and cost-based selection), viability gap, reverse e-auctions, and hybrid annuity. Analyse each of them and examine how different is Swiss Challenge method compared to these methods. (300 Words)

Public procurement methods are used to assign development projects by the Government entities to contractors.

Few ways are mentioned below –

1. Least Cost Method – It is used for standardized projects which require least technical knowledge. Bidder with least cost gets the project. Example – Contracts for services like cleaning, maintenance, etc.

2. Quality and Cost Based – The contractor is evaluated on the cost, technical qualification and experience in the field. Usually used in transport infrastructure.

3. Reverse e-auction – The sellers of a service compete to obtain a business and the prices come down as sellers undercut.

4. Hybrid annuity model – It is based on PPP model. The Government and the contractor contribute 40% and 60% respectively. It is a blend of EPC (Engineering, Procurement and Construction model) and BOT (Build-Operate-Transfer) model.

Usually used in road infrastructure. The Government is responsible for the collection of toll and pay back the private player.

5. Viability Gap model –PPP based. Includes projects that fetch economic benefits but not financial gains so the private player may run into loss. The Government to ensure investment shares the cost. The Central government shares 20% and the State Government shares another 20%. The player demanding the least Viability Gap Fund gets the contract.

6. Swiss Challenge- A new model in which the private players do not wait for the Government to identify the project but take self initiatives. They produce a plan and reach out to the Government entity. Other players can further innovate this plan. Proposer with the best plan wins the contract. Original proposer is paid for the intellectual property and is also given the 'Right to first refusal'. Only if he refuses to carry out the project, it would be given to third party.

Swiss Challenge is different in the following -

1. Government does not have to identify and design the plan. This is done by the proposer.
2. Cuts bureaucratic red tape and shortens implementation timeline
3. Private players while competing with each other bring in more innovation, uniqueness, technology and efficiency.

SCM has been in news as after in use by some states, Indian Railways has decided to award contract for development of 400 stations by this method. Though, the Supreme Court has approved the method, the Central Vigilance Commission frowns over it due to possibility of manipulation and rigging.

The concerns –

1. Process is not transparent
2. Could foster crony capitalism
3. Companies could use dubious means to get the projects

If the process is kept transparent and fair, it would be revolutionary for India's development and many infrastructural related problems would be solved.

2Q> The ministry of road-transport and highways is likely to award three projects under a hybrid annuity model (HAM). Examine the features of HAM model and compare it with PPP model. (200 Words)

Hybrid Annuity model (HAM) is a blend of Engineering-Procurement-Construction (EPC) and Build-Operate-Transfer (BOT) models where the Government entity and the private contractors contribute 40% and 60% respectively.

The contractor under EPC model takes up the responsibility of the complete construction and finally hands over the project. The Government entity under the BOT-Toll model collects Toll and pays the contractors. In places where toll collection is difficult due to poverty or reduced traffic BOT – Annuity is followed according to which contractors are paid via budget allocation or a dedicated fund.

This way financial burden of both the entities is reduced and private players are assured of profit.

Difference between HAM and other PPP models –

1. There is cost sharing between public and the private entities. This reduces burden for both.
2. Land and environmental clearances provided under HAM is 90% so the contractors only have to deal with the rest 10%. Other models, Government provides only 80% clearance. Due to this clearance the development would be quick.
3. In other PPP models like EPC – the Government bears the construction cost, in BOT- Toll – developer is given the responsibility of toll collection. But in HAM risks have been shared with Government collecting toll and in absence of collection paying from its own exchequer.
4. In other PPP models dates and standards are pre-determined. Non conformity leads to penalty. Payments are also performance based. However, in HAM the financial structure is made clear initially so developers are not scared to volunteer.

HAM corrects the flaws present in previous PPP models and hence has given impetus to more private participation. In addition to this, dispute resolution should be improved to fast-track halted projects.

3Q. Recently the Vijay Kelkar Committee on public-private partnership (PPP) has made many recommendations to review and revive PPP model in India. Discuss its important recommendations. (200 Words)

The recommendations of the Vijay Kelkar committee to revive PPP projects which are envisaged to accelerate the development of the country are as follows-

1. It proposes to set up an umbrella organisation '3P India' which would act as a centre of excellence, engage in research and capacity building for the PPP projects.
2. It suggests in the Prevention of Corruption Act to differentiate between graft and genuine errors in decision making.
3. It has proposed to move away from PPP Model Concession Agreements (MCA) as it is a one size fits all approach and does not address the projects specific risks. Thus, MCA's for each sector should be reviewed to accommodate the interests of all the stakeholders.
4. The Finance Ministry should allow banks and financial institutions to issue zero coupon bonds which would lead to soft user charges in the infrastructure sector.
5. It recommended independent regulators for PPP projects in different sectors.
6. There should be a renegotiation framework in the bid document.
7. There should be a provision for monetisation of viable projects that had stable revenue flows after engineering, procurement and construction delivery.
8. PPP model should not be adopted for small projects.
9. There is a need to attract long term investors to source cheap long term capital.

Some sector specific regulations are as follows-

ROAD-

a. Introduction of hybrid models, viable gap funding, part annuity, operation and maintenance grants for non-BOT projects.

b. Relaxing exit norms.

c. Shift to electronic tolling in a time bound manner.

PORTS-

a. Speeding up the environmental clearances.

b. Provide support infrastructure to the developer.

RAILWAYS-

a. Simpler projects should be taken up first to build up credibility.

b. Set up a regulatory authority to settle technical issues.

AIRPORTS-

To avoid regulatory uncertainties, concession agreements should stipulate important commercial parameters.

Topic: *Various Security forces and agencies and their mandate*

1Q. Analyse the role of Indian Navy in safeguarding India's interests in various fields. (200 Words)

The role played by Indian Navy in safeguarding India's interests can be seen under the following heads –

1. Military –

(i) Projection of power during conflicts e.g. naval blockades during the 1971 Indo – Pak War

(ii) Protection of the Indian Ocean Region from security challenges such as proliferation of WMDs, piracy, terrorism etc

2. Strategic –

(i) Protection of sensitive coastal infrastructure such as the BARC facility, Wheeler Island and Sriharikota etc

(ii) Security assistance to merchant vessels of other countries and assistance given to Vietnam in its oil exploration activities in South China Sea against China

3. Economic –

(i) Protecting India's trade routes in sensitive zones such as the Hormuz strait and Somalia coast

(ii) Indian Navy closely cooperates with ONGC in off-shore oil exploration

4. Diplomatic –

(i) Humanitarian assistance in critical situations e.g. Tsunami of 2004, evacuation of Indian nationals from Libya and Yemen etc

(ii) Joint Maritime engagements such as Malabar (with US navy), CORPAT (with Indonesia) to enhance defence cooperation

The navy role will become more significant with the growth in volume of trade in Indian Ocean and India's economic prowess. With the Navy's recent unveiling of a 15-year plan to achieve full-indigenization in all phases of warship construction and alignment of this plan with the 'Make in India' initiative, Indian navy is progressively moving towards its establishment as a true 'blue water navy'.

Topic: Linkages between development and spread of extremism

1Q. In recent months, more Indians are being recruited by ISIS. In your opinion, what are the causes? Critically examine. (150 Words)

Till now nearly 20-30 Indian youths have been reported to have been recruited by Isis in Syria, thus giving reason of great concern to our great secular nation and intelligence agencies in particular. The causes for Indian youth getting attracted to terrorist organisation are:

- 1) Religious reasons- The urge to serve ones religion and its cause
- 2) social media - the propaganda by extremist forces brainwashes the youth to seek for better future or better life after death
- 3) economic concerns - unemployment or need of money for better life of oneself and family forces youth to such take extreme measure
- 4) national climate - insecurity due to anti minority violence can force them to opt this escape route
- 5) peer/ surrounding pressure - getting influenced by the Is sympathisers, religious fanatic, or those already joined is
- 6) forceful radicalisation

To prevent this unmindful drastic acts of youth concerted efforts form all the stakeholders of society is required as:

- building up peaceful and cordial national environment
- stopping unnecessary propaganda of intolerance
- building up intelligence system to stem any radical growth or youth migration
- opening up more employment opportunities
- deradicalizing or neutralising the youth
- reinstalling faith in our constitution and its ideals
- keeping check on social media and radicalizing agents
- increasing vigil at borders

Thus by rebuilding the faith and confidence in the youth towards nation and its people, the attraction of youth for such organisations can be removed.

Topic: Role of external state and non-state actors in creating challenges to internal security

1Q. “This is a new phase of the global jihadist movement. Al-Qaeda more or less waged an asymmetric war against the rest of the world. The IS has built a proto-state in the territories it controls.” Elaborate and highlight the new challenges that IS has posed to Western powers. (200 Words)

The objective of IS is to establish an Islamic caliphate and for fulfilling its political ambitions, it has been fighting on the ground in Iraq and Syria. It was quite successful in the beginning and captured various cities in the 2 countries. It used online propaganda and by citing religious texts, attracted the youth from these countries to fight for IS in Syria and Iraq. As its territorial progress has been halted by anti-IS forces it is posing several new challenges for the western powers.

1. OUTSOURCING OF TERRORISM-

IS has now started outsourcing the terrorism which involves training the radicalised

youth of these countries in their camps and sending them back to their home countries where they could carry on attacks on the behalf of IS. Through massacring civilians in these western countries, they help in the rise of xenophobic forces and increased alienation for the minorities. This helps them in recruiting the alienated youths from these countries. This also drags more western troops into the war which strengthens their narrative of a religious war and attract more youths.

13/11 Paris attack is an example.

2. LONE WOLF ATTACKS-

Another challenge is the increase in the number of homegrown self radicalised individuals who are influenced by the IS ideology and are impossible to detect. These individuals are not in any direct contact with the IS and carry on the lone wolf attacks in the western societies of which they are themselves a part.

The recent California shootings are an example of this type of attack.

The first challenge can be overcome by stringent VISA checks and strengthening of airline security. The second challenge is the most difficult to deal with and can be overcome only by counter propaganda and integration of minorities.

Topic: Prevention of money laundering

1Q. In your opinion, what feasible measures should government take to prevent money laundering? Discuss. (200 Words)

Steps which can be taken to prevent money laundering are –

1. Structural –

(i) Expediting the implementation of Direct Tax Code(DTC) to simplify taxation procedures and plug loopholes

(ii) Revamping schemes like Kisan Vikas Patras which can be used for smurfing

2. Institutional –

(i) Empowering SEBI to regulate the inflow of FDI in the form of P-notes

(ii) Acceptance of Basel-III norms for Indian banks to incorporate safety measures against laundering

3. Technological –

(i) Promote the usage of online-banking and plastic money by increasing internet penetration

(ii) Linking up India's NATGRID with bank accounts, Aadhar accounts etc to allow better monitoring

4. International Cooperation –

(i) Close-cooperation with FATF regarding outflow of money for financing terrorism

(ii) Enacting a law to nationalize all bank accounts where black money is held by invoking UN Convention against Corruption Resolution

4. Social –

(i) Nationwide campaigns against money laundering on the lines of the campaign for giving up of LPG-subsidies

(ii) Emphasis on increasing financial literacy of people to encourage them to invest in securities instead of only in real-estate or gold

Although, political will has been found wanting in numerous occasions, recent moves by the govt. such as accepting the Shome Panel recommendations on GAAR, implementing a LoB agreement with Singapore are progressive steps towards addressing the issue of money-laundering In India.

2Q. Recently India was ranked the fourth-biggest source of black money by a US-based think tank. Critically examine the sources of black money in India and its impact on national economy. (200 Words)

The sources of Black Money in India are –

1. Real Estate – Transactions are registered at very low values to save tax liability. To prevent BM generation, government has planned area-wise circle rates as benchmarks
2. Bullion and jewellery – Immense demand for gold has given rise to smuggling and alloying of gold. However, this demand is expected to lower with growing financial literacy
3. Not-For-Profit organizations – Various NGOs, religious and educational institutions etc are guilty of conducting commercial operations and not paying taxes. Cancellation of NGO-licences is one of the steps taken by the government
4. Tax free zones – Numerous industries setup nominal units in States with favourable taxation regime and inflate manufacturing data to evade taxes. Implementing GST will help in this regard
5. Corruption – Public officials are often accused of leveraging their positions to earn BM. The government has implemented laws such as the PoCA, Black Money Act(2015) etc to address this issue

Impact on national economy –

1. Low tax revenues for the government
2. High demand for scarce commodity like land leading to problems of housing, infrastructure development etc
3. High inflation rates due to the excess of unaccounted money in the market
4. Risk of BM being reinvested in India as FI which carries the risk of capital flight
5. Poor state of securities and bond markets