



VISION IAS

www.visionias.in

GENERAL STUDIES (TEST CODE : 2415)

Name of Candidate	Muskan Srivastava		
Medium Eng./Hindi	English	Registration Number	1492371
Center	Online mode	Date	27 July 2022

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
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 **HINDI & ENGLISH**
इसमें बीस प्रश्न हैं हिन्दी और अंग्रेजी 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

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. 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. भारत में राज्यों की राजकोषीय स्थिरता से संबंधित मौजूदा मुद्दों पर चर्चा कीजिए। इन मुद्दों के समाधान हेतु किन उपायों की आवश्यकता है?
- Examine the persisting issues related to fiscal stability of states in India.
What measures are needed to address these issues? (Answer in 150 words) 10

States have responsibilities like education, health, law & order etc. as per 7th schedule of constitution. These can't be achieved without fiscal stability.

Persisting issues:-

- ① Central devolution of funds to states:-

→ Vertical imbalances (41% as recommended by finance commission)

→ Horizontal imbalances

→ (Eg) Karnataka gets only 0.7% back for every ₹1 generated in economy.

10% UP → ₹1 back

- ② Announcement of freebies (Eg) TV, laptops etc. ⇒ unviability of promises

- ③ Policies (Eg) Several state going back to ATP Old Pension Scheme ⇒ huge fiscal burden.

④ Generation of Revenue

(Eg) Reluctance of states to impose tax on agri. income

⑤ Loss of Revenue $\Rightarrow$ due to GST⑥ Persistent public debt (Eg) 26% of GDP cumulatively.Measures to be taken :-

① Rationalizing of subsidies and policies (Eg) Telangana model of pension $\Rightarrow$ 33% guaranteed online 100% in Old Pension Scheme

② Allowing states to raise resources linked to performance

(Eg) 0.5% additional borrowing for power sector reforms

③ Taxing agri. income of non-agri workers [Balwai committee recommended this]

④ Model Act like FRBMA Act in states with legally binding targets

2. हालांकि रुपये के अंतर्राष्ट्रीयकरण के अनेक लाभ हैं, लेकिन यह जोखिम रहित भी नहीं है। व्याख्या कीजिए।

The internationalisation of rupee has many advantages, yet it is not devoid of risks. Explain. (Answer in 150 words) 10

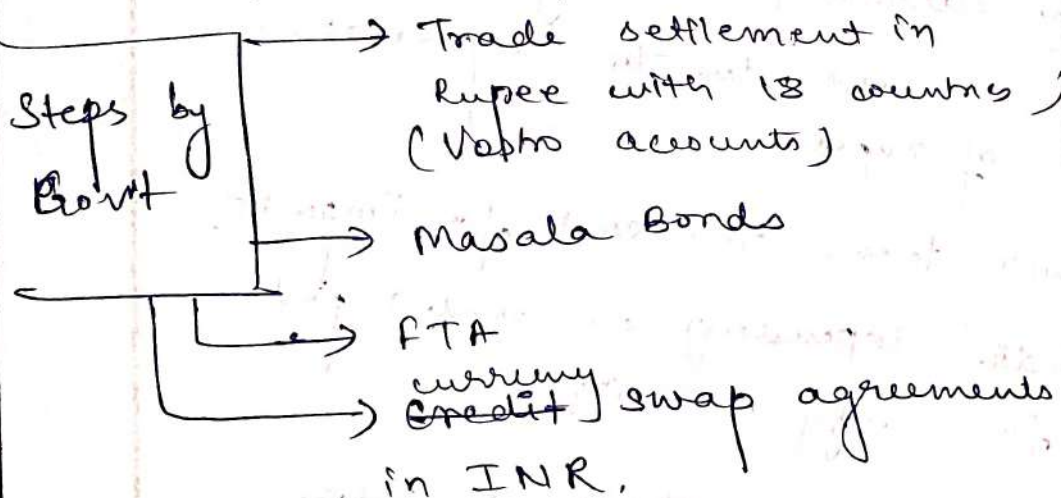
Internationalisation of ₹ means increasing use of ₹ in foreign transactions by both by India & other countries.

Advantages of Internationalization:

- ① Reduced demand to maintain forex reserves
 (Eg) RBI as a custodian maintains forex for import cover
- ② Low currency exchange risk
 (Eg) In debt due to depreciation of rupee
- ③ Lower transaction cost for imports
 (Eg) India dependent on crude import for energy security
- ④ Rising global stature of India
 (Eg) China's rise after inclusion of RMB in IMF basket
- ⑤ Increased trade with other countries
 (Eg) Russia's trade with India in recent times.

Risks :

- ① Need of full capital to Account convertibility
- ② Capital flight risks
- ③ Increased vulnerability to global shocks
- ④ Increased responsibility towards global fiscal stability
- ⑤ Easier financing of illegal activities, money laundering etc.

Steps by Govt

Internationalization of rupee has huge advantages but its fallouts needs to be addressed.

3. भारत में विभिन्न विकास पहलों की लेखापरीक्षा रिपोर्टों में बार-बार सार्वजनिक व्यय से संबंधी अक्षमताओं को उजागर किया गया है। इन अक्षमताओं की पहचान करते हुए, इनके समाधान हेतु अपनाए जाने वाले उपायों का सुझाव दीजिए।

Audit reports on various development initiatives in India have frequently highlighted inefficiencies in public expenditure. Identify these inefficiencies and suggest measures that can be taken to address them. (Answer in 150 words) 10

India's role as welfare state needs to take care of its citizen through public expenditure. However, there are few inefficiencies

Inefficiencies highlighted by audit reports

① Underutilization of funds

(Eg) only 70% utilized in PM Awas Yojana (U)

② Misutilization of funds

(Eg) Beti Bachao Beti Padhao Yojana → 78% → spent only on media campaign

5% → education

③ leakages

(Eg) > 5% leakages in PDS (Shantana Kumar committee)

④ Inclusion and Exclusion Errors

(Eg.) Recent reports on house
allotment to relatively well off
under PM Awas Yojana (Rural)

⑤ Need of reappropriation

⑥ Cost overruns → (Eg.) MNREGA cost
overrun due to
pandemic

Measures: -① Assessment of programmes

- intended beneficiaries
- survey of problem
- budget allocation as per std pricing

② Digitalization of disbursement
in public expenditure.③ Linkages of Aadhar ~~with~~ to check
inclusion and exclusion error.④ Strengthening parliamentary scrutiny

Public Expenditure ~~is~~ comes
from taxpayer's money. Hence, development
programmes need due diligence.

4. उत्पादन से संबद्ध प्रोत्साहन (PLI) योजना आत्मनिर्भर भारत के लक्ष्य की प्राप्ति हेतु सरकार की प्रकार सहायता कर सकती है। साथ ही, इसके उद्देश्यों को प्राप्त करने में आने वाली चुनौतियों का भी उल्लेख कीजिए।

How can the Production Linked Incentive (PLI) Scheme help in achieving an Atmanirbhar Bharat? What are the challenges in realizing its objectives?
(Answer in 150 words) 10

Production linked Incentive (PLI) were launched as a part of Atmanirbhar Bharat package :

How it can achieve Atmanirbhar Bharat :

- ① Performance linked :- ~~not~~ incremental increase in manufacturing of sectors like electronics, food processing, API etc.
(Eg) India → now 2nd largest mobile manufacturer
- ② Time bound - rapid growth
- ③ Incentivizing private sector especially in emerging sector
(Eg) semiconductors.
- ④ Attract FDI's :- in critical sectors → (Eg) medical devices
- ⑤ Atmanirbharta in job creation :-
(Eg) more than million jobs creation.

expected.

Challenges in PLI:

- ① Not enough incentives to private sector (Eg) Recent pulling out of semiconductor projects by few companies
- ② ^{Lack of} ~~lack of~~ skilled labour $\Rightarrow$ needed in sectors like electronics and semi-conductors
- ③ Rigid labour policies
- ④ Monitoring and evaluation performance
 $\hookrightarrow$ Red tapism and Regulatory cholestrol

PLI policies are way forward in achieving Atmanirbhar Bharat to make India an industrial power house. Skilling, ease of doing business reforms and creation of infra is are also needed for successful implementation.

5. भारत के नवाचार परिवेश के समक्ष कौन-सी विभिन्न चुनौतियां विद्यमान हैं? इन चुनौतियों का समाधान कैसे किया जा सकता है?

What are the various challenges that India's innovation ecosystem faces?
How can these challenges be addressed? (Answer in 150 words) 10

Innovation Ecosystem ^{is} ~~are~~
important for creation of new
technology and rapid economic
development.

Challenges faced by India's Ecosystem
of Innovation

① Low R&D spending by government

eg) 0.7% v/s 6% by Israel.

② low per capita patent application

③ low researches by universities

→ low grants for innovation

→ professors focussed on routine
administrative & works

→ low no. of PhD degree granted

eg) only ~15,000 in 2020-21

④ low ~~room~~ no. of women in researches

→ low gender-inclusive researches.

- ⑤ Problems in start-up ecosystems
- ↳ credit access
 - ↳ viability
 - ↳ lower innovation capabilities compared to China or Israel

Measures to address above challenges:

- ① Increase in R & D spending.
- ↳ Eg Creation of National Research Foundation to facilitate R & D in universities
- ② PHD ~~to~~ awards → increase
- ↳ Eg UAC norms to simplify procedure
- ③ collaboration with foreign players.
- ④ Reforms in start up ecosystem
- ↳ Atal Tinkering Labs for entrepreneurship
 - ↳ Incubation centers
 - ↳ PSL norms for credit access.

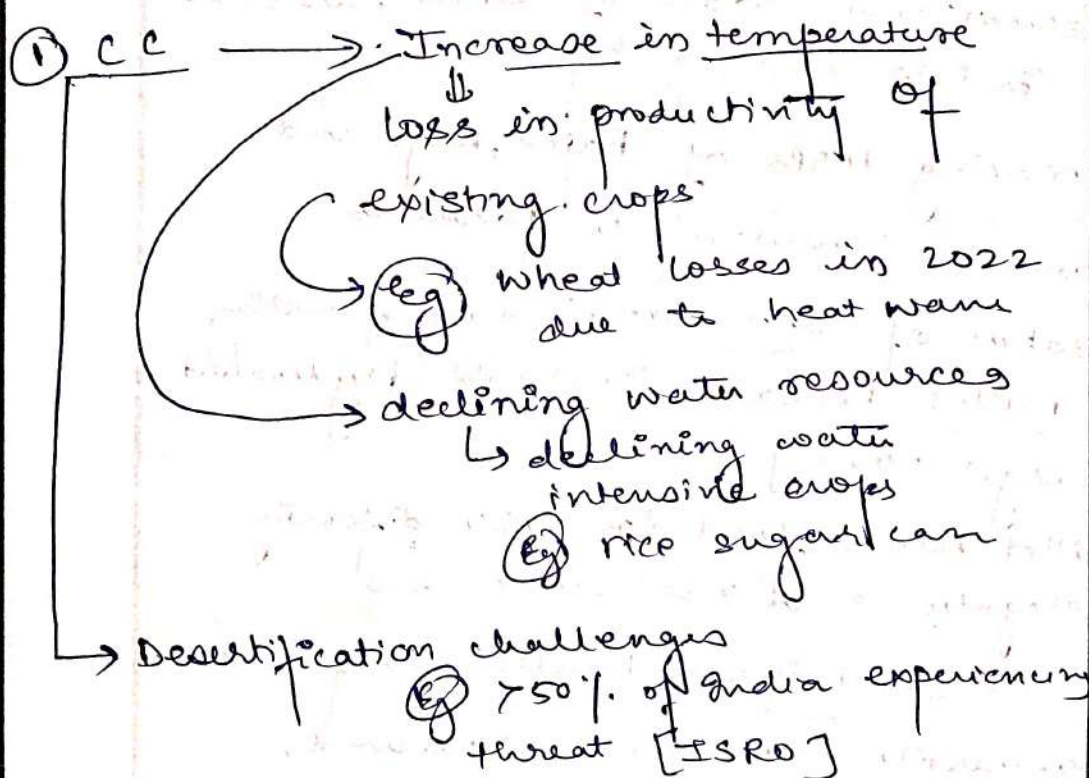
Innovation sector strengthening is important to achieve demographic dividend and Atmanirbhar Bharat.

6. जलवायु परिवर्तन में वृद्धि से मोटे अनाज की खेती का पुनरुद्धार किस प्रकार हो रहा है। साथ ही, भारत में मोटे अनाज के उत्पादन को गति देने के लिए सरकार द्वारा उठाए गए कदमों का उल्लेख कीजिए।

How is the advent of climate change leading to the revival of cultivation of millets? What steps have been taken by the government to give an impetus to millet production in India? (Answer in 150 words) 10

Millets have been traditional crop of India. Due to green-revolution its production and consumption declined drastically. However, with climate change has brought it again into focus.

Revival of cultivation of millets due to CC



→ Cc induced locusts and pests attacks.

② Millets

- Indigenous to Indian agro-ecological climates ∴ Indus Valley civilisations
- low water requirement (Eg) Bajra → < 50 cm rainfall
- ↑ soil productivity
(Eg) Ragi in Karnataka → red-yellow soil
- low susceptibility to locusts & pests

Govt's impetus

- ① International Year of Millet, 2023: —
on India's backing by UN
- ② Increasing MSPs of Bajra, Ragi and Jowar → incentive to farmers
- ③ Creation of 'Shree Anna' and funding to Millet Research Institute, Hyderabad [Budget 2023]
- ④ Millet based food for G20 & foreign delegates ⇒ to rise awareness
- ⑤ Media campaign → health benefits etc. to generate consumer demand.

7. चारे की खराब गुणवत्ता और उसकी अपर्याप्त उपलब्धता भारत में पशुधन की कम उत्पादकता के लिए उत्तरदायी प्रमुख कारण हैं। चर्चा कीजिए।
Poor quality and inadequate availability of feeds and fodder are the major reasons behind the low productivity of the livestock in India. Discuss.
(Answer in 150 words) 10

28% of agriculture GVA is contributed by livestock, but it has poor low productivity in India.

Reasons for low productivity :-

① Poor quality and inadequate availability of feeds & fodders

- poor nutrition to animals → low lactating capacity
- diversion of good quality pastureland to agricultural purpose post independence
- excessive use of fertilizers to grow fodders ⇒ phyto sanitary & sanitary std of livestock current

Other reasons :-

② Lack of suitable agro climatic zone → India tropical country →

natural yield low

③ Susceptibility to diseases (Eg) lumpy
Skin diseases

④ Poor veterinary infra

⑤ Poor breeding capacities.

Way forward:

① Implementation of National
Mission on Livestock

- development of veterinary infra
- quality feed
- vaccination

② Development of livestock rearing
in arid zones → natural high
yielding variety

(Eg) → GJ & Rajasthan → 'Gir' variety
→ ~2500 kg
per capita yield.

Livestock rearing in India has
huge potential to cater food security
demands & agri-exports. Thus, integrated
farming methods which promotes livestock
along wop is needed.

8. एकीकृत कीट प्रबंधन (IPM) क्या है? IPM के उद्देश्यों पर प्रकाश डालते हुए, इसके विभिन्न घटकों पर चर्चा कीजिए।
What is Integrated Pest Management (IPM)? State its objectives and discuss its various components. (Answer in 150 words) 10

With increasing threat of pest and locust attacks in wake of climate change, Integrated Pest Management has been brought to focus.

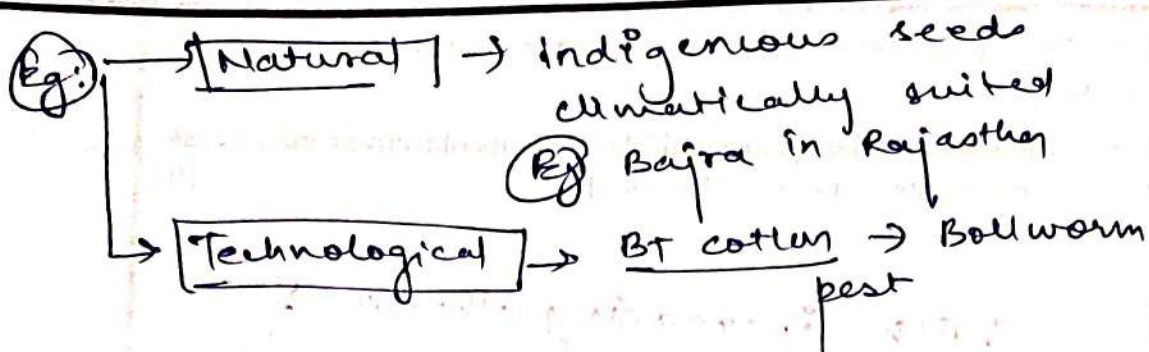
Integrated Pest Management → is a sustainable techniques to manage the population of pest below the level which can be dangerous to human activities like agriculture.

Objectives :-

- ① sustainable management of pest
- ② minimizing agricultural losses
- ③ decrease incidence of pest attacks.

Components :-

- ① Use of seeds → which are less susceptible to pest attack



② Crop diversification

↳ crop rotation, leguminous crops plantation

③ Agro forestry → using trees like Neem → natural pest repellent.

④ Sustainable Pesticide Prevention methods

→ (Eg) Natural organic pesticide
 ↳ lemongrass
 ↳ use of 'cats' to chase rodents

⑤ local climate maintenance

↳ Humid & hot climate → more susceptible to pest

In recent times, pest led agricultural losses has increased substantially in India. 9PM can minimize such losses.

9. बताइए कि किस प्रकार अनाज की वास्तविक कमी की तुलना में खराब खाद्यान्न प्रबंधन भारत में खाद्य सुरक्षा के समक्ष एक बड़ी चुनौती रहा है।
How has poor grain management been a greater challenge to food security in India than the actual shortage of grains? (Answer in 150 words) 10

According to NITI Aayog,
India loses > 60000 crore worth
food due to poor management
of grain.

Poor grain management challenge to
food security

- ① India → largest cereal producer in
World
→ largest rice exporter
- ② FCI → overflowing buffer stocks
(eg) 30 MT of rice in 2022-23
compared to 14 MT required
- ③ IL management
 - poor storage techniques (eg) PPT
method
 - damp condition storage
 - leakages in supply chain
(eg) 50-60% in PDS [Shanthen
Kumar committee]
 - post-harvest losses → lack of

- cold storage
- black marketing of ~~set~~ goods sold through PDS
- lack of digitization

Impact:

- ① Food security issues
 (E) Hunger in India is serious according to Global Hunger Report
- ② Lack of last mile connectivity & huge food losses.

Way forward :

(Shantha Kumar Recommendation)

- ① Digitization of supply chain of PDS
- ② Storage reforms of PDS → plinth & cover system
 → no grain should be stored for 3 months
- ③ allow FCI to sale extra grains in open markets.
- ④ Creation of warehouses and cold storage to minimize losses.

India is irony of agri. exporter and largest hunger struck population. Proper grain management is sine qua non to achieve SDG 2.

10. शहरी कृषि से आप क्या समझते हैं और इसके विभिन्न प्रकारों का वर्णन कीजिए। साथ ही, भारत के संदर्भ में इसके महत्व पर चर्चा कीजिए।
Explain what you understand by urban agriculture and state its types.
Discuss its significance in the context of India. (Answer in 150 words) 10

India has 2.4% land to serve 18% of population. With increasing urban sprawl and rising food security challenges, urban agri has come to focus.

Urban agriculture

↳ production of agriculture products like food grains, fruits, vegetables, dairy products etc. inside the limit of urban area

Types:-

① Kitchen gardens

↳ growing of daily household requirement of vegetables like amla, bottlegourd, tomatoes in backyard, balconies etc.

- ② Dairy farming and at outskirts of cities
 ↳ to fulfill requirements of milk, eggs etc.

- ③ Vertical farming
 ↳ creation of 'green spaces' at rooftops of buildings.

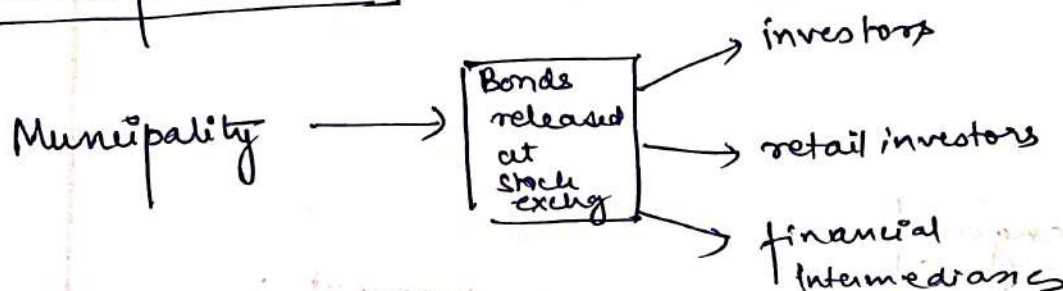
Significance in India

- ① Rapid changing land use in India
 ↳ diversion of agri. land.
- ② Since 2011, net arable land in India has slightly declined.
- ③ Stagnating productivity of Indian agri → not enough to keep with population growth
- ④ Fluctuation in prices of agri commodities
 (Eg) Tomatoes prices in June 2023.
- ⑤ Promotes sustainable and ^{chemical} free ^{cultivati-} kitchen garden → as per use of consumer.

11. भारत में तीव्र शहरीकरण को देखते हुए, शहरी क्षेत्रों में पूंजी निवेश की बढ़ती मांग को पूरा करने के लिए म्युनिसिपल बॉण्ड्स का उपयोग करना आवश्यक हो गया है। चर्चा कीजिए।
In view of India's rapid urbanisation, it has become imperative to tap into municipal bonds to meet the rising demand of capital investment in urban areas. Discuss. (Answer in 250 words) 15

According to UNFPA, 55% of Indians will live in urban areas by 2050. Thus, financing of municipality is of utmost importance.

Municipal Bonds



Need of municipal Bonds

① Lack of finances



NETI Aayog has highlighted deficiency and declining trend in municipal finances.

② Rising urbanization : thus need for expansion of urban amenities like sanitation, roads, parks etc.

③ Innovative way of fund mobilization : -
through municipal bonds
→ higher returns to subscribers
→ less dependency on State and central government

Challenges

① Nascent stage of development : -
New ecosystem in India,

② No sovereign backing

③ Risk averse behaviour by investors.

④ Lack of pay-back capability by of municipalities

Way forward :

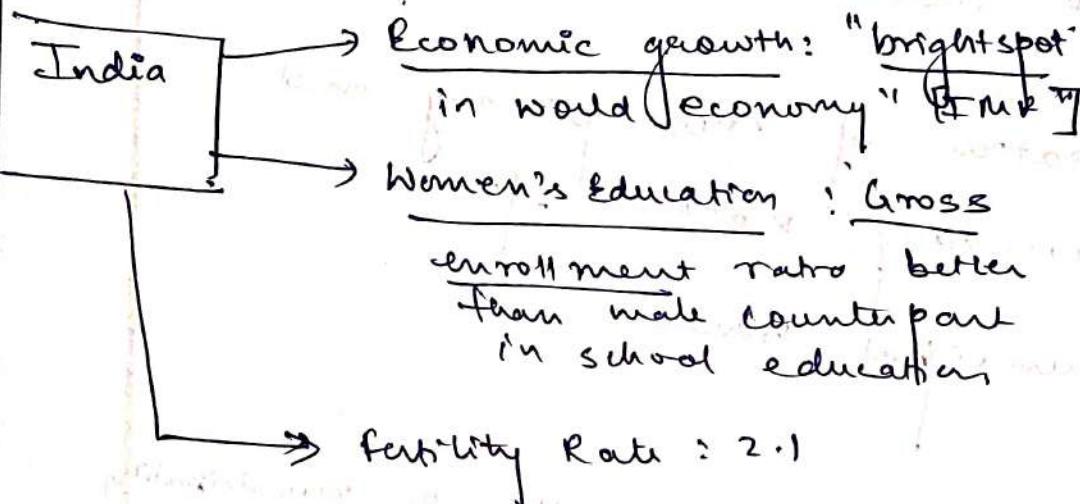
- ① Government push :- through removing legal requirement of municipalities to maintain surplus budget
- ② Credit rating of municipalities to increase investor confidence
- ③ Creation of new primary and secondary market for municipal bonds.

The effectiveness of municipalities to serve need of urban population lies in 3f - funds, functions and functionaries. Municipal bonds can help in generating the first 'f'.

12. भारत ने आर्थिक संवृद्धि, महिला शिक्षा और प्रजनन दर जैसे विभिन्न विकास मानदंडों पर महत्वपूर्ण प्रगति हासिल की है। हालांकि, देश की महिला श्रम बल भागीदारी दर (FLFPR) वैश्विक स्तर पर सबसे कम है। चर्चा कीजिए। भारत में FLFPR में सुधार के लिए कौन-से कदम उठाए जा सकते हैं।
India has achieved significant strides in various development parameters such as economic growth, women's education, and fertility rates. However, the country's Female Labour Force Participation Rate (FLFPR) remains amongst the lowest in the world. Discuss. What measures can be taken to improve the FLFPR in India? (Answer in 250 words)

15

India's FLFPR remains around ~25%, which is lowest among BRICS and below world's average.



Despite these, low FLFPR.

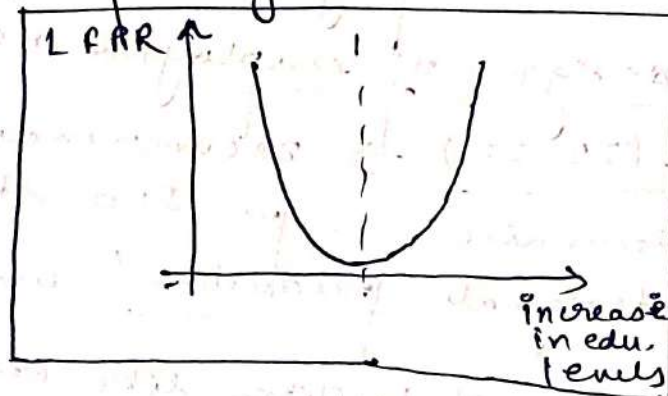
Reasons for low FLFPR

- ① Increase in family's income :-
family guided by patriarchal

norms, thus "no need" to work by females.

② Inverted 'U' hypothesis

~~More~~ According to previous eco. survey, more females pursuing higher education $\Rightarrow$ temporary withdrawn from work



③ Unpaid work

eco. survey 2022-23: productive work like fuel collection, MFP collection $\Rightarrow$ done by women $\Rightarrow$ characterized by unpaid work $\Rightarrow$ low LFPR.

④ Maternity penalty: - Firms prefer male employees as female perceived as having high overhead cost

- ⑤ Low Representation of women in salaried jobs (Eg 19% v/s 60% women)

Measures to Improve FLFPR

- ① Skilling of women :- through PM Kaushal Vikas Yojana → to ↑ Salaried employment
- ② Redesign of employment survey :- E.S. (22-23) → recommended multiple questionnaire as per ILO std to redesignate 'productive' unpaid work.
- ③ Creation of facilities like crèche and sanitised washrooms :- to incentivize women workers.
- ④ Increasing women in sector high paying sectors like software etc
↳ 10% supernumerary seats reserved for girls in central engg. iits.
- ⑤ Attitudinal changes in society :- through media campaign, movies etc

13. क्या आपको लगता है कि निजी और सार्वजनिक क्षेत्र का सहयोग भारत में शहरी बुनियादी ढांचे से संबंधित निवेश मॉडल के सफल विकास की कुंजी है? अपने उत्तर का औचित्य सिद्ध कीजिए।
Do you think that the collaboration of private and public sector is the key to the successful development of an investment model related to urban infrastructure in India? Justify your answer. (Answer in 250 words) 15

The recent of urban floods of Delhi has highlighted the need of urban infrastructure and catering need of 31% of urban dwelling Indians.

Collaboration of private & public sector for successful development of investment model for urban infra: -

- ① Resource constraints of Government
(eg) 6.5% fiscal deficit of center in Budget 23-24
- ② Bringing expertise of private sector
(eg) Larsen & Toubro's commendable job in Lucknow's metro development.
- ③ Mobilization of financial resources from private sector

- ④ Greater efficiency and timely completion of infra projects
- ⑤ Public & sector participation → incentivizes prt sector in areas of high risk
- ⑥ Development of Engineering Procurement Model with public sector providing for material + land.

However, there are some issues :-

- ① Lack of assessment of profitability:

⑥ Low passenger traffic in metros of tier-2 cities

- ② Problems in project appraisal by public govt employees

→ lack of capacity building

→ Risk aversion by civil servants due to Prevention of Corruption

Act stringent

③ Lack of development according
to 'Master plan of cities'

④ NCR → 40% of land use changes
not as per master plan.

Way forward:

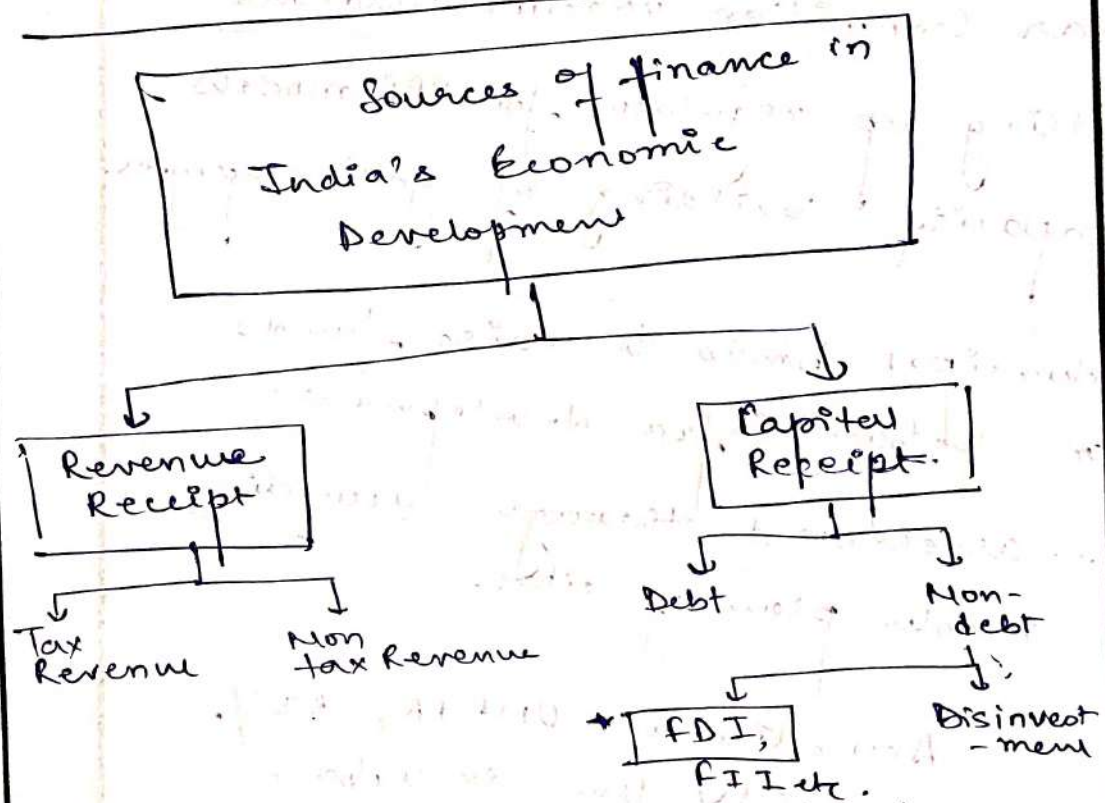
Kelkar Committee recommendations:-

- ① Setting up regulator for PPP models.
- ② capacity building of govt employees.
- ③ Municipal bonds to raise funds
for urban infra development
- ④ Re-assessment ~~through~~ according
to master plan of cities.

According to UNRPA, 55%
of Indians will live in urban
areas by 2050, thus development
of robust infra is the need of the
hour.

14. प्रत्यक्ष विदेशी निवेश (FDI) भारत के आर्थिक विकास के लिए गैर-ऋण वित्त के एक महत्वपूर्ण स्रोत के रूप में कार्य कर सकता है। भारत में FDI को बढ़ावा देने हेतु कौन-से कदम उठाए गए हैं।
How can Foreign Direct Investment (FDI) act as an important source of non-debt finance for India's economic development? What steps have been taken to boost FDI in India? (Answer in 250 words) 15

Foreign Direct Investment
(FDI) is a source of capital originating from a foreign country with aim of management control in a domestic country.



FDI as imp. source of finance

- ① India is 7th largest inflow FDI receiver
- ② FDI → capital receipt → helps in capital formation characterized by increase in capital asset
- ③ Brings technological and managerial expertise
 Eg) Walmart's FDI investment in Flipkart ⇒ innovative logistic and supply chain management techniques
- ④ Allows government to spend more on welfare activities
- ⑤ Leads to higher aggregate demand in the economy ⇒ fuels economic growth
- ⑥ Increases competitiveness and economic efficiency. (Eg) ICOR of Indian

economy declining consistently since 1991.

Measures undertaken to boost FDI

- ① LPG reforms and New Economic Policy of 1991 $\Rightarrow$ opened up Indian economy
- ② DPIIT $\rightarrow$ Min of commerce $\rightarrow$ release of FDI Policy
- ③ Increase of FDI limit to 100% through automatic route in number of sectors like e-commerce (platform type), food processing etc.
- ④ Single window clearance for govt. route
- ⑤ Promoting Make in India to attract FDI like Singapore Model.
- ⑥ Ease of Doing Business Reforms to attract investors.

According to World Bank, India is one of the top countries benefiting from FDI inflows and leading to rapid economic transformation.

15. भारत में कोयला निष्कर्षण संबंधी बुनियादी ढांचे को उन्नत बनाने और कोयले की समग्र प्रतिस्पर्धात्मकता में सुधार हेतु माल ढुलाई लागत को कम करने के लिए हस्तक्षेप की आवश्यकता है। चर्चा कीजिए।

There is a need for interventions to enhance the coal evacuation infrastructure and reduce the freight cost to improve the overall competitiveness of coal in India. Discuss. (Answer in 250 words) 15

Despite having 5th largest coal reserves, India imports huge quantities of coal with one the reason being low competitiveness of Indian coal.

Need of creation of coal evacuation infra and reduce freight cost :-

① Long travel time

② Each mined coal in India travels 477 km before reaching destination.

② Captive mines

↳ reduced 'supply' in market as additional coal can't be sold in open market

③ Low technology

③ $>90\%$ coal mining $\Rightarrow$ open-pit mining.
 $\downarrow$
 low exploration of deep
Coal $\Rightarrow$ where most of coals
 lie

④ Use of railways for coal transportation
 $\rightarrow$ overburdened railway tracks
 $\rightarrow$ unutilized cheaper inland water ways.

⑤ Jharia coal mine $\Rightarrow$ Jharkhand
 $\rightarrow$ Damodar river to N Waterway I
 can be used.

⑥ mining techniques
 ⑦ Increases moisture content in
the coal $\Rightarrow$ lower value.

⑧ Policy towards thermal power plants
 $\rightarrow$ State govt. legally obliged to
 transfer coals to public owned
power plants $\Rightarrow$ high cost of coal
 for pvt sector.

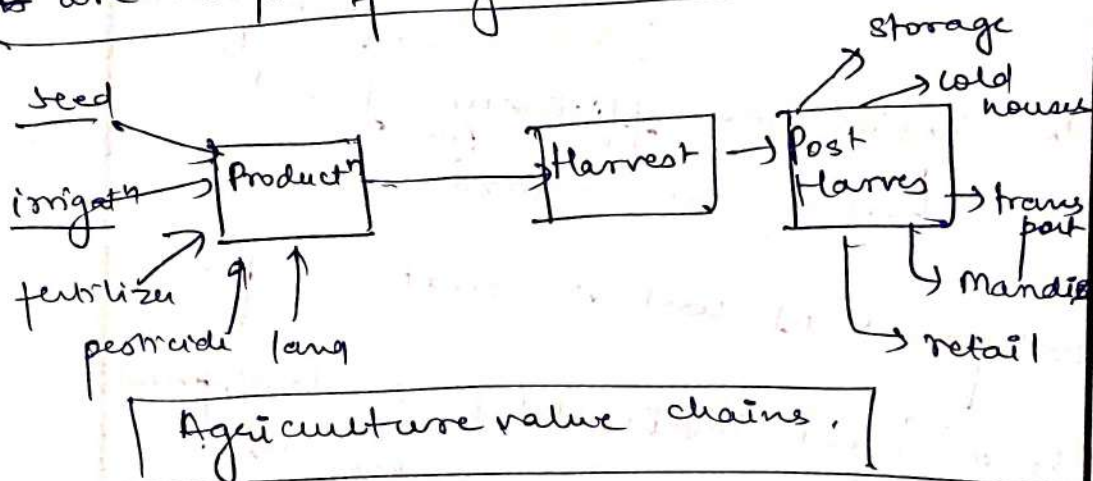
Way forward :-

- ① Development of inland water way channels for coals transportation to decrease logistic cost
- ② Technology development → coal bed methanation
→ deep coal mining tech
↓
leads to higher use efficiency of coal
and thus, better cost realization
- ③ Development of coal evacuation infra
- ④ Role of Coal India Ltd as development of aggregator and policy maker to cut down down travel time.
- ⑤ opening up of captive mines (Eg) Recent Mines Act amendment in mines Act.

India's energy security is intricately tied with coal. Thus, increasing overall competitiveness of coal is the need of the hour.

16. फसल कटाई के बाद की मूल्य श्रृंखला में अक्षमताओं के कारण लघु और सीमांत किसानों की आजीविका पर अत्यधिक प्रतिकूल प्रभाव पड़ने के साथ-साथ फसल की हानि हो रही है। भारत के संदर्भ में चर्चा कीजिए। इन चिंताओं को दूर करने के लिए सरकार ने क्या कदम उठाए हैं?
- The inefficiencies in post-harvest value chain are leading to crop losses, with significant adverse impact on the livelihood of small and marginal farmers. Discuss in the context of India. What steps has the government taken to address these concerns? (Answer in 250 words) 15

According to NITI Aayog, ~~40%~~ of agri post harvest losses in India are 40% of agri GDP.



Post-harvest inefficiency: -

- ① Lack of cold storage and ~~star~~ ware houses

(Eg) 30-40 lac tonnes deficiency ~~at~~
(Dalwai Committee)

- ② Poor road connectivity

(Eg) Bihar → sucrose content loss in sugarcane due to poor road infra.

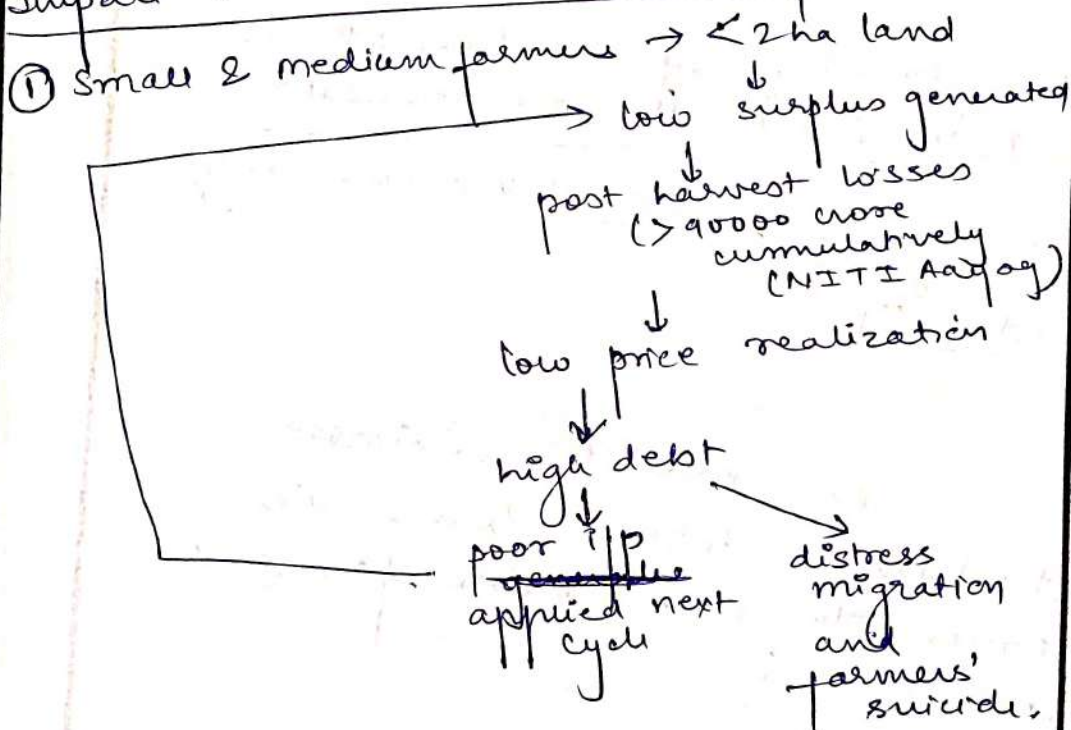
③ APMCs Inefficiency

- availability :- (Eg) Assam → > 36 km
avg distance
(Salwai committee -
5 km recommended)
- cartelization by traders
- lack of mandi infra → (Eg) 50% mandis
don't have weighing
facilities
- high 'fee' and other costs

④ Retail selling

- lack of awareness among farmers &
consumers.

Impact on small & medium farmers :-



Govt Steps :-

- ① Creation of Mandi infra through PPP model in many states
- ② Model APMC Act → to reform mandis
- ③ GeM and eNAM Portal → retail selling & better price realization
- ④ KCC loans → cover post-harvest losses
- ⑤ PM Fasal Bima Yojana → ^{insurance to} cover post harvest crop losses
- ⑥ Negotiated Warehousing Receipt → get credit even on unsold produce
- ⑦ Strengthening of cold houses as per Dadwai committee recommendations
- ⑧ Setting up of Central Warehousing Authority.

We need to minimise post-harvest losses in order to double farmers' income.

17. भारत में भूमि अभिलेखों से संबंधित मौजूदा मुद्दे क्या हैं। भूमि अभिलेखों का डिजिटलीकरण और 'लैंड टाइटलिंग' (भू-स्वामित्व का निर्धारण) इनके समाधान में कैसे मदद कर सकता है।
What are the existing issues related to land records in India? How can digitisation of land records and conclusive 'land titling' help in addressing them? (Answer in 250 words) 15

Land in India has competing usages given the fact we have 2.4% land area serving 18% of population.

Existing issues in Land Records :-

① Use of presumptive land titling

→ land fraud susceptibility
→ high land related litigation
(eg) 2/3rd disputes in lower judiciary → related to land.

② Lack of digitization

→ lack of uniform land record format across cities and states

→ old land records

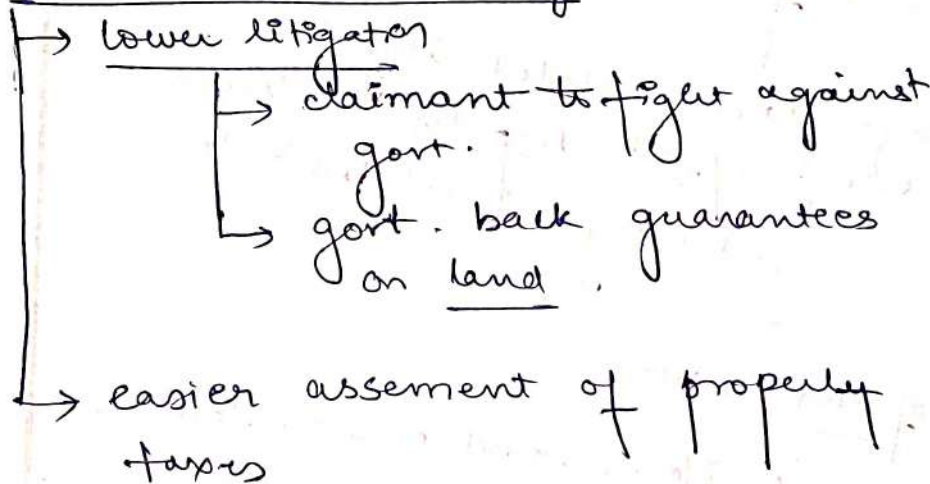
(eg) Generational records dating back to colonial era.

→ Coordination issues b/w departments

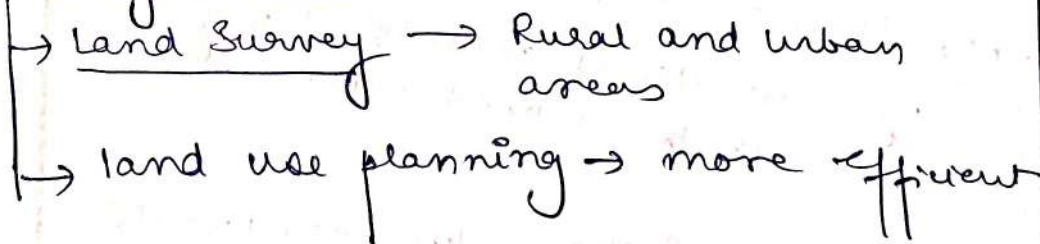
- ③ Eg) City Development Authorities v/s Registry offices etc
- ③ ~~to~~ Illegal land use changes due ~~to~~ its poor survey.
- ④ Assessment of property taxes difficult
⇒ loss of rev. for state govt.

Benefits of digitization and conclusive land titling

① Conclusive land titling



② Digitization



- 'Rights of records' for landless & small farmers → access to credit
- coordination b/w departments
- uniformity of storage format

Govt. steps :-

- ① Svamiitva scheme → rural survey
→ digital records
→ rights of records
- ② National Land Record Digitization Mission under (Digital India programme)
- ③ ULPIN or Bhu - Aadhar Number
- ④ National Generic Doc Registry System → to address prevailing diversity across states
- ⑤ National Land Record Modernization Programme
→ to modernize Land Records + implement conclusive land titling.

18. ऊर्जा क्षेत्र के संदर्भ में डीकार्बोनाइजेशन, विकेंद्रीकरण और डिजिटलीकरण की प्रवृत्तियां तेजी से उभर रही हैं। चर्चा कीजिए।
When it comes to the energy sector, the trends of decarbonisation, decentralisation and digitisation are fast emerging. Discuss. (Answer in 250 words) 15

India in COP 27 had announced its plan to go for deep 'decarbonization' of energy sector.

Trends of Decarbonization

- ① focus on renewables
 - wind
 - solar
 - OTEC
 - biomass

Eg → National Mission on Solar Energy

 - OTEC plant set up in Lakshadweep
 - offshore wind energy development
 - GOBARDHAN scheme

- ② Increasing efficiency of thermal power plant
 - critical temp
 - Eg → NTPC's → super thermal power plant
 - 45% efficiency vs 33% of traditional.

- ③ Renewed focus on nuclear energy
- ④ Development of ~~test~~ & deployment technologies like scrubbers etc. & air filters in thermal power plants.

Decentralization trends:

- ① Exploration of newer areas
 - ② NE to set up new energy plants
- ② Rise of smaller projects
 - ↳ focus on small HEP
 - ↳ mini nuclear reactors
- ③ Energy sector → states play greater role → decentralization.

Trends of Digitalization

- ① Push for reforms in power discoms management
- ② Use of digital technologies in nuclear power plants
- ③ Single window clearances for through

e-governance models in new solar & wind plants.

Challenges in Energy Sector

- ① Over dependence on thermal power plants $\rightarrow$ is 60%.
- ② Unreliability of renewable energy due to its dependence on climatic factors.
- ③ Development of digital and new tech in nascent stages.
- ④ Cyber security challenges $\rightarrow$ Energy sector $\rightarrow$ critical infra (Eg) China's cyber attack on Mumbai's grid in 2020.

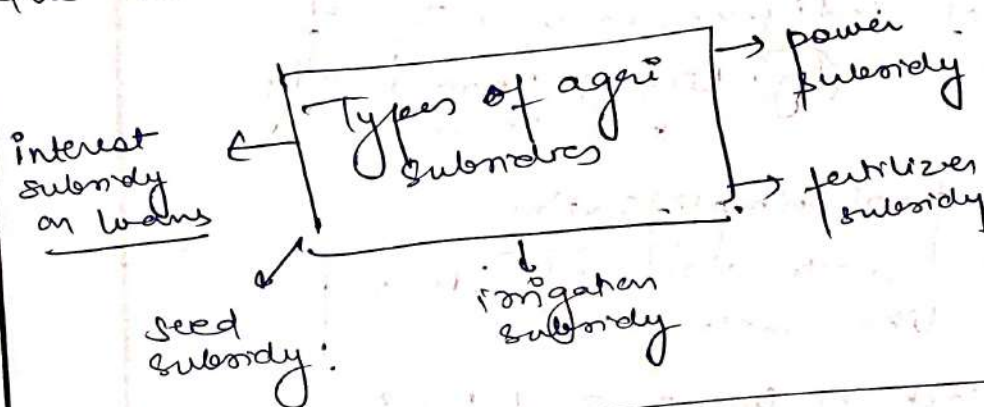
~~Way forward~~

- To meet demand of India's growing population radical reforms in energy sector are needed.

These can be achieved by increasing efficiency, increasing cyber security of these infra & decarbonization.

19. यद्यपि भारत में कृषि सब्सिडी ने किसानों की आय में वृद्धि की है, तथापि इन्होंने पर्यावरणीय निम्नीकरण और जैव विविधता के ह्रास में भी योगदान दिया है। चर्चा कीजिए।
Agricultural subsidies have supported farmers' income in India, but they have also contributed to environmental degradation and biodiversity loss.
Discuss. (Answer in 250 words)

India gives world's ~~big~~ largest agricultural subsidy in the world.



Agriculture subsidy :- EWTI degradation and BD losses

① fertilizer subsidy → II largest subsidy in India after food subsidy.
Types :- Urea subsidy (Retention price scheme)
• Nutrient based subsidy

Input
↓
distorted N:P:K ratio = 20:8:1
(recommended 4:2:1)

due to over use of urea
 ↳ decline in soil fertility
 ↳ decline land productivity

② Seed subsidy → on HYV seeds and BT cotton.

Impact:-

① loss of indigenous variety of crops : (Eg) Rice > 4000 variety post Green Rev

② Gene pool simplification

(Eg) due to use of GM crop like cotton,

③ ↑ attack of locust and pests
 ↳ loss of local flora.

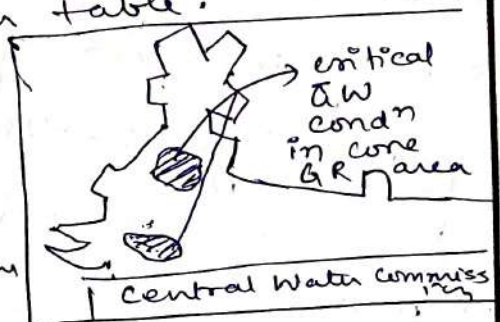
④ Power subsidy → free power to farmers in many states

(a) overuse of tube wells
 ↳ declining water table.

↳ alkalinisation of soil

(Eg) Punjab, Haryana

WUP → semi-arid condn → ↑ capillary a/c due to over irrigatn.



④ Irrigation subsidy

↳ Construction of canals $\Rightarrow$ submergence of land

(Eg) Ken-Betwa Link $\Rightarrow$ > 90,000 sq km
Panna ~~res~~ reserve to submerged

Way Forward

① Promotion of sustainable agriculture

(Eg) National Mission on sustainable agriculture

↳ promote organic farming
↳ crop diversification

② Rationalizing power and irrigation subsidy

↳ development of micro-irrigation on lines of Israel model

(Eg) PM Kishu Sinchai Yojana)

③ Increasing MSPs on millets and pulses $\Rightarrow$ to restore soil fertility.

India's agriculture sector is linked with food security essential in achieving SDG 1 & 2, thus ~~is~~ countering fallout of subsidy is necessary

20. सड़क क्षेत्र में बुनियादी ढांचे के वित्त-पोषण को सुव्यवस्थित करने के लिए कई उपायों को अपनाए जाने के बावजूद, निजी निवेश ने सीमित भूमिका ही निभाई है। चर्चा कीजिए।
Despite adoption of numerous measures to streamline financing of infrastructure in the road sector, private investment has played a limited role. Discuss. (Answer in 250 words) 15

India has 2nd largest road n/w in the world with over 760% of passenger share in transportation sector.

Measures taken to streamline financing of road infra

① Bharatmala project

→ creation of free ways and highways

② NHAI

→ ~~under~~ ^{adopt} creation of new PPP models like Engineering procurement, Hybrid annuity and Swiss challenge models

③ Creation of border roads through financing of BRD

④ Vibrant Village Programme - financing

for border roads.

Pvt investment has played a limited
Role :-

① Land acquisition problem

Eg Diversion of tribal land for
Delhi-Mumbai link of Golden
Quadrilateral project

→ time consuming process

② Environmental clearances required

Eg litigation in SC for clearance
of Char Dham Project

③ High gestation period

④ Low realization of profits

Eg Lower than expected fatfalls
on Purvanchal Expressway in

UP ⇒ lower profits for pvt sector.

- ⑤ lack of access to credit
↳ risk aversion by banks in
infra sector
- ⑥ Dominant ^{pvt} players like L&T
↳ restricted entry of new players

Way forward :-

- ① Land acquisition ⇒ should be
carried on by govt. before announcing
projects
- ② Capacity building of public sector
employees for collaborations
[Kelkar committee]
- ③ Assessment of the profitability of
routes before project creation.

Road sector in India is
known for ~~boosting~~ ^{boosting} regional
development. ~~Decentralizing~~ ^{Decentralizing} pvt players
can have huge multiplier effect.