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GENERAL STUDIES (TEST CODE : 1072)

Name of Candidate	PAWAN KUMAR GOEL		
Medium Eng./Hindi	English	Registration Number	104395
Center	ORN	Date	14/9/19

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
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8	10	
9	10	
10	10	
11	15	
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16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- 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)।
- There are **TWENTY** questions printed in **ENGLISH & HINDI** इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- 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।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- 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।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

M-1/4, Plot No-A-12/13, 1st Floor, Ansal Building, Dr. Vidya Sagar Homeopathic Clinic, Mukherjee Nagar, Delhi-110009

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.

All the Best

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

व्याख्या 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।

Poor land record is the legacy of British Raj in India.

Importance of solving problem of poor land records

- It will ease process of land acquisition
- It will help farmers to take loans from banks. As due to poor land record can't mortgage land for loans
- It will help to solve existing land disputes.

Ways to solve

- 1) Digitisation of land records like Bhoomi project of Karnataka government
- 2) Use of technology like Blockchain to

develop land records.

- 3) Proper surveying of land.
- 4) Taking help of village panchayat & sarpanch to verify land holding.

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।

Infrastructure forms backbone of any economy.
features which make infrastructure financing a challenge :-

- 1) Long gestation period creates asset-liability mismatch in banks.
- 2) It is vulnerable to changing global economic scenario & national policy making. Which makes ~~infra~~ loans given susceptible to NPA
- 3) Infrastructure development is expensive, so it requires large amount of loans.

Measures Required to facilitate growth of Infrastructure :-

- 1) Raising funds from long term infrastructure bond instead of banks.
- 2) Use of Investment tools such as REITs & InVITs
- 3) ~~collab~~ Taking loans from multilateral finance institutions such as AIIB, ADB, World Bank.

It is estimated that India requires \$4 trillion dollar in next 3 decades to fulfill its infrastructural needs. This makes it very important to have a stable infrastructure financing model.

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?

Electronics constitute 2nd largest import bill only after petroleum. This shows that rising demand isn't met indigenously.

favourable conditions

- Huge demand
- 2nd highest STEM graduate in world
- cheap workforce
- established IT & software industry

Hindrance in growth of electronics manufacturing are :-

- 1) Poor infrastructure
- 2) Lack of skilled manpower in manufacturing of semiconductors.
- 3) Unfavourable electronics manufacturing policy.
- 4) Lack of funding in R&D.

5) Inverted duty structure which makes import convenient.

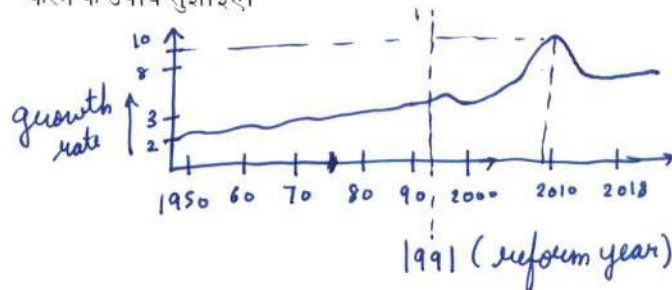
Steps Needed Enhance electronics manufacturing

- 1) Tax holiday & other business incentives
- 2) Increasing funding of R&D
- 3) skill development in electronics manufacturing.

~~4)~~

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।

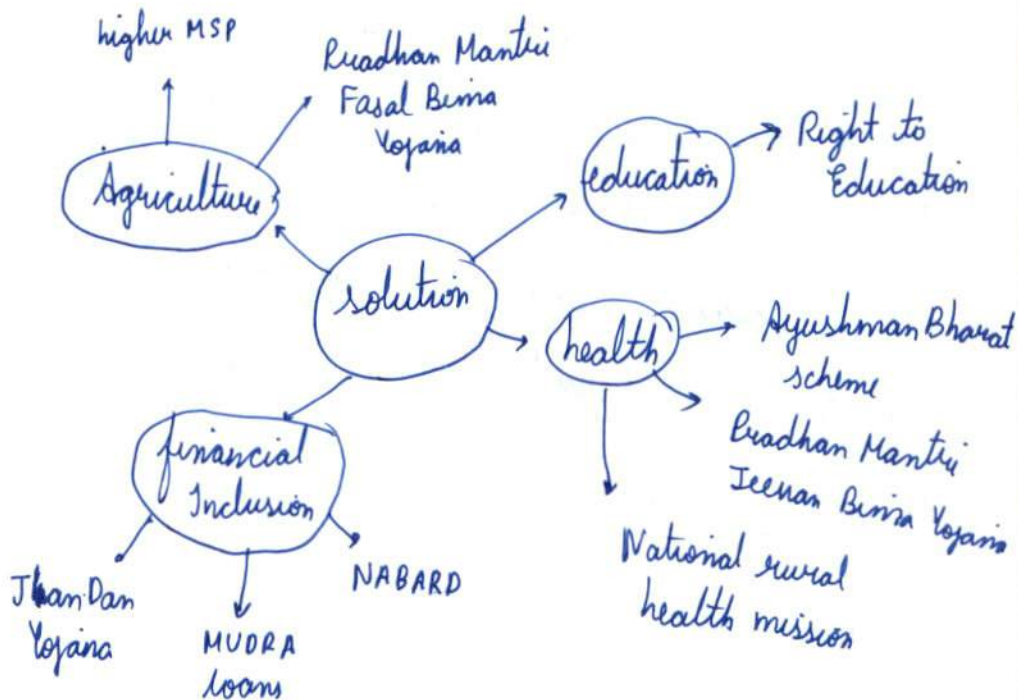


Post reform Era growth rate has increased from 3% to 7-8% on an average. However inequality has also increased leading to high poverty. According to Oxfam report 2017 in India 1% controls 73% of wealth.

This paradox exists as:-

- ① High Inequality as explained above; where few benefitted from LPG reforms.
- ② Recent phenomenon of Jobless growth → where growth is fuelled by consumption of upper & middle class.

- ③ Huge disparity in Education & Nutrition is creating gap between rich & poor.
- ④ Due to liberalisation, FDI is increasing in India leading to growth.



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 जिसों को आवश्यक वस्तु अधिनियम से पूर्णतया हटा देने का समय आ गया है।

Over years India's agriculture production has drastically increased, which has led to creation of surpluses.

Due to ^{or restriction} ban on export of commodities under Essential Commodities Act farmers are unable to export their produce & they are forced to sell it in India at throwaway prices.

Essential commodities Act ^(ECA) was introduced so as to control food inflation. So the act is favouring consumers at the cost of farmers.

~~So there~~ Pros of Removing Agricultural Commodity from ECA:-

- 1) Increase income of farmers.
- 2) Increase export ^{basket} of India.
- 3) Prevent farmers suicide. Presently 12,000 farmers commit suicide every year.

Cons of Removing Agricultural commodity
from ECA :-

- 1) Increase food inflation.
- 2) Create a situation where agriculture produce
being sold internationally while food shortage
exist in India.

It is high time that agricultural commodities
are removed from Essential Commodities
Act so as to double farmers income
by 2022.

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।

National forest policy of 1988 is 30 years old and with changing times there is a need for new forest policy.

Need for new forest policy

- 1) To incorporate use of new technology for conservation & preservation of forest.
- 2) Focus on new set of endangered species.
- 3) To bring forest policy inline with forest rights Act of 2006 which provides rights to tribals over access to resources.
- 4) To incorporate private sector, civil societies & locals in forest protection.

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 करते हुए, आपदा-प्रत्यास्थ शहरों का विकास करने के उपाय सुझाए।

Rapid urbanization has led to ~~up~~ unplanned expansion of cities which have made them vulnerable to disasters like:-

- 1) Flooding → flooding in Chennai & Mumbai is due to unplanned growth of cities where wetland & river floodplains have been destroyed.
- 2) Urban fire → ~~More~~ ^{over} crowding ~~in~~ in cities have led to maximizing area of flat at cost of ~~the~~ space for fire exit. This has led to death of people in Delhi [Uphaar Cinema fire] & in restaurants of Mumbai.
- 3) Earthquake → Due to rapid rise of population, ~~the~~ rapid construction has occurred at cost of safety norms. This has led to creation of disaster vulnerable buildings.

- 4) Epidemic → Due to creation of slums & overcrowding, spread of disease in very fast in cities.

Measures to develop disaster resilient cities:-

- ① Better enforcement of rules by municipalities
- ② Creating awareness about disaster resilient infrastructure in public.
- ③ Protecting wetland, floodplains of rivers & enhancing drainage system to prevent flooding.
- ④ ~~Dis~~ Disaster mapping of area to build buildings according.
- ⑤ Reduce pace of migration to control burst of population in cities.

8. Explain DNA profiling and highlight its forensic application. Also discuss the significance of DNA Technology (Use and Application) Regulation Bill, 2018 in this regard. (150 Words) 10

डीएनए प्रोफाइलिंग की व्याख्या कीजिए और इसके फॉरेंसिक अनुप्रयोग पर प्रकाश डालिए। साथ ही, इस संबंध में डीएनए प्रौद्योगिकी (प्रयोग और लागू होना) विनियमन विधेयक, 2018 के महत्व पर चर्चा कीजिए।

DNA profiling refers to collecting DNA samples and storing them in system, so as to use them in future for identification of person. It is used in many fields such as forensics, identification of disaster victim, preventing food adulteration.

Application of DNA profiling in forensics :-

- ① It is used to store DNA of criminal, so that any future crime by him/her can be easily tracked.
- ② DNA profiling can also help in identification of unknown dead bodies.
- ③ It can help in investigation of crime. As by collecting DNA from crime site one can determine who the criminal is.

DNA technology (Use & Application) Bill 2018

- 1) It allows collection of DNA samples of criminals
- 2) Creation of DNA bank to store DNA of suspects.
- 3) It also ~~has~~ lays down protection mechanism to safeguard right to privacy.

9. What is meant by the term Blue Water Capabilities? In this context, identify the key measures that have been undertaken to enhance the blue water capabilities of the Indian Navy. (150 Words) 10

ब्लू वाटर क्षमताएँ पद का क्या अर्थ है? इस प्रसंग में भारतीय नौसेना की ब्लू वाटर क्षमताओं का संवर्द्धन करने के लिए किए गए प्रमुख उपायों की पहचान कीजिए।

Blue Water Capabilities refer to capability of Navy to operate anywhere in the ocean i.e.

- ① They don't need to come back to parent nation for refuelling.
- ② They have knowledge about seas ^{from} all around the world.
- ③ They have enough logistics to conduct operation anywhere in the world.

Presently ~~only~~ US Navy is has ^{highest} Blue Water Capabilities.

Measures needed to enhance blue water capabilities of Indian Navy :-

- 1) Signing MOU with other countries to have access to their ports for refuelling & repairs like that with Singapore (Changi port)
- 2) Opening overseas naval ports Eg) As done by

China in Djibouti.

- 3) Increasing fleet of nuclear powered submarines & aircraft carriers.
- 4) Improving indigenous manufacturing in navy & increasing R&D.
- 5) Use of advance technology like CATOBAR in aircraft carriers for propulsion of aircrafts.

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 सुभेद्य बनाते हैं? साथ ही, हमारे देश में इससे निपटने के लिए उठाए गए प्रमुख कदमों की चर्चा कीजिए।



India is vulnerable to drug trafficking as:-

1) Geographical location → India is between golden arc & golden triangle which are major hub of production of drugs.

~~India's~~ Eg) In punjab drug smuggled from Pakistan.

2) Long coastline → It makes patrolling ~~to~~ tough which allows maritime drug trafficking into India.

- 3) Large population → It leads to increase demand for drugs.
- 4) Porous land borders due to tough terrains like forest, rivers makes it easy to traffic drugs into India.

steps taken to control drug trafficking

- 1) Sharing of intelligence & coordination with other countries to crackdown on trans national smuggling.
- 2) Improved marine patrolling with help of Navy, coast guards & marine police force.

~~3)~~

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?

India imports 80% of its ~~crude~~ oil needs. So this makes Indian economy highly vulnerable to fluctuations in global crude oil prices.

Impact of ^{high} global crude oil prices :-

- 1) Higher Current Account Deficit → It increases import bill thereby increasing trade & current account deficit.
- 2) Higher Inflation → High petrol & diesel prices increase cost of transportation. Leading to higher food inflation.
- 3) Depreciation of Rupee → higher global oil needs leads to fall of ~~rupp~~ Rupee wrt dollar.
- 4) It disturbs macroeconomic fundamental of economy. which makes raising money through bonds expensive. It can also lead to

flight of money of FII, FPI.

- 5) It impacts government's ~~expend~~ expenditure on social empowerment as larger share of money goes into import of oil.

steps to Insulate India from global oil price volatility :-

- 1) Enhancing Renewable Energy basket → India plans to install renewable energy capacity of 227 GW by 2022 from the present 70 GW.
- 2) Use of electric - vehicle → India plans to manufacture only e-vehicles after 2030.
- 3) Better end to end connectivity by public transportation to reduce number of private vehicles.
- 4) 100% electrification of Railways.

- 5) setting up of more strategic petroleum
reserves in order to reduce price
volatility.

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 कीजिए। इस संदर्भ में, कौशल विकास क्षेत्र में निरीक्षण और साथ ही वित्तीयन में सुधार के लिए कौन-से उपाय आवश्यक हैं?

Private sector ^{has} played ^a critical role in skill development ~~in~~ like:-

- 1) Establishment of ITI's.
- 2) ~~at~~ Imparting skill training.
- 3) Collaborating with colleges to inculcate employable skills in youth.
- 4) Helping government in policy formulation
- 5) ~~•~~ Providing technology for skill development.
- 6) Hiring of workforce from these ITIs

Ways to ~~improve~~ Improve skill development sector :-

- ① Oversight
- ② Digitisation of ITIs to ^{keep} track on their

activities.

- ① Developing a standard & framework for certification of skills like NSQF.
- ② finance
- ① Government setting up Kaushal Kendras under Pradhan Mantri Kaushal Abhiyan
- ① Developing PPP model for financing skill development.
- ① Encouraging industries to setup their own skilling centres.

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।

India is the fastest growing e-commerce market in the world.

Need for regulation

- 1) FDI → A clear e-commerce policy will attract more FDI & improve ease of doing business
- 2) Entry of Walmart → Walmart wasn't allowed to setup brick & mortar shops in India because of restrictions on multibrand retail. So it used loophole & acquired flipkart e-commerce company to enter Indian market.
- 3) Protect rights of customer from exploitation by e-commerce giants.
- 4) To regulate impact of e-commerce giants

on the local ration shops. So regulation will help to prevent monopoly of few ~~gas~~ global ~~gas~~ giants such as Amazon, Walmart.

challenges faced by e-commerce:-

- 1) Absence of National e-commerce policy is preventing other companies from entering into India.
- 2) Lack of internet penetration & digital literacy in rural area where 70% of population lives.
- 3) Cut-throat competition for local companies & startups because of huge discounts given by big companies like Amazon.
- 4) Lack of infrastructure such as warehousing & transportation facility increases logistics cost for e-commerce companies.

5) e-commerce startups face problem of accessing credit.

Way forward

*) Government is bringing e-commerce policy & has already started schemes like startup India, tax holidays & MUDRA loans to promote e-commerce ~~startup~~ startups in India.

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।

Dairy sector is one of the most important allied sector of Agriculture in India.

Importance

- 1) Regular source of Income for farmers, as it isn't seasonal like agriculture labour.
- 2) Generates large scale employment.
- 3) Ensures nutritional ~~base~~ security of country.
- 4) forms backbone of milk processing industries like sweets, ~~ice~~ icecream, and etc.
- 5) It also protects dairy animals by ensuring them proper food & veterinary care.

Achievement of dairy sector

- India largest producer of milk in world
- India has largest population of milch cattle.

Overproduction is one of the reasons faced by dairy sector which has led to crashing of milk prices. This resentment was shown by 10 day national strike by farmers in June by spilling milk on roads.

However, overproduction is not the only reason
as:-

- 1) India suffers from low milk productivity in comparison to New-Zealand.
- 2) ~~Milk giving capacity of 1st~~ There is poor ~~market~~ linkage of dairy farmers with global value chain - So they aren't able to export their production.

Solution

- 1) Connect dairy farmers with global value chain.
- 2) Improve storage & transportation system to prevent distress sale.
- 3) Use of milk in food processing industry.

- 4) Training dairy farmers in making milk based products like milk shake, ice-cream to increase income.
- 5) Schemes like Hissar Gaurav, National Bovine Mission to improve productivity of cows.

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 सविस्तर वर्णन कीजिए। इस संबंध में कौन-से कदम उठाए गए हैं?

^{Industry}
Textile & Apparel ^{is} one of the largest employers
~~India~~ India.

Potential of Textile Industry

- 1) Labour Intensive Sector → So textile & apparel has opportunity to generate large scale employment in India.
- 2) Exports → Textile sector has huge potential of exports thanks to cheap labour.
- 3) Growth in textile & Apparel sector also gives boost to other sector such as agriculture (cotton growing farmers)
- 4) Culture → Variation in textile & apparels show rich diversity & culture of India.

Challenges to achieve true potential of textile sector :-

- 1) Expo Poor use of obsolete Technology → Indian textile mills don't have machine to process good quality cotton. So most of the good quality cotton is exported.
- 2) Poor quality of Raw material → Due to poor quality of raw material, final product's quality is also impacted.
- 3) Textile policy → As a result of old textile policy which is not fibre neutral it results in underutilization of India's potential.
- 4) Strict labour laws impact generation of employment in textile industry.
- 5) Lacked of skilled manpower in textile industry.
- 6) Lack of basic Infrastructure like 24x7 electricity
- 7) Lack of focus on synthetic fibres which are in demand in international markets.

Easing of labour
laws & skilled
development through
KVIC

step taken

Launched its schemes
like POWERTEX & SATHI
to give better powerlooms
to textile industry.

Allowing 100% FDI in
apparel sector

A new textile policy
under discussion

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।

Transportation corridors are road & rail corridors through forest & other biodiversity areas. They are needed to enhance connectivity, reduce travel time but they also have adverse impact on wildlife such as:-

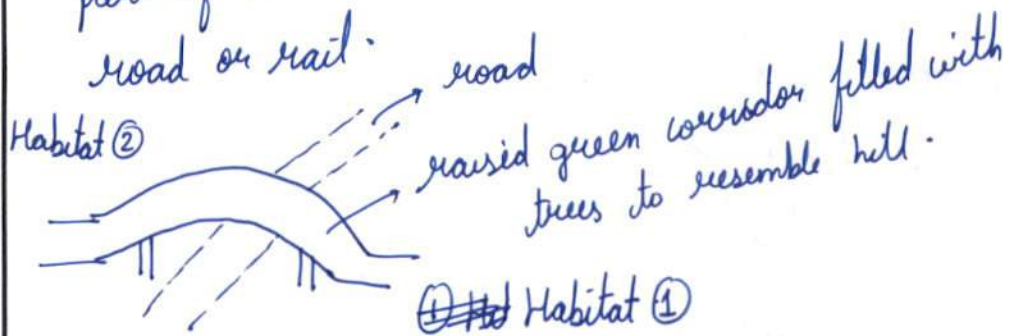
- 1) Death of Animals → It increases deaths because of accident like collision between elephants & train is common in Uttarakhand.
- 2) Noise pollution → It increases noise levels which causes disturbances in mind of the animals.
- 3) Tremors because of train & vehicle can create panic among small animals near transport corridor.

4) fragmentation of habitat → This reduces area available for ~~area~~ animals to graze, hunt etc.

5) Increases Man - Animal conflict

Policy framework for transportation corridor :-

1) Government aiming to build green corridor in order for animals to travel from one part of habitat to other bypassing the road or rail.



Already Telangana government is building green corridors.

2) Environmental impact assessment → Conducted to minimise damage to environment.

3) CAMPA fund → Money deposited in this fund to compensate for deforestation.

Measures needed to minimise negative impact

- 1) Proper utilization of CAMPA fund for afforestation.
- 2) ~~Pro~~ construction of more green corridors for animals.
- 3) Use of environment friendly ^{construction} material to minimise damage to environment.
- 4) Installation of sound & shock absorbers to minimise disturbance to animal.
- 5) Use of technology like mobile Apps to inform about any accident on road to provide quick first aid to animal.

There is a need to balance developmental & environmental needs. India can learn from international best practices like that of Sweden in constructing transportation corridors.

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 सुभेद्यता 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।

~~NITI Aayog~~ According to Economic Survey 2017-18

farmer's income can reduce by 25% as a result of climate change.

Technology can help to tackle the problem of climate change like :-

- 1) Productivity
- 2) Soil Health Card → It can tell farmer which crop to grow & which fertilizer to use to increase productivity.
- 3) Use of microirrigation / drip irrigation to improve productivity
- 4) Through genomics better productivity seeds can be given to farmers.
- 5) CHAMAN → It will help horticulture industry to improve its sanitary & phytosanitary standards.

- 2) Reducing Susceptibility
-) Use of satellites & early ^{weather} warning system like that of drought. Eg) e-NADAMS
 -) Helpline numbers & ~~let~~ television shows can help farmers to tackle various problem.
 -) Pradhan Mantri fasal Bima Yojana will use technology like drones to reimburse farmers in case of crop failure.
 -) FARMER ZONE → portal will give holistic information to farmer like climate, soil type, pest to reduce susceptibility.
 -) Better pesticides, storage facilities will reduce susceptibility.

However despite these advantages, ^{utilization of} technology remains underutilized as:-

- 1) Lack of Digital literacy.
- 2) & shortage of skilled manpower.
- 3) Poor interface between farmers, agricultural

scientist & policymakers.

- 4) Lack of infrastructure like internet penetration
- 5) Inertia towards change & use of technology.
- 6) Lack of awareness amongst farmers about many schemes that has been launched by them.

~~Ways to~~

Improving Internet
penetration

Eg) BHARATNET

ways to improve
technology
penetration

Improving
digital literacy

Eg) PMGDISHA
scheme

Increasing funding
for R&D in agriculture

Creating awareness
about use of
technology

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 transportation system refers to a smart transportation system which uses tools like artificial intelligence, machine learning & Internet of things to provide seamless transportation experience.

Need of ITS

- 1) Smart traffic light signals → will reduce waiting time & lead to better traffic management according to traffic rush.
- 2) Multimodal transportation system which provide end to end connectivity.
- 3) Reduce Road Accidents → It will reduce roads accidents which is a major cause of death.
- 4) Better surveillance of roads will help police

to maintain law & order on roads.

5) Reduced Delay → It will help to tackle problem of traffic jams

6) Quicker transportation → It will reduce wastage of perishable goods like fruits, vegetable.

Challenges in deploying ITS

1) Lack of digital literacy → Its is problem as it limits potential of use of technology. Eg) Fast Tag RFID tags to provide seamless toll experience not much popular due to digital illiteracy.

2) Shortage of skilled manpower → India needs more skilled workforce working on AI, IoT, Big data.

3) Police force → Need to modernize police force & train them in using new generation technology.

Vacancies in police force also makes traffic

management tough.

- 4) Poor access to high & modern technology → Due to ~~poor~~ lack of R&D India make to rely on other countries for technology.

There is a need to promote digital literacy & R&D in intelligent transportation system so as to improve Ease of living in India.

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।

Srikrishna Committee on "Data protection" has recently suggested principle of data localisation.

Data localisation refers to storing data of citizens by MNC's within his/her country of residence. That is, presently global companies like Google, Facebook store data of Indians in their servers in USA; but when data localisation principle kicks in they will have to store data of Indians in servers in India itself.

Significance of Data ~~location~~ localisation

- 1) It will allow quick access to data to Indian law enforcement Agencies.
- 2) It will make global companies accountable to Indian government.

- 3) It will safeguard misuse of personal data of Indians by any other foreign nations. ~~It~~
- 4) It is in tune with fundamental right of per Right to privacy as declared in KS Puttuswamy case.

~~Limitations in strengthening~~
Draft personal Data protection Bill 2018 has made it mandatory:-

- 1) For Data fiduciaries (data companies) to keep a copy of personal data of individuals in India.
- 2) ~~Per~~ People have to Right to consent to know how their data is being used.
- 3) Processing of data can take place without consent only in matter related to national security.

However these principles of data localisation has several limitations such as:-

1) ~~Right over geographical~~ Having servers in India won't give government right over the data. So, still they will have to go through the same ^{lengthy} process for retrieval of data.

2) Data localisation will increase cost of doing Business in India. This will discourage foreign companies to invest in India. This will have impact on technology transfer.

3) Law Enforcement agencies don't have ~~as~~ as strong cyber security framework in India. So this can make personal data of citizens vulnerable.

The Bill, is a step in right directions & apprehensions of Companies should be addressed so as to strike balance between law enforcement & ~~business and~~ ease of doing Business in India.

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।

Issues of illegal immigration was recently in news because of illegal Rohingya immigrant & illegal bangladeshi immigrants in Assam.

Illegal immigrants can be threat to National security as :-

- 1) These immigrants have entered India without any official screening process so these people might ^{even} belong to a terrorist organisation.
- 2) Illegally entering into India shows loopholes in our Border security management system.
- 3) Since they are unaccounted people living in a country, it becomes difficult for government to keep track on their activities.
- 4) Since these immigrants are poor, so they are ~~super~~ easy target of radicalisation.

- 5) Illegal immigrants can cause ethnic clashes with the locals as seen in Assam.

In this regard National Register of Citizen (NRC) updation ~~was~~ in Assam was agreed under the Assam Accord of 1985.

National Register of citizen (NRC) will document genuine citizens of the country who lived in Assam before the cutoff date of 24th march 1971.

This process will hence help to identify illegal ^{bangladeshi} immigrant in Assam.

Pros of NRC

- 1) Help in detection & deportation of illegal immigrant.
- 2) Ensure that demography change is reversed in Assam.
- 3) Prevent future ethnic clashes
- 4) Will ~~empower~~ politically & economically empower indigenous community who feel marginalised due to presence of illegal immigrant

5) Preserve culture of Indigenous community.

Cons of NRC

- 1) It might further create divide between illegal immigrants & indigenous people.
- 2) Deportating them back to Bangladesh might spoil diplomatic relations with them.
- 3) If ~~deport~~ immigrants aren't deported, then without having citizenship right they will be further ~~more~~ marginalised.
- 4) Issues of loopholes in NRC process where ^{some} members of same family are included & others excluded.

Government should try to further make the NRC process more accurate so that discrepancies in the present 40 lakh immigrants are reduced. Further efforts should be made to find an amicable solution ^{through} by consultation ^{with} of all the stakeholders involved.