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GENERAL STUDIES (TEST CODE : 1072)

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Center	HOME	Date	18/09/18

INDEX TABLE			INSTRUCTIONS
Q. No.	Maximum Marks	Marks Obtained	
1	10		1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code). उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2	10		2. There are TWENTY questions printed in ENGLISH & HINDI इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3	10		3. All questions are compulsory. सभी प्रश्न अनिवार्य हैं।
4	10		4. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5	10		5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one. प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6	10		
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Total Marks Obtained:			7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off. उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।
Remarks:			

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EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

1. Explain why it is important to urgently address the problem of poor land records and infirmity of land titles in India. Also discuss how this problem can be addressed. (150 Words) 10

ब्याख्या कीजिए कि भारत में खराब भू-अभिलेखों एवं भूमि अधिकारों के सुदृढ़ नहीं होने की समस्या का तत्काल समाधान करना क्यों महत्वपूर्ण है। साथ ही, चर्चा कीजिए कि इस समस्या का समाधान किस प्रकार किया जा सकता है।

The problem of poor land records leads to artificial scarcity of lands, generation of black money etc. It need to addressed urgently as:-

1) Urban areas:-

- ↳ Lead to Benami Transaction.
- ↳ Low tax collection on account of archaic land prices.
- ↳ artificial scarcity of land for affordable housing.
- ↳ Urban sprawl and diversion of rural land for urban use.

2) Rural areas :-

- ↳ Lack of benefits for landless tenants.
- ↳ fear of land acquisition has led to fallow lands post rural-urban migration.

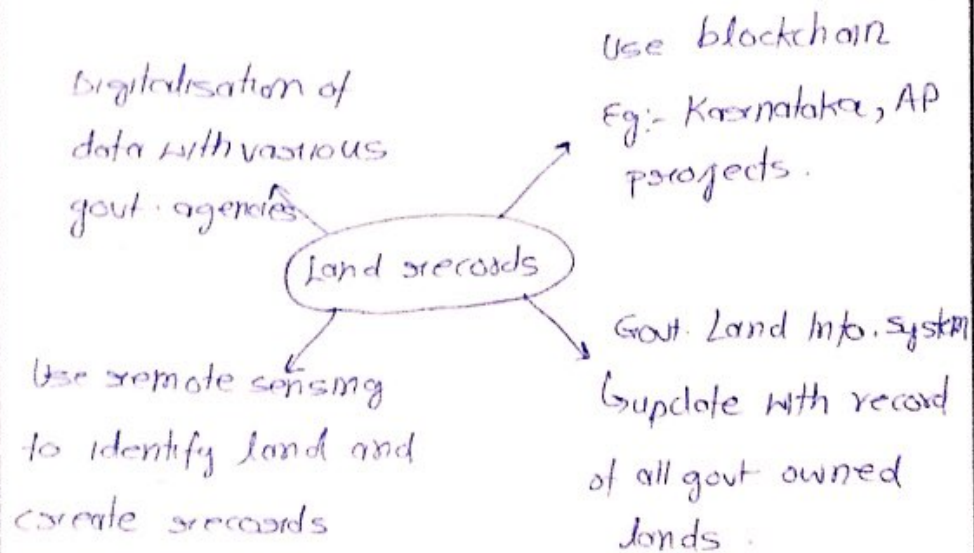
3) Infrastructure development like roads,

Industry suffers due to poor land records.

4) excessive litigation in courts over issues of land.

5) Cost and time overruns in PPP projects due to delay in land acquisition.

Following steps can be taken as way forward:-



Thus, following steps can help solve the problem of land.

2. What are the special features of the infrastructure sector that make its financing a challenge? What measures have been taken to facilitate adequate amount of finance to this sector?

(150 Words) 10

अवसंरचना क्षेत्र के वे विशेष लक्षण क्या हैं जो इसके वित्तीयन को चुनौतीपूर्ण बना देते हैं? इस क्षेत्र में वित्त की पर्याप्त उपलब्धता को सुनिश्चित करने के लिए कौन-से उपाय किए गए हैं।

According to Budget 2018, 50 lakh crore are needed in infrastructure sector in next 4 years. However, funding remains an issue as:-

- 1) Long gestation period of project lead to escalated costs.
- 2) Cost & time overruns due to land, forest clearances.
- 3) Highly capital intensive with profits after long period.
- 4) NPA in banking sector has led to scarcity of credit for the sector.
- 5) EPC and BOT model transferred disproportionate risk to concessionaire.
- 6) Cyclical nature of economy (boom & bust)

cycle) create high risks.

Govt. has taken following steps to improve financing:-

- 1) National Infrastructure Investment Fund
(NIIF) is setup to attract fund from foreign sovereign wealth fund.
- 2) Infrastructure Investment Trusts to mobilise smaller savings for sectors.
- 3) Amendment to Central Road Fund Act to use cess in inland waterway.
- 4) Toll operate Transfers to monetise current assets of road ministry.
- 5) Leverage current unused land by railway, and airports.
- 6) HAM (PPP model) & NPA resolution.

Thus, ~~following~~ these steps are expected to show results in future.

3. Despite favourable circumstances, India's electronics manufacturing has been unable to respond to the rising demand. Discuss. What steps can be taken to address this situation? (150 Words) 10

अनुकूल परिस्थितियों के बावजूद, भारत का इलेक्ट्रॉनिक्स विनिर्माण बढ़ती मांग के प्रति अनुक्रिया करने में असमर्थ रहा है। चर्चा कीजिए। इस परिस्थिति को संबोधित करने के लिए कौन-से कदम उठाए जा सकते हैं?

Indian current account deficit has risen to 1.9% of GDP in 2017-18 in part due to rising electronic import from China. Domestic sector faces following challenges:-

- 1) Inverted duty structure (component cost more than final product)
- 2) Lack of investment in R&D.
- 3) Competition and dumping from China & South Korea.
- 4) High logistics cost reduces competitiveness.
- 5) Lack of availability of raw materials like lithium, rare earth metals etc.

Following steps can be taken:-

- 1) Anti-dumping duty on Chinese ~~ex~~ imports.
- 2) Promote MSMEs in sector through govt. procurement.
- 3) Encourage FDI in sector via tax holidays
Eg:- Samsung plant in Noida.
- 4) Skilled labor force via PM Koushal Vikas Yojana.
- 5) NITI Aayog action agenda talk about creating coastal employment zone with easier regulation to encourage exports as:-

Market of electronics $\nearrow$ Domestic \$65 bn
 $\searrow$ International \$2 trillion.

Hence, ~~for~~ these steps along with other incentives like MEIS scheme will help to increase domestic production.

4. Despite registering a high growth rate in the post-reform era, India continues to witness a high incidence of poverty. Explain this paradox and suggest ways to resolve it. (150 Words) 10

आर्थिक सुधारों के बाद की अवधि में उच्च संवृद्धि दर दर्ज करने के बावजूद, भारत लगातार निर्धनता की अति व्यापकता का साक्षी रहा है। इस विरोधाभास की व्याख्या कीजिए और इसका समाधान करने के उपाय सुझाएं।

Despite registering a growth rate of over 7.5% in post-reform period, 20%-30% of population is still under poverty according to various estimates. The reasons are following:-

- 1) Sectoral mismatch:- Agriculture accounting for 17% of GDP has 56% workforce.
∴ Growth has been capital intensive service sector based.
- 2) Regional mismatch:- Low growth in eastern and north-eastern states, tribal areas etc.
- 3) Human capital:- poor learning outcomes as shown in ASER report and high malnutrition (39% NFHS IV)

4) Penetration by MNCs post LPG reform led to informalization of workforce (66% in informal sector)

Thus following steps can be taken:-

1) Develop capabilities:-

Acc. to Amartya Sen India need to focus on primary education and healthcare.

2) Labour intensive industries:-

Eg:- Textile, Tourism, Gems & Jewellery.

3) Balanced regional growth:-

Eg:- Aspirational districts program.

4) Agriculture and animal development.

Acc. to steps suggested by Swaminathan Commission (2007)

5) Skilled labour force

Thus, we need to eradicate poverty as a constitutional duty under Article 39 & SDG 2.

5. In light of the argument that India has entered a regime of "permanent surpluses", discuss whether the time has come to remove agricultural commodities completely from Essential Commodities Act. (150 Words) 10
- इस तर्क के आलोक में कि भारत "स्थायी अधिशेषों" के युग में प्रवेश कर गया है, चर्चा कीजिए कि क्या कृषि जिनको को आवश्यक वस्तु अधिनियम से पूर्णतया हटा देने का समय आ गया है।

India has entered a regime of permanent surpluses as can be gauged from following:-

- 1) Large amount of buffer stock of wheat & rice with FCI.
- 2) Low inflation (<4% CPI) for 2-3 years.
- 3) Decline in prices of commodity like milk, onion etc.
- 4) Green revolution (extension of irrigation - 48% of NSA has reduced dependence on monsoon for food security).
- 5) Record food production of 275 million tonnes in 2017-18.

Thus, the Essential Commodities Act which mandates that any hoarding of grains above limit will be penalised need to be removed as:-

- 1) It will help protect farming and value addition.

- 2) ~~Reduce~~ Eliminate illegal hoarding and blackmarketing.
- 3) Encourage private investment in Warehousing, cold chain etc.
- 4) It will reduce cost of FCI to hoard grains for emergency while creating storage spaces.
- 5) Reduction in post harvest losses.

However, total removal will be extreme step as :-

- 1) Scarcity of food grains during poor monsoon (El-Nino years)
- 2) Compulsory under NFSA 2013 to provide to PDS.

Hence, a partial removal for contract farming as envisaged in contract farming act is way forward.

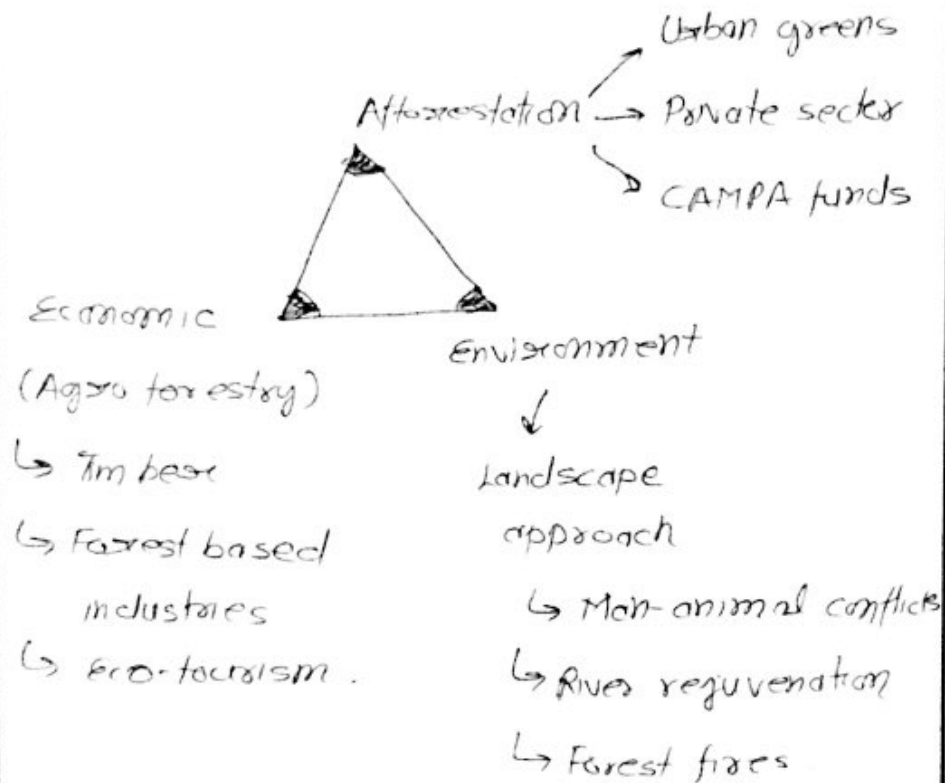
6. The 1988 National Forest Policy (NFP) was visionary in its scope and ambition. However, there is a need for a new forest policy in the current context. Discuss. (150 Words) 10

1988 की राष्ट्रीय वन नीति (NFP) अपने विषय-क्षेत्र और लक्ष्य की दृष्टि से दूरदर्शी थी। हालांकि, वर्तमान संदर्भ में एक नवीन वन नीति की आवश्यकता है। चर्चा कीजिए।

The forest ministry has come out with draft Forest Policy 2018 as ⁱⁿ the 1988 Forest Policy several lacunae have emerged like -

- 1) Definition of forest is not holistic as it doesnot cover urban green, agro forestry etc.
- 2) Limited role to private sector, however after LPG reforms role of private sector has increased.
- 3) Community engagement in forest management was not planned.
- 4) Did not include steps for climate change mitigation via afforestation.
- 5) Lacked a holistic landscape approach towards forest.

Hence, a new policy is a step ahead as:-



Regulatory :- It also sets up National Community Forest Management Mission to involve community inline with forest Rights Act 1994.
2007.

Hence, it will help to reach a target of 33% forest cover from present 22%.

7. How does rapid urbanization increases the vulnerability to major disasters? Explaining with examples, suggest measures to develop disaster-resilient cities. (150 Words) 10

दुत शहरीकरण प्रमुख आपदाओं के प्रति सुभेद्यता को कैसे बढ़ाता है। उदाहरणों के साथ व्याख्या करने हुए, आपदा-प्रत्याम्ब शहरों का विकास करने के उपाय सुझाए।

India is undergoing a rapid unplanned urbanization with 600 million urban population by 2030 from 377 million in 2011. It leads to following vulnerability:-

1) Urban floods due to urban heat island effect. Eg:- Mumbai floods.

2) Water scarcity and drought due to reduction of wetlands, river stream etc. Eg:- Shimla 2018 water scarcity.

3) Coastal cities are prone to Tsunami, cyclones etc. Eg:- Chennai in 2013.

4) Epidemics due to high population density and slums Eg:- Nipah, Swine flu etc.

5) Urban fires, stampedes Eg:- Elphinstone bridge, Kamla mill fire etc.

6) Earthquakes

Hence, following steps can be taken:-

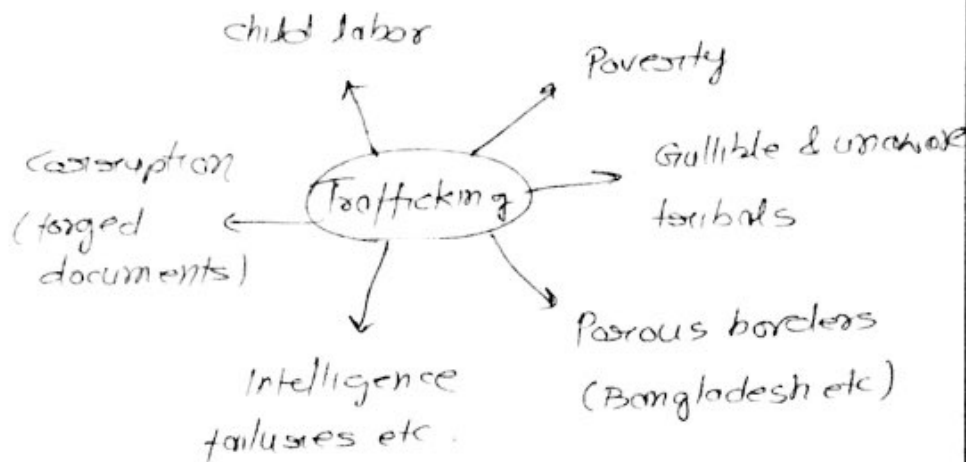
- 1) Urban planning & urban governance
need to be strengthened as envisaged in
74th amendment
- 2) District level disaster plans is mandated
in NDMA 2005.
- 3) Building retrofitection for seismic events.
- 4) Coastal mangroves do reduce tsunami,
cyclone damage.
- 5) Regeneration of coastal wetlands and
storm drainage pathways.
- 6) Early warning and relief, response plans
- 7) Disease monitoring & surveillance using
ICT. Timely advisories.

Thus, following steps will improve
resilience to various disasters.

10. Identify the factors that make India vulnerable to drug trafficking? Also discuss the key steps taken to deal with it in our country. **(150 Words) 10**

उन कारकों की पहचान कीजिए जो भारत को ड्रग तस्करी के प्रति सुश्रेय बनाते हैं? साथ ही, हमारे देश में इससे निपटने के लिए उठाए गए प्रमुख कदमों की चर्चा कीजिए।

India is both a source and destination of trafficking. Following factors make India vulnerable.



Thus, following steps are taken to deal with it:-

- 1) Immoral Trafficking Prevention Act.
- 2) Sec 370 of IPC outlaws trafficking.
- 3) Trafficking Bill is pending in parliament which follows a holistic protection, rescue,

→ rehabilitation approach.

4) rehabilitation of trafficking victims under protection homes.

5) Improvement of border security.

6) Collaboration at international lev. UN convention on trafficking.

As 3rd biggest organized crime after
heroin and drugs more steps are required
to curb it.

11. How do higher global crude oil prices affect the Indian economy? What steps can be taken to gradually insulate India from global oil price volatility in the long term?

(250 Words) 15

कच्चे तेल की उच्च वैश्विक कीमतें भारतीय अर्थव्यवस्था को कैसे प्रभावित करती हैं? दीर्घावधि में भारत को वैश्विक तेल की अस्थिर कीमतों से सुरक्षित करने के लिए उत्तरोत्तर कौन-से कदम उठाए जा सकते हैं?

Indian economy's dependence on crude oil prices can be gauged from the fact that rising oil prices was a major factor behind 1991 Balance of Payment crisis and 2012 taper tantrum.

Crude oil affect economy in following manner :-

- 1) Oil accounts for 24-25% in India's primary energy mix. 90% of it is imported.
- 2) $\therefore$ Rise of oil prices lead to increase in import bill and current account deficit.
- 3) Rising CAD leads to fall in rupee exchange rate which adversely affects other imports.
- 4) Rising transport cost may lead to inflation of other good of everyday use.

S Rise of fuel price $\rightarrow$ Increase in household consumption expenditure $\rightarrow$ Decrease in savings $\rightarrow$ Decrease in investment.

G Industry's competitiveness gets adversely affected due to rise in cost of logistics.

Positives -

- 1) Increase in remittances from Gulf countries.
- 2) Exports can be benefitted from lowering exchange rate.

Thus, reducing vulnerability to oil price shocks is essential for macro-economic stability going forward.

Following steps can be taken:-

- 1) Draft Energy Policy of NITI Aayog aims to make India self-reliant in energy through following:-

i) Strategic oil reserves.

1) Increase share of renewables in energy mix.

Eg:- National Electric Mobility Mission Plan.

Methanol economy fund (NITI Aayog)

Gobar-Dhan Yojan (energy from agri-waste)

Waste to Energy Plants in city as suggested by NITI Action Agenda.

2) Lobby with like minded countries to reduce 'Asian premium' charged on oil by OPEC countries.

3) Quick completion of TAPI, IPI gas pipelines (PM Ujjala Ganga)

4) Energy efficiency measures like Perform, Achieve, Trade initiative, USA LA.

5) Diversification of sources (shale gas), exploration of sedimentary basin (domestic) & acquiring strategic resources.

Thus variety of measures can make economy resistant to such shocks.

12. Critically discuss the role of private sector in skill development in India in recent years. In this context, what are the measures required to improve oversight as well as financing in the skill development sector?

(250 Words) 15

हाल के वर्षों में भारत में कौशल विकास में निजी क्षेत्र की भूमिका की समालोचनात्मक चर्चा की जाए। इस संदर्भ में, कौशल विकास क्षेत्र में निरीक्षण और साथ ही वित्तीयन में सुधार के लिए कौन-से उपाय आवश्यक हैं?

Indian employment sector is characterized by disguised unemployment, skill shortages and lack of well paying jobs. As a result unemployment is a 5% - 6% according to Employment - Unemployment survey of NSSO.

Private sector has played following role in skill development:-

1) National Skill Development Corporation
It is formed with 51% stake from private sector to undertake skilling.

Issues:- According to Sharda Prasad committee report, the structure of NSDC has created scope for corruption etc. in sectoral skill councils.

2) Sectoral skill council managed by private

sector have become source of earning profits with lack of focus on outcomes.

3) MUDRA loans are provided to generate self employment and support MSMEs but the average loan is of ₹47,600 and risk of becoming NPAs.

4) Employment Generation :- Private investment is low in medium skill labor intensive manufacturing compared to service sectors despite programs like Make In India, Startup India.

Thus following measures are required to improve oversight & financing:-

1) Oversight.

(i) Create a national skill regulator to monitor all skilling institutions.

(a) Allow CAG to audit private skill centres that take fund from govt.

(b) Merge various sectoral councils to form

4-5 domains that will ease tracking of outcomes.

(4) Limit the intake of new students unless placement target is achieved.

(5) set standards and examination for different skill domains.

(a) Finance

(1) Leverage CSR funds to create apprenticeship programs.

(2) Provision of stipends, scholarships to students which undergoing skill training.

(3) Development impact bonds and other international funding mechanism like World Bank led STRIVE program.

(4) Cluster based MSME development will skilling centres attached to cluster.

Thus, maintaining accountability through regular monitoring and using innovative funding mechanism is way forward.

13. The e-commerce sector has been booming in India for the last few years. Examine the need for its regulation in light of the recently proposed draft e-commerce policy. Further, identify the challenges that the sector is currently facing.

(250 Words) 15

ई-कॉमर्स क्षेत्रक विगत कुछ वर्षों से भारत में तेजी से बढ़ रहा है। हाल ही में प्रस्तावित ड्राफ्ट ई-कॉमर्स नीति के आलोक में इसके विनियमन की आवश्यकता का परीक्षण कीजिए। साथ ही, इस क्षेत्रक द्वारा वर्तमान में सामना की जाने वाली चुनौतियां की पहचान कीजिए।

The e-commerce sector has grown exponentially due to increase internet penetration, entry of new players like Amazon, Alibaba etc. in Indian market.

It needs regulation due to following new developments:-

- 1) Its nature is different from traditional retail sector as seller don't own or manufactures product. Thus the draft e-commerce policy divides sector into 2 model.

Market model

(No inventory, only platform for sale)

100% FDI is allowed

Inventory model

(company hold its own inventory with custom products)

74% FDI with indian ownership.

2) Consumer protection :- As e-commerce industry own a lot of consumer data. Thus policy provides right to privacy in line with draft privacy bill.

3) Taxation :- Due to cross-border nature of companies (MNCs) as well as products a new taxation policy is required. Thus policy provides for destination based taxation with reverse charge mechanism.

4) It also provides for recall of faulty products, penalty for misadvertising etc.

5) Growth of sector :- It aim to develop India as e-commerce hub with aim of being a trillion dollar digital economy till 2022.

The sector face following challenges in the current scenario:-

1) Aggressive pricing by foreign MNCs using their global revenue as leverage.

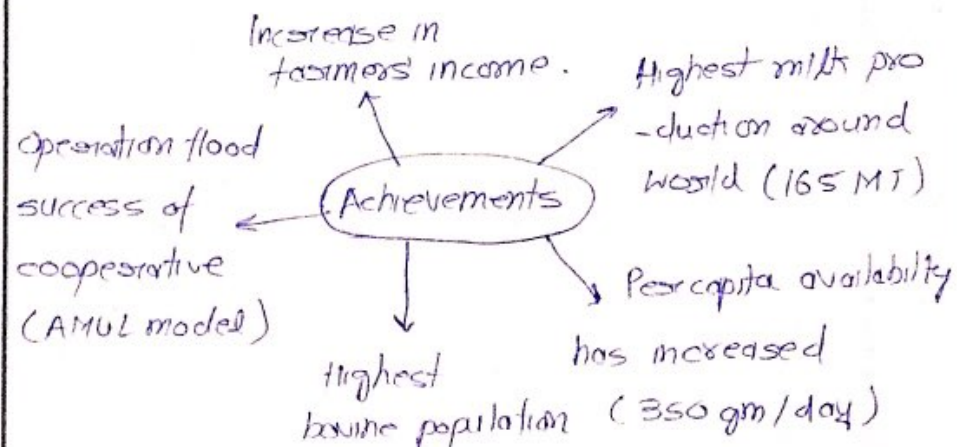
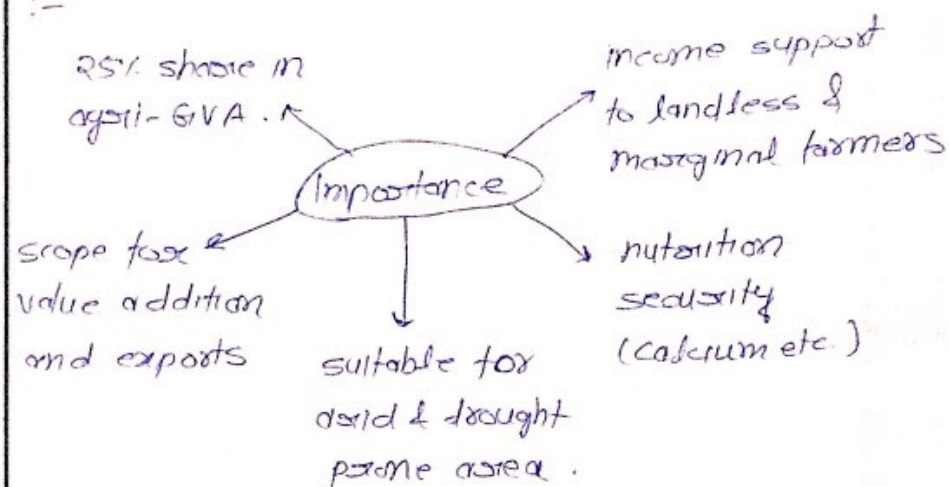
- 2) Most of the India companies are now owned by foreign MNCs like Walmart-Flipkart deal etc.
- 3) Lack of penetration in rural areas.
- 4) High logistics cost.
- 5) Increased compliance cost due to EU's General data protection regime and Right to Privacy judgement in India.
- 6) Cyber attacks, frauds and theft of customer data.
- 7) Fast changing nature of market and technology like Big data, AI etc.

Thus, the draft e-commerce policy is a way forward for better regulation and facilitating expansion of sector.

14. Explaining the importance, highlight the achievements of dairy sector in India. Examine whether over-production is the reason for the problems being faced by the dairy industry. Give some solutions to address the problems. (250 Words) 15

भारत में डेयरी क्षेत्र के महत्व की व्याख्या करते हुए, इसकी उपलब्धियों पर प्रकाश डालिए। परीक्षण कीजिए कि क्या अति-उत्पादन डेयरी उद्योग द्वारा सामना की जा रही समस्याओं का कारण है। इन समस्याओं को दूर करने के लिए कुछ उपाय सुझाइए।

India has largest no. of livestock population and is the highest producer of milk in the world. The dairy sector has following importance :-



However, as seen in recent years during dairy farmers' protest, fall in price due to over-production has become an issue as:-

- 1) per capita availability is very high in west and north west region (Punjab, Haryana, Gujarat, Maharashtra)
- 2) Lack of sufficient supply chain and marketing infrastructure leads to losses.
- 3) Phytosanitary measure by EU, China has affected exports.

However, the national average per capita consumption is not very high (350gm/day).

Thus following steps can be taken:-

- 1) Dairy infrastructure and entrepreneurship development fund
 - ↳ to improve supply chain
 - ↳ value addition (milk powder etc.)
 - ↳ chilling infrastructure.
 - ↳ penetration of cooperatives in under covered villages.

2) Development of milk testing laboratory for certification will help to tackle sanitary measures.

3) SAMPADA Yojana aims to develop mega food parks etc. should develop linkages with dairy villages.

4) Private sector investment in cold chains, refrigerated transport and value addition.
(Eg:- World Food India organized to attract investment)

5) Develop dairy infrastructure in eastern and north-eastern region.

6) Supplying milk from surplus to deficit region. (Increase procurement under ICDS and mid day meal)

Thus, following steps will help to create demand for 210 MTonnes supply target of 2022.

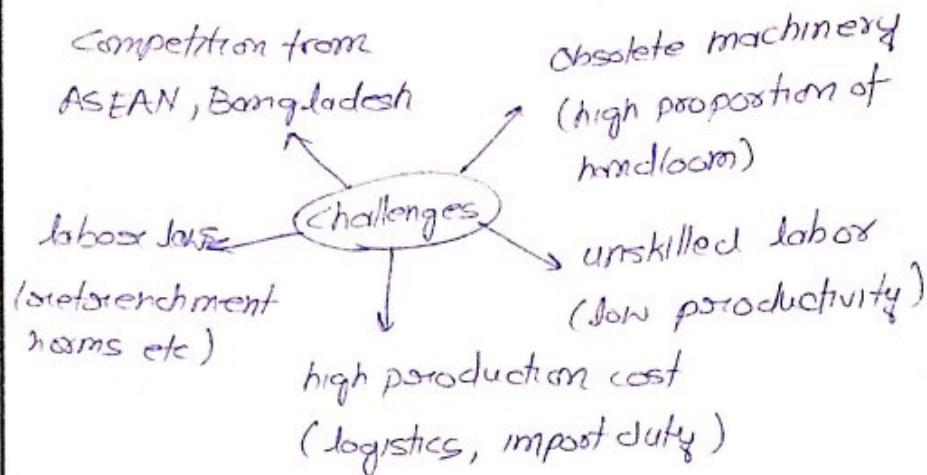
15. There has been a focus on Textile and Apparels industry in India in recent years. Elaborate the potential of this industry and the challenges that lie in achieving it. What steps have been taken in this regard? (250 Words) 15

हाल के वर्षों में भारत में वस्त्र एवं परिधान उद्योग पर ध्यान केंद्रित किया गया है। इस उद्योग की संभावित क्षमता और उसे हासिल करने में निहित चुनौतियों की सविस्तार वर्णन कीजिए। इस संबंध में कौन-से कदम उठाए गए हैं?

Textile and apparel sector has provide employment to many since 1850s and the sector has following potential:-

- 1) Low skill, highly labour intensive. Hence, potential for creating jobs.
- 2) Women find employment in the sector. Hence improves gender gap.
- 3) Shift of industries from China due to high costs provide opportunity to capture market.
Eg:- NITI Action Agenda talks about creating Coastal Employment Zones.
- 4) Export to EU, USA and African market can be increased post FTA.
- 5) Traditional skill and expertise in the sector.
- 6) Demand for Indian good like Banarasi Saree (GI products) etc. in western market.

However, industry faces following challenges:-



Due to these challenges, potential is not fully utilized. Thus govt. has taken following steps:-

1) Merchandise Export for India Scheme.

Incentives to sector increased from 2% to 4% post mid term foreign trade policy review.

2) Distribution of ~~handlooms~~ powerloom for modernization.

3) Cluster based development of MSMEs and support via credit linked subsidy, credit assurance

nce scheme.

4) Fixed-term employment is introduced to ease labour regulation.

5) FTAs like RCEP etc. is underway to enhance access to market. (India - EU FTA)

6) PM Pongosa Pratishthan Yojana to ease labour cost by providing EPFO contribution for new workers.

7) Provision of credit through MUDRA, SHG-bank linkage etc.

8) Duty free scrips for import of raw material required in exports under GST.

9) Setting up of 1st Coastal Economic Zone at Jawaharlal Nehru Port Trust to provide for ease in export.

Thus following measures have led to increase in export of apparel in last year according to Economic Survey 2018.

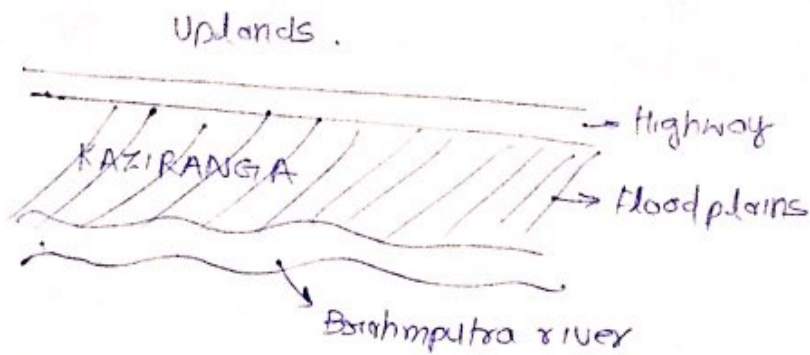
16. How do transportation corridors in biodiversity rich areas impact the wildlife? Examine the current policy framework in this regard. Also, suggest measures to minimise the negative effects while balancing the need for development. (250 Words) 15

जैव विविधता से समृद्ध क्षेत्रों में परिवहन गलियारे वन्य-जीवन को कैसे प्रभावित करते हैं? इस संबंध में वर्तमान नीतिगत ढांचे का परीक्षण कीजिए। साथ ही, विकास की आवश्यकता को संतुलित करते समय इसके नकारात्मक प्रभाव को न्यूनतम करने के उपायों का सुझाव दीजिए।

Recently, death of Tiger due to accidents in Bandipur Tiger Sanctuary at transport corridors was in news. Such, corridors impact biodiversity in following way:-

- 1) Death of animal while crossing.
- 2) Segregation of habitat. It lead to change in genetic diversity etc.
- 3) Edge effects tend to increase where a new community develops along edge of highway.
- 4) Invasive Alien Species through human interference can cause loss in biodiversity.
- 5) Source of food, water & shelter for animal may get segregated.

eg:-



When flood plains get inundated, rhino run for shelter in upland but get killed in road accidents at highway.

However, current policy framework tries to reduce such disturbance like:-

- 1) Environment Impact Assessment are done to understand such threats and take decisions.
- 2) Declaration of protected forest, national parks through which no highways can pass.
- 3) CAMPA fund will be used to create wildlife corridors at fragmented regions.
- 4) All such projects over forest lands need approval of Ministry of Forest.

However, despite these safeguards there are many corridors which are already developed.

d. Thus following steps can be taken:-

1) Creation of overpass/underpass to facilitate movement of wildlife.

Eg:- Highway ministry planning such underpasses at Bandipur.

2) Observing animal movements via remote sensing before planning such corridors.

3) Using forest land only as last resort when no other option is available.

4) Monitoring the impact of corridors on biodiversity and taking actions to reduce damage.

5) Slowing down the speed of vehicles while passing through reserved area.

Thus, balancing development with environment will help us fulfill our pledge of additional 2.5 - 3 million tonnes carbon sequestration by 2030 in Paris treaty.

17. The potential of technology to aid farmers in increasing productivity as well reducing susceptibility to climate change remains underutilized. Identify the reasons for the same and suggest measures to improve technological penetration in agriculture.

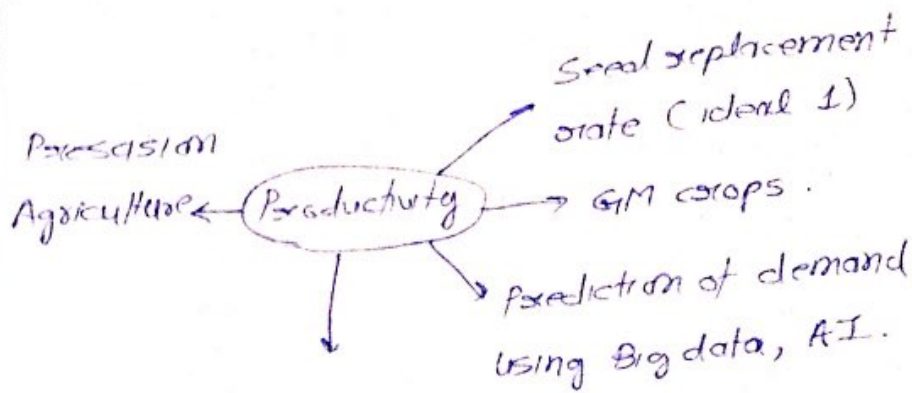
(250 Words) 15

उत्पादकता में वृद्धि के साथ-साथ जलवायु परिवर्तन के प्रति सुशेक्षता को कम करने हेतु किसानों की सहायता करने के लिए प्रौद्योगिकी की क्षमता का पूर्ण दोहन नहीं हो पाया है। इसके कारणों की पहचान कीजिए और कृषि में प्रौद्योगिकी प्रसार में सुधार हेतु उपाय सुझाइए।

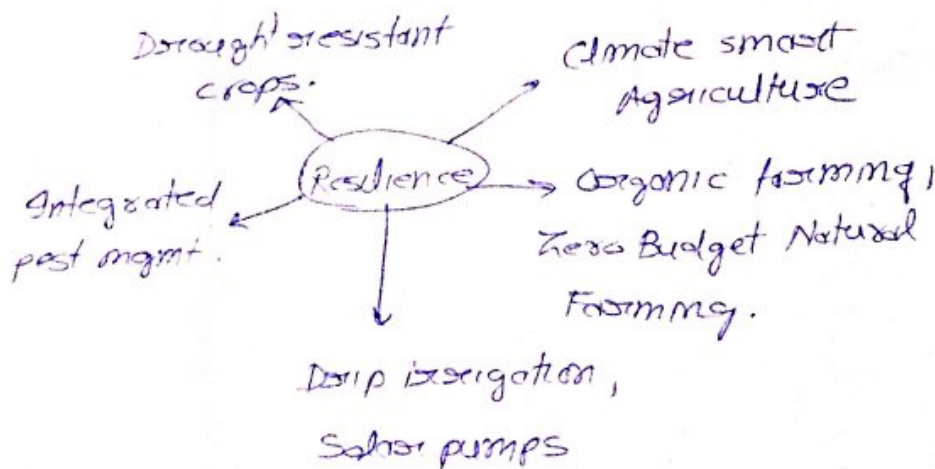
According to Economic Survey 2018, climate change can reduce farm income by 20-25% in rainfed areas. However the potential to reduce such damage remains under utilized as :-

- 1) Focus on production and agriculture growth.
Ex:- Rise in MSP leads to increase in intensity of inputs like irrigation, fertilizers etc.
- 2) Lack of farmers awareness on benefits of new technology and risk of climate change.
- 3) High cost of new technology limits its use due to lack of credit.
- 4) 86% of farmers are small and marginal. They lack resources to use new technology.

However technology has immense potential to increase productivity and resilience like:-



Time for sowing,
quantity of fertilizers required etc.
using remote sensing.



Thus, following steps can be taken to make farmers adopt new technology:-

- 1) Provide subsidy support for new technology.

Eg:- Solar pump subsidy under KUSUM Yojana.

2) Formation of Farmer Producer Organisations

↳ Information diffusion.

↳ credit to buy products like drip, sprinkler irrigation etc.

3) Provide apps for soil mgmt etc. in local languages. Eg:- Microsoft developing app to predict agricultural prices.

4) Encouraging startups to use data like soil health card data to create solutions for agri. insurance etc.

5) Demonstration of new technology.

Eg:- ICRA uses Krishi Vigyan Kendra to demonstrate climate smart agri. methods.

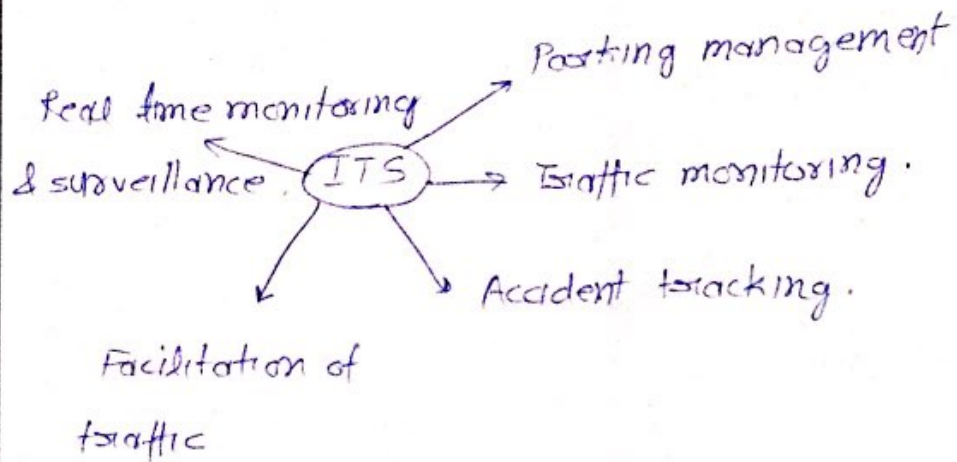
6) Encourage private investment like contract farming which will bring new technology.

Thus measures addressing finance, awareness, accessibility are required to make agriculture climate smart.

18. What is Intelligent Transportation System (ITS)? Explaining the need of ITS in India, identify the challenges in deploying it. (250 Words) 15

कुशल परिवहन व्यवस्था (इंटेलिजेंट ट्रांसपोर्टेशन सिस्टम: ITS) क्या है? भारत में ITS की आवश्यकता की व्याख्या करते हुए, इसके परिनियोजन में आने वाली चुनौतियों की पहचान कीजिए।

Intelligent Transport system refers to transport where new technologies of information technology like IoT, AI, Big data etc. are used to manage transport.



Thus, it is a way to improve efficiency of traffic. It is needed in India due to following reasons:-

1) High congestion in urban India during rush hours.

2) Lack of parking spaces in market area.

- 3) Traffic accident. (Acc to ministry of Road & Highway data, 1 accident happens every 3 minutes).
- 4) Violation of traffic rules & remain unaddressed hence better management is required.
- a) Lack of inter-modal compatibility in mass transport. eg:- Delhi (No sync between bus and Metro timings).
- c) Manpower to manage traffic areas at all intersection is lacking.
- 2) Air pollution in cities due to slow movement of traffic. eg:- Delhi winter smog.

NITI Aayog has signed MoU with Geneva based International Road Federation to develop ITS for India. However it will face following challenges:-

- 1) It will require retrofitting all vehicle fleet to improve monitoring.

- 2) Lack of sufficient funds to implement program at city scale.
- 3) Integrated transport is prone to cyber attack and thus require enhanced cyber security.
- 4) Public literacy about the system is low and manual ground support will be required.
- 5) Problem of physical space, road quality, old vehicle etc. need to be addressed.

Thus a pilot program at a tier 2 town will be better to gauge the benefits and risks in the system.

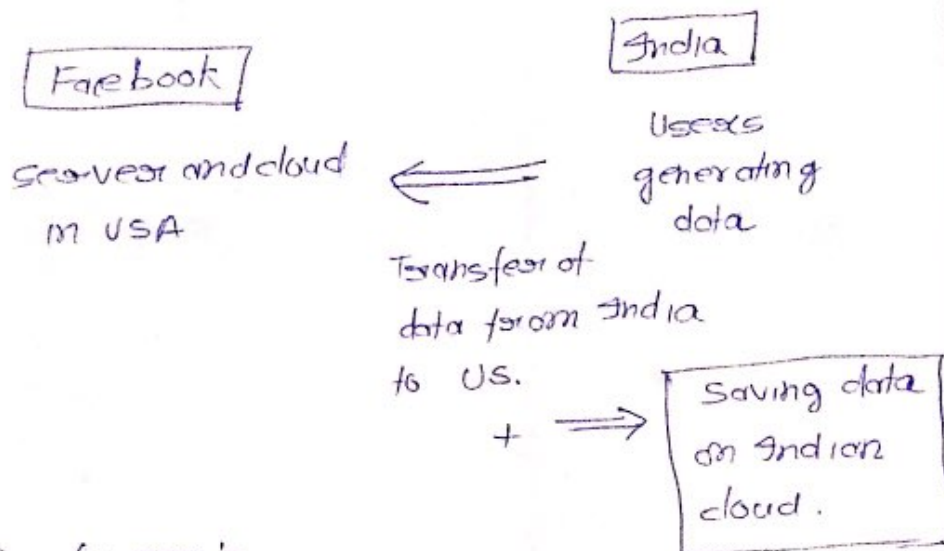
19. Explain the concept and significance of Data Localisation. Also discuss its limitations in strengthening law enforcement efforts in the context of Srikrishna Committee report and the draft Personal Data Protection Bill, 2018.

(250 Words) 15

डेटा लोकलाइजेशन की अवधारणा और महत्व की व्याख्या कीजिए। साथ ही, श्रीकृष्णा समिति की रिपोर्ट और ड्राफ्ट पर्सनल डेटा प्रोटेक्शन बिल, 2018 के संदर्भ में कानून प्रवर्तन प्रयासों को सुदृढ़ करने में इसकी सीमाओं की चर्चा कीजिए।

Data localisation refers to storage of all personal data created by a business inside the domestic boundaries of the country.

Eg:-



Significance:-

- 1) Protect the privacy of citizens.
- 2) Data security from manipulation, transfer to third party can be addressed.
- 3) Data can be used by local crime enforce-

ment authority to investigate any crime.

4) Hence, it will give the govt and citizen control over their data.

5) At present data needs to be requested from US authorities in case of crime related to US based companies like facebook etc.

However, it has following limitations:-

1) Increasing compliance cost for the companies.

2) Govt. need to provide infrastructure for data storage.

3) Stored data is prone to cyber threat.

4) It will not stop company from keeping a copy of data with itself and using for other purposes.

5) Indian IT companies might have to face similar regulation in other jurisdiction, affecting their business.

Saurashtra deposit and draft personal data protection bill makes data localisation mandatory for all international companies.

- 1) It provides data privacy authority to ensure safety and privacy of localised data.
- 2) Data localisation will not protect citizen's privacy from government.
- 3) Some people fear that exception are too wide for ground of data disclosure to govt. like → welfare measures
→ national security etc.
- 4) Industry feel that they may have to face similar law in other jurisdiction.
- 5) CLOUD Act of US has made data sharing by US companies to other govt. easier.

However, in light of national security data localisation is a good way to ensure autonomy over citizens' data.

20. What is the link between illegal immigration and national security? In this context, critically discuss the exercise of creating a National Register of Citizens in Assam. (250 Words) 15

अवैध आप्रवासन और राष्ट्रीय सुरक्षा के मध्य क्या संबंध है? इस संदर्भ में, असम में नागरिकों के राष्ट्रीय रजिस्टर को तैयार करने की कवायद की समालोचनात्मक चर्चा कीजिए।

Illegal migration due to conflicts, economic distress etc. in source region are a burden for destination countries as they create following threat to national security:-

- 1) Threat of violence due to backlash from local population. Eg:- Assam agitation of 1980s.
- 2) Threat of radical elements in immigrant population indulging in illegal activities.
- 3) competition for limited resource, lead to political polarization and arise of far right groups in various nation like Hungary, France etc.
- 4) Terrorist activities from people coming back from ISIS regions. Eg:- Lone Wolf attacks.

1) Change in demography of the region and associated ethnic conflicts.

In this context, the NRC exercise in Assam aims to create a list of legal citizens of India living in Assam & identify illegal immigrants that crossed border post 1971.

Benefits:-

- 1) Fulfilment of commitment under Assam Accord of 1985.
- 2) Detect further migration in future.
- 3) Preservation of local culture and right of local people over their resources.
- 4) Identifying criminal elements if any in illegal immigrant population.

However, it may create further conflicts:-

- 1) Process is prone to inclusion & exclusion error.
- 2) Bangladesh has rejected to accept them so they will become stateless.

3) Those identified illegal immigrants may be targeted by local population.

4) Migration from Assam to other states will create problem in newer areas.

5) May lead to similar persecution on Indian population in neighbouring country.

6) If they are deported forcefully, it will be in violation of their human rights.

Thus, the process needs to be completed under watch of hon'ble SC and those identified need to be rehabilitated in the local population under long term settlement program.