

GS SCORE

TEST - 13

GENERAL STUDIES - PAPER III

Time Allowed: 3 hrs.

Max. Marks: 250

Q.	Marks	Instructions to Candidate
1.		<ul style="list-style-type: none">There are 20 questions.All questions are compulsoryThe number of marks carried by a question is indicated against it.Answer the questions in NOT MORE THAN 200 words each. Contents of the answer is more important than its length.Answers must be written within the space-provided. <p>Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.</p> <p style="text-align: right;">4/10/2017.</p>
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1. Invigilator Signature _____

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Name JASROOP KAUR BATH

Roll No. JAS-16961

Mobile No. [REDACTED]

Date 30-9-2017

Signature Bath

REMARKS

GS SCORE
MOCK TEST SERIES 2017

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Roll No. _____

Q1. Has 'Make in India' has improved the industrial investments in India? Illustrate with some key investment projects? (12.5 Marks)

7 10
Ans
Investment

Ans - Make in India was the flag ship project of the government - in order to make India a hub for manufacturing.

It has resulted in a number of key projects

- USA is willing to make F-16 jets in India closing its factory in USA.
- Defence maker SAAB will make equipment in India.
- Chinese maker Huawei ~~proctor~~ makes mobile phones in India.
- Automobiles are increasingly being made in India.

⇒ But POSCO retained CO. ... FDI flows
L fact figure

- Make in India hasn't come with much investment.
- Most projects are in discussion stage.
- FDI has been in stock market not industry.
- Very few projects have taken off ground.
- tax terrorism.

Remarks

- Manufacturing in India too is stagnating as shown by IIP
- Purchasing Managers Index (PMI) has fallen below 50 showing decline in manufacturing
- Growth of core industries has been hovering around 1-2%

⇒ Steps needed -

- Increase ease of doing business eg. Doing eg. Predictable tax laws & not retrospective taxes such as the Vodafone case.
- Reduce corruption & red tapism.
- Restructure NPAs of core industries so as to increase economic activity

Underlined parts

MPL

Bankability

UDTM Schemes

Remarks

Q2. What is the meaning of 'protectionism and trade-restrictive measures'. Also, analyze, how it is affecting the world trade and relationship between countries? (12.5 Marks)

Ans- Protectionism and trade restrictive measures are the opposite of Globalization. While globalization sought to increase world trade by decreasing trade barriers, protectionism seeks to put up such barriers once again. - Anti dumping
Domestic content requirements
Exchange rate manipulation

eg. Using high custom duties to prevent goods from other nations to enter your markets.

eg- Using non-tariff measures such as quotas, sanitary and phytosanitary measures to restrict inflow of goods.

⇒ Examples of Protectionism

- Buy America
Brexit
- USA under President Donald Trump: has increasingly resorted to protectionism such as Mexico-US
- USA pulled out of the regional trade agreement TPP (Trans Pacific Partnership)
- USA threatens to stop imports of Chinese products into USA
- USA wants NAFTA (North American Free Trade Association) amended to reduce imports.
- Britain's exit from EU after invoking article 50 of the Lisbon treaty.

Remarks

⇒ Flow Protectionism affects world trade.

- Distortion of world trade: whereby USA only wants to export goods to other nations & not import any.
- Poor and 3rd world economies suffer: as USA and other developed nations block off their borders.

USA pulling out of TPP affected small economies such as Vietnam and Cambodia.

Decrease in world trade: as developing nations too try and impose barriers to trade to protect their interests.

⇒ How protectionism affects relationship between nations

Increases tensions between nations: such as

Tensions between USA & China increased after Trump's rhetoric against Chinese economy.

Tensions between Britain & rest of EU, especially Germany worsened due to Brexit.

Small and developing ^{& like-minded} countries try to form own groupings

- China has now emerged as the protector of globalisation
- USA is increasingly losing its position as the world leader due to its isolationist stance.

Protectionism is increasing as the world economy never fully recovered from 2008 crisis

Remarks

U.S.
Reduces efficiency,
competitiveness
Autarky
Protection
Trade wars

Q3. What is India's National Trade Facilitation Action Plan? Do you think the trade facilitation agreement of WTO would benefit India? Give arguments to justify your opinion.

(12.5 Marks)

Ans- The ministerial conference of the WTO at Bali resulted in the finalization of the Trade Facilitation agreement.

The Trade Facilitation agreement (TFA) is aimed at -

- Easing of customs rules and regulations
- Reducing bureaucratic red tape
- Easing and digitization of procedures.

All these are expected to result in increased ease of doing business, increased world trade by \$1 billion and increased job creation.

⇒ India's National Trade Facilitation Action Plan incorporates the following.

- Ease of rules such as customs rules and procedures which will reduce delays at ports and reduce bureaucratic red tape
- Inter agency co-ordination such as between Customs, FSSAI (Food security safety and standards authority of India), Plant protection measures.
- Timelines introduced: within which these measures have to be incorporated.
- TFA Plus: includes infrastructure development such as roads and rail development upto port etc
- Short term, mid term and long term goals introduced

Remarks

reduction in lay down
paperless regulatory environment
predictable legal regime

- Digitalization of clearances: at ports in order to reduce bureaucratic red tape.

⇒ How TFA will benefit India -

- Ease of doing business: will be enhanced due to simplification of rules and procedures, reduction of bureaucratic red tape and digitalization.
- Increase in investment: as a result of Ease of doing business.
- Increased trade: due to simplification of procedures in other nations as well eg Vietnam, Brazil etc will increase. Indian exports and foreign earnings.
- Increased job creation: due to digitization of services and increased exports.

⇒ Negative effects of TFA:

- Reduced scope of increase in exports: especially by developed nations as their procedures are already simple.
- Massive increase in imports: especially by developed nations due to easing of rules.
- Loss of jobs: due to flooding by imports and thus fall in exports.

TFA is a landmark agreement that will help world economy. It will also help ease of doing business in India. But protection must be provided against its

Remarks - negative effects.

especially by the Public Sector Banks (presently 12% of total loans advanced) is a cause of worry and is both a factor and a result of the slowdown of growth.

- It resulted from a decreased earnings of infrastructures and other big companies (textile, power etc). This also causes slow down.

- It further causes - reduced lending to corporate sector which again causes fall in growth rate.

• Agriculture sector is stressed: as a result of low growth (merely 1.5% in 2016), fall in prices of crops, less processing of crops, farmer suicides, decrease in public investment

• Job less growth: Only 60,000 jobs created in last quarter of 2016-17 by according to Labour ministry, but 10 lakh job seekers enter market every month.

• Unskilled workers present in India & informal nature of employment

⇒ Solutions:

• Resolution of NPA's: with the help of a Bad Bank as proposed in Economic survey, increase in provisioning, restructuring of Asset reconstruction companies.

• Invest in infrastructure creation by govt to create jobs

• Reform agriculture: by providing insurance (eg Pradhan Mantri Fasal Bima Yojana), processing of crops (eg Mega Food Park scheme), micro irrigation (Krishi Sinchai Yojana)

• Skill Indian Youth: eg Through Skill India programme

• Promote entrepreneurship & innovation: eg Through Standup India

Remarks

Q5. Recently NITI Aayog has suggested the introduction of 'Price Deficiency Payment' system. Do you think this will effectively reduce farmer's problems and improve their livelihood? Critically analyze. (12.5 Marks)

Ans- Price deficiency payment system includes the payment of the price difference between MSP (Minimum Support Price - as announced by government) and the actual market price that farmers get.

This will ensure that every farmer gets equivalent of MSP for his crop sold and government will bear the cost of subsidy.

The price will be directly transferred to the farmer's bank account.

⇒ Benefits of Price deficiency payment system

- All crops will get MSP prices: which is now availed by few crops such as wheat and rice as it is usually bought by government at the announced MSP.

- Farmers will have assured income: according to the MSP of the crops they grow and won't have to depend on unscrupulous middle men.

- Better crop selection: as now crop selection is biased towards wheat and rice which get assured MSP.

- Drought prone crops and oilseeds can be promoted: such as Bajra, Pigeon & oilseeds such as Mustard, oil palm which can be grown on marginal lands & help India achieve nutritional security & reduce imports.

Remarks

• Reduction in farmer suicides: which has increased in recent times (3500 suicides in Maharashtra alone) and as a result of inability of farmers to realize good prices for crops.

• It will increase investment in land: as farmers will have more disposable income & can thus invest in machinery, fertilizers, irrigation etc.

• Reduction in government spending: on procurement & storage of food grains under PDS

Negative effects -

• It does not protect farmers in case of loss or destruction of crops: eg by pest attacks, loss of irrigation, untimely rains etc, especially when insurance is still not popular.

• Middlemen and ahtiyas: may pay even lesser market price to farmers as Government is ready to bear the subsidy.

• Mistargetting of subsidy: as in case of tenant farmers where the land holder instead of the tenant may get the subsidy.

• May not solve farmer suicide & debt issue: as suicides happen due to indebtedness, lack of formal source of lending, ~~ruin of crops~~, increase in price of inputs etc.

• Won't solve other problems: eg decreasing public investment, unscientific rotation of crops, less food crop processing etc.

Remarks: This is a good step but must be accompanied with other steps such as extension of insurance, banking, irrigation.

technical support

Benefit
of DBT
to farmer
efficiency
no paper

6

may
lead
to

no
privatization
for
share

Q6. Father of the Green Revolution in India and renowned farm scientist M.S. Swaminathan has given the call for 'Evergreen Revolution'. What do you understand by the term? Discuss the need of Evergreen Revolution in India, in light of contemporary challenges?

(12.5 Marks)

Ans- Green revolution is the term used for the period 1964 onwards when as a result of introduction of high yielding varieties of wheat & rice seeds, India's production of these crops increased massively and India became self sufficient in food grains.

But green revolution has suffered from a few drawbacks.

- Confined only to wheat & rice: and has not spread to other crops such as coarse grains, pulses & oilseeds.
- Confined only to Punjab, Haryana and West UP: and has not spread to other parts of the country.
- Unscientific rotation of crops: eg rice-wheat cycle in Punjab has depleted ground water levels.
- Strain on resources - such as decrease in fertility of land, excessive use of pesticides, increased water extraction.

⇒ There is thus a need for ever green revolution -

It means -

- Spread of revolution to other parts such as Eastern India, North East and Central India
- All food crops incorporated - eg pulses (arhar, chickpea, black gram, ~~lentil~~) and oilseeds (mustard, corolla, rapeseed) etc.
- Revolution based on sustainable practices - such as

Remarks

organic farming, ban on burning of crop residue, less extraction of ground water etc so that it is environment friendly and can be carried on for a long time

⇒ Reasons for need of ever green revolution.

Malnutrition
water scarcity
Biomagnification

scope of green revolution limited - both in terms of crops sown and the area it was spread to.

• Increase in farmer suicides: in recent times has also been a factor as productivity of their fields & choice of crops is wrong.

• Decreases in water table & water wars - eg between Tamil Nadu and Karnataka for Kaveri waters.

• Decreased productivity of land due to exhaustion & over use of fertilizers

• Increased pest & disease attacks due to global warming.

4.5

⇒ Way forward -

eco friendly
bio tech
molecular
digital
tech.

• Development of High yielding and environment friendly varieties - eg rice variety developed in Punjab which is fast maturing & disease resistant.

• Use of sustainable practices: such as stubble mulch, drip irrigation (as promoted through PM Kisan Scheme Yojana), organic farming.

• Land reforms needed: such as consolidation of land holdings & digitization of land records.

• Supplementary income: through dairying, beekeeping.

• Ever green revolution is the way to go to counter

Remarks: global warming, farmer suicides & declining prod.

Q7. India has been following Food Grain Procurement Policy since green revolution, but it suffers from various defects, which hampers the growth of the agriculture sector. What are the major defects in food grain procurement policy? What steps must be taken to overcome these defects? (12.5 Marks)

Ans. Indian Food Grain Procurement Policy revolves around the tripod of MSP (Minimum support price), FCI (Food Corporation of India) and PDS (Public distribution system).

- Government announces the MSP for each crop so farmers can sow accordingly.
- After harvesting, government procures crops from farmers.
- These crops are procured by FCI and stored in FCI godowns.
- FCI then distributes these crop grains to public at subsidized rates under PDS.

⇒ Defects in food procurement policy.

- Procurement is concentrated around wheat and rice only and other crops are hardly ever procured by the government because of which cropping patterns are distorted towards growing wheat and rice.
- MSP is not increased regularly and not in accordance with increase in prices of inputs and cost of living.
- Procurement by the government starts late - long after crop is harvested. Farmers, in a hurry to get money for their crop in order to buy next season seeds.

Remarks

lack of storage facilities

are open to private & public

share of profits not included family calculation

- Fertilizers sells the crop to middle middlemen at lower prices.
- Procurement only from a few states: such as Punjab, Haryana, UP and Madhya Pradesh whereas backward ones such as Odisha are left behind.
- Food grains procured not away: in absence of silos and air tight godowns, the grains are ruined by rain & eaten by pests. Loss is about 25% of grains.
- Leakages of food grains procured from FCI godowns where they are sold in open market.
- Mismatching of PDS grains: to ~~are~~ above poverty line families

⇒ Reforms Needed

Reforms as suggested by the Shanta Kumar Committee on restructuring of FCI can be adopted.

- Procurement of crops other than wheat & rice.
- MSP to be raised in accordance with rise in cost of living and cost of inputs.
- Early procurement: as soon as crop is harvested.
- PPP (Public private partnership) model can be adopted for procurement.
- Private agencies for storage & building of cold storage chains.

Thus the procurement system needs overhaul

Remarks

4

Q8. Oil spills have a devastating impact especially on marine life. In this reference discuss how they impact the marine ecosystem? What are various measures to contain pollution from oil spill? (12.5 Marks)

Ans- Oil spills are a form of pollution where by oil carried by ships and marine tankers leaks to the sea. A recent example of oil spill was seen off the coast of Ennore in the Arabian Sea.

⇒ Negative effects of oil spill on marine ecosystem.

- Oil layer covers the sea surface: due to which exchange of Oxygen (O_2) and carbon dioxide (CO_2) is not able to happen at the sea-water interface.
- As a result, the marine animals may die due to lack of oxygen.
- Oil layer covers gills of fishes & they are unable to breathe.
- Death of corals: is also caused due to oil spills as it interupts with their functioning.
- Marine birds may ingest oil or oil covered fish and may thus die.
- Oil in water interupts dolphins & other fishes' ability to communicate
- Bio magnification: as infected fish that ingested oil may be consumed by humans - traveling up the food chain & may cause adverse health effect.

Remarks

⇒ Measures to contain oil spill.

Like any disaster, containing an oil spill is a combination of methods of prevention, mitigation & effective response & rehabilitation.

• Prevention: of oil spill by incorporating safety measures in ships to ~~avoid~~ them of other approaching ships using BHUVAN app of ISRO to monitor by coast agencies to see that ships to don't get too close to each other, rocks, sand bars etc.

• Mitigation: measures in place to undertake to minimize the damage from an oil spill when it does occur.

- eg Oil zapper bacteria & cori cob which absorb eat oil must be kept ready as be deployed quickly when an oil spill occurs.

• Response: must be quick with a well ^{trained} crew.

- Training of workers to respond to oil spill

- Early warning by coastal authorities of oil spill

- Immediate deployment of workers & oil zapper to contain spill.

- Monitoring using GPS, BHUVAN app, ISRO's NAVIC to see

- Warn other coastal authorities & residents.

Oil spills, like other man made disasters should be prevented & steps taken to minimize their effect.

Remarks

Big named
physical
oil zapper
controlled
burning
use of
disposal
- so that

4-5

Q9. Western Ghats are one of the most significant biodiversity hot-spot in the world. In this reference, discuss importance of western ghat. What are the major recommendations given by Kasturirangan Committee to save and conserve the western ghat and discuss the steps taken by government in this direction? (12.5 Marks)

Ans - Western Ghats are a series of low mountains and hills that run along the West coast of the country starting from Gujarat and ending in Kerala.

They are covered with dense evergreen and Tropical deciduous forests that are home to indigenous species not found elsewhere.

⇒ Importance of Western Ghats -

- Evergreen and deciduous forests: that greatly contribute to India's forest cover.
- Biodiversity & ecological services: such as cleaning of air, recharging the water table, they also play a role in monsoon.
- Providing habitat to variety of flora and fauna: some of which are found only in India such as the Nilgiri langur, lion tailed macaque, etc. especially when forests at other points are being cut.
- Several biodiversity reserves, National Parks & sanctuaries: in Western Ghats provide protection to biodiversity & important species eg Tigers.

Remarks

Tourism carbon sinks monsoon facilitates tribes. Wetland micro climate

Research and studies of ecosystem and its services are carried in Western Ghats.

Importance of Western Ghats can be assessed from the fact that Conservation International has declared it as one of Biodiversity Hotspots of world

⇒ Kasturirangan committee report on protection of Western Ghats.

Declaring about 37% of the total area as ESA (Ecologically sensitive area).

Ban on mining activities in such areas.

Restrictions on economic activities: such as setting up of polluting industries is banned, big hydro power projects can't be set up,

Restrictions on construction of infrastructure (roads, rails, power lines) & houses.

⇒ Steps taken by government

Government has declared the area prescribed as ESA

Individual state governments are yet to notify the area and are resisting the decision as economy will be affected.

Mining still continues - eg Mining for iron in Baba Budanki

Government should take immediate steps to protect the Western Ghats & thousands of animals with it

Remarks

For farmer review

M

Q10. Poaching not only endanger the fauna, but also its potential linkages to other criminal activities, including terrorism, which constitute a grave menace to sustainable peace and security; elaborate. Also highlight International Efforts against poaching.

(12.5 Marks)

Ans - Poaching is the killing of an animal in the wild for economic benefits and to trade in its skin, fur, teeth, tusks etc.

Poaching is a big problem for wildlife and its protection
eg - Rhinos were being poached in Kaziranga even during the visit of Prince William of UK.

=> Harmful effects of poaching -

• Loss of biodiversity of an area: especially due to loss of predator species such as tigers which control the population of many other species.

• Entire ecosystem may be affected due to loss of a particular or few types of species.

• Criminal activities are encouraged: eg smuggling of turtles across the border with Bangladesh.

• Accompanies other criminal activities: eg smuggling of arms and drugs

• Poaching may finance terrorist activities: eg cartels of smugglers of tiger skin, rhino horns may finance terrorist and violent activities such as NSEA (National Socialist Council of Nagaland), Left

Reasons behind poaching
① Lack of employment
② Commercial value of animal body
③ My Remarks
proposed margin

Wing extremism and Maoists.

⇒ International efforts

• CITES (Conservation of international trade in endangered species) is a convention that seeks to ban trade in endangered species, encourage international cooperation to address the issue etc.

TRAFFIC (Wildlife Trade Monitoring Network) is another another step to counter and take effective steps to minimize poaching and its trade.

• Sustainable development goals - to indirectly go against poaching when they ask to encourage the wildlife population of a region.

⇒ Governmental steps

• Wildlife Protection Act 1972 - provide powers to the government to declare National Parks and sanctuaries for protection of flora and fauna.

It also gives powers of punishment against illegal wildlife trade.

• Power given to Forest and Range officials to shoot poachers on sight.

• Strengthening international borders eg with Bangladesh

Remarks

China recently banned ivory trade.

Q11. What is Elephant census? How is it going to impact the measures related to elephant protection in India? (12.5 Marks)

Ans.

The all-India Asian Elephant population estimation or Elephant census was carried out lately. It was carried out in 2 stages.

• Stage I - Eastern states - Jharkhand, Odisha, Chhattisgarh, Madhya Pradesh, West Bengal etc carried out the census.

• Stage II - Southern states - Karnataka, Kerala, Tamil Nadu and Andhra Pradesh carried out the census.

• Elephant census is carried out every 5 years. It was last conducted in 2012.

• Methodology -

- Direct counting - as a result of elephant spotting & sightings
- Indirect counting - as a result of dung decay analysis.

⇒ Importance of elephant census

• Recognize threats to elephant population - despite having more than 25,000 elephants in India, they are facing a number of threats. The census will be able to find out the threats faced.

• Trends of elephant population and their spread - the age profile of elephants in India and their geographical spread and ~~can~~ concentration will be found out using the census.

• Success of elephant conservation measures - such as Project Elephant & Haathi, mere saathi will be found

Remarks.

out as a result of the census.

⇒ Impact of census on elephant protection measures

- Adjustments in elephant protection measures: can be made once the threats faced by elephants such as poaching, loss of habitat, loss of water bodies is recognized.
- Elephant corridors can be designed: depending on where most elephants are found.
eg Odisha state government was designing elephant corridors for elephants displaced as a result of coal mining. But these corridors were located far away from where elephants were found.
- Afforestation and revival of water bodies: can be done once it is found out where elephant populations are concentrated & where water bodies & forests are being lost.
- Steps against poachers: can be taken after census.
- Steps to reduce man-animal conflict: by protecting tribals & their agriculture fields, protecting elephants from tribal attacks by teaching tribals how to drive away elephants without harming them.

Elephant census will be able to tell about number, spread of elephants & problems they face which in turn can help us re-design conservation strategies.

Remarks

no. of elephants — both male & female
 - ADI coordination
 - age & sex ratio

Q12. Can India commercially utilize the; satellite mapping and launch services market as an important economic activity? Illustrate with relevant data. (12.5 Marks)

Ans - NAVIC is

ISRO (Indian space research organization) is India's premier agency dealing with space, satellites and its technology.

ISRO has had a number of spectacular achievements so far

- Launching Chandrayaan Orbiter around moon
- Successful lander MOM (Mars orbiter mission)
- Indigenous cryogenic technology
- Launching indigenous satellite navigation system (NAVIC) like USA's GPS etc
- Successful testing of SCRAMJET engine etc

⇒ How ISRO's success can be commercially utilized.

- NAVIC and its services : which extend to 1500 km beyond Indian borders can be commercialized by selling to other SAARC nations on payment of license fee & can be used in areas such as
 - For navigation : in cars, aeroplanes, ships and to track shipments.
 - Intra regional trade and commerce - among SAARC nations can be tracked, monitored & enhanced using NAVIC.
 - Mineral surveying : in other nations can be done

Remarks

by leasing out services of NAVIC

- Data on Forest cover, agricultural productivity, fisheries etc can be collected and sold to respective nations or be undertaken as joint projects.
- Close co-operation of nations (Nepal, Bangladesh) can be gained to control cross border terrorism & to safeguard borders.

• Launch services too can be utilized commercially in the following manner -

- Launching of satellites for other nations: eg PSLV-C37 which launched 103 satellites in one go, 100 of which were of other nations.

- Launching heavy satellites: of the weight 3-5 tons can be done by indigenous cryogenic technology for which very few nations have the expertise.

- Till now heavy satellites were launched from French Guyana or Baikonour (Kazakhstan).

India can become the new hub for launch of heavy satellites.

• Selling bandwidth on communication & INSAT satellites

Thus ISRO's achievements have tremendous commercial potential & its commercial wing Antrix can be utilized for tapping this potential.

Remarks

Q13. What do you understand by the social cost and explain how it is different from market price/cost? In the above context, contrast between the cost of various sources of energy and analyze their actual grid parity? (12.5 Marks)

Ans:

Social cost of any economic activity is the ~~cost~~ cost society has to pay to avail that activity / its benefits. Social cost is not ^{paid} in terms of money but in terms of

- health of people
- quality of environment
- loss of opportunity for education, skills, jobs etc
- loss of livelihoods
- effect on poverty

Market price or cost on the other hand is the value in terms of money that has to be paid to avail an economic activity and its benefits.

eg Mining in tribal and forest areas has the following social cost -

- Displacement of tribals
- Loss of livelihoods
- whereas its market cost is the price of those minerals in market
- Impoverization
- loss of biodiversity

⇒ Cost of various sources of energy

- Thermal energy accounts for 80% of all the electricity produced in India. It has the following social cost -
- Increase in air pollution due to burning of coal
- Deterioration of health of people

Remarks

- Displacement of tribals due to coal mining
- Deforestation of thickly forested areas for coal mining

Hydel energy - accounts for about 20% of all electricity produced in India. Social cost -

- Displacement of villagers - for setting up hydel projects
eg Narmada Bachao Andolan protests against the same.
- Submergence of forests - & thus loss of biodiversity
- Loss of fertile agricultural land

Nuclear energy : accounts for about 7GW of 4% of all electricity produced. Social cost -

- Displacement of villagers : for setting up projects
- Loss of liveable woods : due to displacement
- Threat to health : as a result of leakage of radiation on dumping of radioactive waste.

Renewable energy : accounts for about 5-7% of energy produced. Social cost -

- Threat to biodiversity : eg birds fly into solar panels or wind mills and die
- Need large area and thus may lead to displacement

Thus all forms of electricity have social costs but the cost due to renewable energy is the least.

Decentralized grid

Remarks

Q14. What do you understand by the technology transfer? What are necessary scientific know-how and pre-conditions for that? Discuss its key components which make it success or failure? (12.5 Marks).

Ans- Technology transfer, is often associated with import of sophisticated machinery or defence equipment.

It means that the products being imported will also be accompanied by the country/company sharing their manufacturing process, engineering and how they are made so that the importing nation may be able to manufacture those items on its own.

eg. Russia sells some defence equipment and the Kamov-helicopter deal comes with transfer of technology provision

⇒ Necessary scientific know how and precondition

- Skilled man power: and workers, engineers, technicians must be available in order to understand how the products are manufactured.
- Capital availability: Public or preferably private capital must be available so as to set up factories and industries along with equipment to manufacture the products.
- Healthy business environment: must also be present in the country.

Remarks

=> Key components that make it a success or failure

- Ease of doing business: in the country should be present such as easy rules and procedures, no bureaucratic red tape, no corruption and predictable and fair tax regime to make it a success.
- Laws that facilitate industry and manufacturing such as a fair and transparent land acquisition act, labour laws that are fair to both labour and industrialist.
- Presence of healthy market: for which the products are manufactured. eg India is a big market for mobile phones & our automobiles because of which they are being manufactured here.
- Buying power of the people: abject poverty of a large number of people will make it a failure.
- Industry - Education linkages: so skills in universities & colleges are provided according to the requirement of industry.
- Atmosphere for innovation: so the products imported can be used to create new products or else the nation will always be dependent on imports.

Thus technology transfer is being accompanied by Make in India → Skill India Program, Standup India and New labour code for industry to make it a success.

Remarks

Q15. Discuss the challenges in adoption of scramjet engine technology in Indian space program, while highlighting its significance? (12.5 Marks)

Ans- Scramjet technology uses an air breathing propulsion system for satellite vehicles.

- In this technology, oxygen as an oxidizer will be available and used from the atmosphere.
- Thus it will reduce the weight of fuel carried.
- Hence it can carry ~~l~~ heavier payloads.

ISRO has recently developed an indigenous scramjet system.

⇒ Significance

- Launch of heavier satellites: has been made possible because of scramjet engine combined with oxygenic technology.
- Can be used to launch satellites of other nations and India can become a hub of ^{commercial} satellite launches.

- Carrying a human to space and even to the moon has been made possible because of scramjet.

- Next Chandrayaan can carry a lander and rover - which the earlier Chandrayaan couldn't carry because heavy satellites couldn't be lifted.

- India has joined the group of select nations with

Remarks

This technology.

- Individual feat for ISRO : which has yet again developed an indigenous technology, like cryogenic engine, Mangalyaan.

⇒ Challenges faced.

- Cost: The scramjet engine because of the technology will be very expensive to use and deploy.
- Restricted use: mainly because of cost restrictions it can't be put to use often.
- Reusable rocket: has not been developed by ISRO because of which a new satellite launch vehicle will have to be made each time which is wasteful.
- Can only be used at supersonic speeds: which are hard to achieve and because of which its utility is limited. (More than speed of sound)

(2)

Scramjet engine is no doubt a fantastic feat of engineering by ISRO but to make it more usable, its cost needs to be brought down.

Limitation of scramjet

① oxygen availability in Troposphere

Special cooling mechanism

②

① need testing

Remarks

Q16. Recently union government has filed a curative petition on AFSPA in Supreme Court, seeking review of its 2016 judgment. What was the importance of Supreme Court's 2016 judgment on AFSPA? While assessing the need of AFSPA in present times, explain the need for the review of the judgment? (12.5 Marks)

Ans-

AFSPA (Armed Forces special powers act) is an act of the central government which is in force in disturbed areas of the country such as J&K, Nagaland, Assam, Arunachal Pradesh etc

The act gives over arching powers to defence personnel to take steps to secure the law and order of an area - eg:-

- Shooting a person if he is considered a threat to law and order.
- Conducting search & seizure operations anytime.

⇒ Supreme Court judgement

Supreme court in 2016, said that every death caused by the armed forces in a disturbed area, whether the victim is a criminal, terrorist or an innocent civilian will be inquired into

⇒ Significance of the judgement

• Protection of civil and fundamental rights:

Article 21 protects the right to life and personal dignity. This article is threatened by powers given to the army under AFSPA

Remarks

• Limiting discretion of the armed forces: especially at a time when it has been criticized for being unduly harsh towards citizens & for killing of innocents in areas like Kashmir, Manipur.

• Rule of law: has been extended to the armed forces thus taking away the special powers accorded to them. Thus constitutional principles have been reiterated.

⇒ Is there a need to review the judgement?

• Yes as -

(u) - Law and order situation in J&K is particularly bad as the citizens have started supporting militants like Burhan Wani and attack the army.

NSCN (IM) and other extremist outfits attack the army and cause huge casualties.

It is. Powers under AFSPA will act as a deterrence against attacking army & government apparatus.

No -

Internet
manpower
inquiry
Penalized
review of
the
AfSPA
Army has become ruthless over time & kills ^{even} innocents. Thus there is a need to check army powers.

- Powers under AFSPA are one of the reasons for increased unrest in J&K

- India is not a totalitarian state but a democracy & everyone has rights eg Art 21, Rule of law

Supreme Court judgement rightly criticized powers of army & protected some checks. It should be kept intact as suggested even by 2nd ARC

Remarks

Q17. Great advancements are being made in information technology and new operational technology areas. In view of this assess the need of data security policy in India.

(12.5 Marks)

Ans -

Internet penetration in India is estimated to be about 22%. Yet more than 50% of Indians have a mobile phone and increasingly a smart phone.

The government too is trying to increase and expand the digital economy through -

- Trinity of JAM (Jan-dhan - Aadhar - Mobile)
- Push to digital transactions: through online banking, e-wallets such as UPI (Unified Payments interface); BHIM.
- Direct benefit transfer of subsidies: eg LPG, fertilizer subsidy.
- Income tax returns being filed online etc.

⇒ In such a scenario, the need for data security also enhances as -

- Increasing number of Indians are connected to the net as a result of which their data is available online.
- Increasing vulnerability: as increasingly personal data of Indians is available online - eg Aadhar data - name, address, finger prints of citizens.

Remarks -

- Increasing cyber attacks :
eg - Wannacry ransomware affected thousands of computers around the world & even in India's JNPT port.
- eg Yahoo accounts of 300 million users was stolen in 2015

4

◦ Increasing online banking transactions : also makes it necessary to make the data secure.

◦ Use of data by terrorists, for tax fraud etc
Personal data can be used by terrorists, for tax frauds & can undermine national security.

◦ New data security policy is thus required to

◦ Safeguard by law access to Aadhar data : who can collect, access it and in what conditions it isn't misused.

◦ Data encryption policy : so all government data is encrypted and thus tough to attack.

◦ Building capacity of IT & government professionals to protect data.

◦ Strengthen CERT-In & NATGRID to defend data.

◦ Pratim Watal committee on digital payments suggested some measures to protect data. These must be incorporated.

data security
B to
banking
warrant
data
encryption
cap. rat
India
net cap
govt

Remarks

Q18. Attack on vital assets like railway lines and security installments has emerged as new method to sabotage internal security in India. What kind of security challenges does India's vital assets faces? What effective steps must be taken to tackle such challenges?

(12.5 Marks)

Ans - Threats to internal security are ever changing
 Some of the recently emerged threats are -

- Sabotage to infra structure such as rail lines
- Vital security installments such as Pathankot
- Cyber warfare

⇒ Threats faced by India's vital assets.

- Physical threats; such as sabotage.
- Terrorist attacks; eg at Delhi and Pathankot
- Cyber warfare: against important establishments such as nuclear facilities, Army headquarters. eg Data can be stolen about Indian defence upgradation plans.
- eg - Working of nuclear power plants can be hampered and due to cyber warfare.
- Technology such as clones can be used to target vital installations.
- Online indoctrination and attacks planned through Whatsapp and internet.

4
Jurisdictional
Issues

Remarks

⇒ Steps needed -

- Secure the borders: The first and foremost step that is needed is to secure borders against infiltration. This can be done using -
 - Laser walls
 - Anti tunnel devices
 - Constant vigil through NAVIC satellite system.

• Speed up response of security forces: to terrorist attacks such as one that happened at Uda

- Protect vital installations: eg Army & air force headquarters and nuclear power plants.
eg Pan Thambkot base even had a broken boundary wall.

- Protect against cyber warfare: by strengthening CERT-IN (National computer emergency response team) and training a force in cyber warfare.

• Increased funds for defence modernization & cyber security. Only 3% GDP spent on defence as of now

- oppose & counter online indoctrination & take help of religious leaders to speak against ISIS etc.

Thus protecting vital installations needs a multi-pronged strategy.

ALL
Gaps

Remarks

Q19. Attack on black money has emerged as a major focus area in recent. Why it has gained so much attention from policy makers? What are the important steps taken in this regard? Assess the need for additional steps to tackle this challenge. (12.5 Marks)

Ans - Black money is the money on which tax is not paid, money earned from illegal means like smuggling, arms trade and money that does not come into government records.

Black money has become a major threat as-

- It is estimated that size of black money is just as big as the Indian GDP (\$2 trillion)
- It is used to finance terrorist activities, human trafficking, arms smuggling etc.
- Black money plays a big role in election financing.
- It causes loss to the government as tax is not paid on it.
- It causes rising inequality in society as rich don't pay tax on black money which can be used to finance government schemes for poor etc.

=> Steps taken to counter black money -

- Income declaration scheme (IDS) - to turn black money into white by paying a one time penalty of 45%
- Pradhan Mantri Garib Kalyan Yojana: another income declaration scheme where tax paid is 50% & the proceeds issued be used for benefit of poor

Remarks

- Benami transactions act: as land & property are where most of the black money is stored. Thus benami transactions are made illegal.
- Demonetisation: withdrawal of ₹500 & ₹1000 notes was done to counter black money & fake Indian currency notes.
- Electoral bonds to finance political parties: as that transactions will be online & thus tracked.
- Ban on cash donations to parties above ₹2000
- Spur to digital transactions & online banking
- Project INSIGHT - using big data & find tax evaders.
- ⇒ Despite these steps, a lot still more needs to be done.
- Reform tax laws - to reduce tax rates and increase tax base.
- Only 4% of Indians pay income tax (NSSO survey) this needs to be increased through incentives to pay & punishment to those who evade, not IDS.
- Reduce corruption in income tax department
- Partial state funding of elections as proposed by Second Administrative Reforms Commission.
- No cash donations to political parties

Covid

Remarks

Q20. Close cultural affinity, historical linkages, and geography has created its own set of problems in efficient border management in India. Comment. (12.5 Marks)

Ans. India shares a variety of borders with its neighbours that range from the high snowy peaks of Himalayas with Pakistan & ~~Kashmir~~ - China to the desert of Thar & marshes of Rann of Kutch. With North East - Myanmar - ~~thick~~ ^{thick} forests forms the border, while plains are the border with Nepal. Sea is the boundary with Sri Lanka.

⇒ Problems of border management -

• Mountains : are hard to defend due to sub-zero winter temperatures, difficult terrain, less oxygen.
eg. Siachen glacier & its defence. problems are widely known.

• Thar desert : due to high temperature & sand storms becomes hard to defend.

• Rann of Kutch : is waterlogged many months in a year.

• Plains of Nepal India border - People on either side of border freely move to the other side because of which it is hard to defend.

Remarks

Nepal shares an open border with India as a result of which many people cross the border to work, marry & reside making it hard to defend.

Forests & North East: Tribals here have close cultural ties across the border.

eg Nagas live on either side of the border and trade across the border often.

Being thickly forested also makes it hard to defend.

Bangladesh border: here too as a result of enclaves, plain areas of riverine borders, people freely move and rivers & forests make it hard to defend.

Historical & cultural reasons

As it is an artificial border, pro-Bengali people across the border have close cultural links.

These various types of borders presents with various problems. To manage them, strict vigil needs to be accompanied by use of technology such as drones, co-operation with other nation's border guards & taking help of local people.

Remarks