

Time taken - 4 hours

NEXT IAS

MAIN TEST SERIES 2024 (SLT)

(To be filled by candidate)

TEST CODE : SLT005

TEST NO. : 05

(Please write test code printed on Question Paper)

Name of Candidate: Chiranshu Taneja Mobile No.

Roll No.: MT24SLTON011 Start Time End Time

Date of Examination: 13/09/2024 Medium : English Hindi

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	
TOTAL MARKS - 100		

Q.No.	Maximum Marks	Marks Obtained
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	
TOTAL MARKS - 150		

GRAND TOTAL :/250

EVAL CODE: EVAL DATE:

GENERAL INSTRUCTIONS

- Immediately on receipt of the QCA booklet, please check that this QCA booklet does not have any misprint or torn or missing pages or items, etc. If so, get it replaced by a fresh QCA booklet.
- Candidates must mention all relevant details like Name, Email, Roll No, Mobile, etc. in the space allocated.
- Candidate is expected to attempt all 20 questions within the given timeline.
- Answers must be written in the medium authorized at the time of admission.
- Candidates must write answers for the specific question under the respective question itself. Any answer written outside the space allotted may not be given credit.
- Please write neatly. Avoid illegible writing.
- Do not write/mark irrelevant matters in the QCA B.

सामान्य निर्देश

- QCA पुस्तिका प्राप्त होने पर कृपया तुरंत जांच लें कि इस QCA पुस्तिका में कोई पृष्ठ या सामग्री आदि गलत छपी हुई या फटी हुई या गायब तो नहीं है। यदि ऐसा है, तो इसे एक नई QCA पुस्तिका से बदल लें।
- अभ्यर्थियों को सभी प्रासंगिक विवरण जैसे नाम, ईमेल, रोल नंबर, मोबाइल नंबर आदि का आबंटित स्थान पर उल्लेख करना होगा।
- अभ्यर्थियों से अपेक्षा की जाती है कि वह आबंटित समय सीमा के भीतर ही सभी 20 प्रश्नों के उत्तर लेखन का प्रयास करें।
- प्रत्येक उत्तर, प्रवेश के समय चुनी गयी भाषा के माध्यम में ही लिखे जाने चाहिए।
- अभ्यर्थियों को विशिष्ट प्रश्न के उत्तर संबंधित प्रश्न के नीचे ही लिखने होंगे। आबंटित स्थान के बाहर लिखे गए किसी भी उत्तर को क्रेडिट नहीं दिया जाएगा।
- कृपया साफ सूपसा लिखें। अमंजवीय लेखन से बचें।
- QCA B में अप्रासंगिक तथ्यों को न लिखें / न ही चिह्नित करें।

REMARKS:

FOR OFFICE USE ONLY

The Pu
Answ

<u>Student Concerns / Query</u>	<u>Evaluator's Feedback / Response</u>
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2	2
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3	3
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MARKING SCHEME *

Marks Per Ques	Below Average	Average	Above Average
10 Marks	Below 3.00	3.00 - 3.75	4.00 and above
15 Marks	Below 4.50	4.50 - 5.75	6.00 and above

* Subject to change without prior notice.

IMPORTANT QR CODES



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MACRO COMMENTS

The Purpose of evaluation@nextias.com is to provide constructive suggestions on 'How to improve Answer Writing and thereby score better marks.

STRENGTHS OF THE CANDIDATE

AREAS OF IMPROVEMENT



IMPROVEMENT SUGGESTIONS

Q.1

भारत में उच्च राजकोषीय घाटे में योगदान देने वाले कारकों पर प्रकाश डालते हुए, ऐसे घाटे के संभावित परिणामों पर चर्चा कीजिए और राजकोषीय समेकन सुनिश्चित करने के उपाय सुझाएँ। (10 अंक, 150 शब्द)

Highlighting the factors contributing to a high fiscal deficit in India, discuss the potential consequences of such deficit and suggest measures to ensure fiscal consolidation.

(10 marks, 150 words)

Fiscal deficit refers to the difference between government's revenue and expenditure for a particular year. Indian government's fiscal deficit stands at 4.9% of GDP as per Budget 2024-25.

Factors leading to high fiscal deficit

- ↳ Fiscal stimulus required in the aftermath of pandemic to enable economic recovery
- ↳ Welfare Schemes to ensure basic amenities to the most vulnerable sections.
- ↳ Infrastructure construction requires large capital expenditure
- ↳ Pensions and social security measures

Consequences of high fiscal deficit

- ↳ Inflation: rising fiscal deficit leads

to rise in prices

- ↳ Taxes may rise as govt. tries to finance the deficit
- ↳ Credit rating of the country may be downgraded due to persistent high deficit
- ↳ Crowding out of private companies in the credit market as govt. goes for borrowing

Measures to tackle fiscal deficit

- ↳ Austerity: Govt can undertake measures to avoid unnecessary expenditure
- ↳ Avoid freebies which lead to excessive expenditure
- ↳ Counter-cyclical fiscal policy: undertake fiscal consolidation as soon as need for stimulus disappears
- ↳ Disinvestment and Privatization
- ↳ Reduce pension burden eg → Agnipath scheme

Fiscal consolidation being undertaken by the govt. (Budget 24-25) is appreciable and will go a long in stabilising our economy

Q.2

वर्ष 2047 तक विकसित राष्ट्र बनने की भारत की आकांक्षा महत्वपूर्ण पूँजी निवेश पर निर्भर करती है। इस आलोक में, इस दृष्टि को प्राप्त करने में पूँजी निवेश की क्षमता पर चर्चा कीजिए। इस संबंध में भारत के समक्ष क्या चुनौतियाँ हैं? (10 अंक, 150 शब्द)

India's aspiration to be a developed nation by 2047 hinges on significant capital investment. In light of this, discuss the potential of capital investment in achieving this vision. What are the challenges India faces in this regard? (10 marks, 150 words)

Capital investment involves creation of long-term assets like infrastructure, factories etc, which is essential for a country's economic growth.

Potential of Capital Investment

- 1) Infrastructure Creation acts as a catalyst for growth of other sectors
- 2) Investment in factories leads to technological advancements
- 3) Capital investment generates jobs, provides employment and inclusive growth
- 4) Better connectivity due to improved roads and railways will strengthen integrity
- 5) Defence sector is significantly depend-ent on investment in indigenous manufacturing

6) Capital investment spurs demand,
reinvigorating the economy

Challenges that India faces

- 1) While government has given tremendous push to CAPEX in last two budgets, private investment hasn't picked up.
- 2) Geopolitical tensions are hampering the incoming foreign direct investment.
- 3) Consumer demand hasn't picked up yet in many sectors and remains below pre-pandemic levels
- 4) Supply chain issues leading to stalled projects \rightarrow chip shortage - automobile sector
- 5) Infrastructure creation also faces the threat of climate change.

Indian private sector must step in to perform its role in leading India to Viksit Bharat.

Q.3

केंद्रीय बजट 2024-25 में दीर्घकालिक पूंजीगत लाभ (LTCG) और प्रतिभूति लेनदेन कर (STT) के संबंध में महत्वपूर्ण परिवर्तनों पर टिप्पणी कीजिए। भारत की बचत और निवेश व्यवस्था पर ऐसे परिवर्तनों के प्रभावों का मूल्यांकन कीजिए। (10 अंक, 150 शब्द)

Comment on the important changes with respect to the Long-Term Capital Gains (LTCG) and Securities Transaction Tax (STT) in the Union Budget 2024-25. Evaluate the impact of such changes on India's savings and investment regime. (10 marks, 150 words)

Union Budget 2024-25 has increased the securities transaction tax (STT) and ^{or purchase} long-term capital gains (LTCG) on sale of capital assets.

STT increase - Causes

It was widely accepted that Indian Share market was overvalued due to non-stop bull run since the pandemic.

STT's low value encouraged frequent transactions, especially in Futures and Options (F&Os)

STT increase - Impact

It will slow down the relentless bull run and ensure stability in F&Os, which is necessary to maintain investor trust especially small scale ones

LTCG: causes for the changes

LTCG has been increased from 10% to 12.5% and exemption limit has been increased to ₹1.25 lakh. This was necessitated by similar reasons. Govt. wanted to bring stability in the stock market.

Impact of LTCG changes

- It may discourage investments in stocks and mutual funds
- It can lead to rise in investments in gold, worsening the current account deficit

The indexation benefit, initially removed by govt on sale of property, was later brought back and made optional. This highlights the need for economic policy certainty and need to hold wide consultations with stakeholders before bringing large scale changes.

Q.4

भारत की एक कल्याण योजना "कोई भी व्यक्ति पीछे न छोड़े" की कहावत के साथ आगत-आधारित दृष्टिकोण से परिणाम-आधारित सशक्तिकरण में परिवर्तन आया है। उपरोक्त कथन के आलोक में, चर्चा करें कि सरकार के दृष्टिकोण में इस परिवर्तन ने समावेशी विकास को किस प्रकार बढ़ावा दिया है। (10 अंक, 150 शब्द)

India's welfare scheme has undergone a shift from an input-based approach to outcome-based empowerment with the maxim of "no person left behind". In light of the above statement, discuss how this change in the approach of the government has fostered inclusive growth. (10 marks, 150 words)

Formation of NITI Aayog in 2015

heralded a transformative change in Indian welfare State. The focus has shifted from "beneficiaries" to "active participants".

Change in government's approach

- # Focus on saturation of welfare schemes
- # Output-outcome monitoring framework
- # Schemes with sunset clause
- # Rationalization of schemes and bringing them together under one umbrella
- # 'Antodaya' - Last-mile reach

How it fostered inclusive growth

↳ Most disadvantaged sections of

- society are also covered through Aadhaar.
- ↳ Prevention of leakages through DBT has ensured enough fund availability
 - ↳ Focus on basic amenities
 - ↳ Swachh Bharat - 10 crore toilets
 - ↳ Jab Jeevan Mission - 15 crore taps
 - ↳ Financial inclusion of women through Jan Dhan Yojana (50 crore accounts)
 - ↳ Women empowerment through asset creation in their name - PM Awas Yojana
 - ↳ Providing opportunities to oppressed sections through Stand Up India scheme
 - ↳ Focus on environmental sustainability



The new approach has led to "Sabka Saath" and "Sabka Vikas".

Q.5 "बढ़ते शहरीकरण के साथ, पेरी-अर्बन कृषि ताजा कृषि उपज की जरूरतों में महत्वपूर्ण योगदानकर्ता के रूप में उभर रही है"। इस संदर्भ में, पेरी-अर्बन कृषि को संधारणीय तरीके से बढ़ावा देने से जुड़े अवसरों और चुनौतियों पर चर्चा कीजिए। (10 अंक, 150 शब्द)

"With growing urbanization, peri-urban agriculture is emerging as a significant contributor to fresh farm produce needs". In this context, discuss the opportunities and challenges associated with promoting peri-urban agriculture in a sustainable manner. (10 marks, 150 words)

Peri-urban areas are the ones lying on the outskirts of cities which don't come under municipal jurisdiction. Agriculture is increasingly being carried out in such regions to meet urban needs

Opportunities associated with peri-urban agriculture

- 1) Promote truck-farming, which is prevalent in most of Western Europe.
- 2) Livelihood opportunities for farmers who migrate to cities in search of jobs
- 3) Employment creation by setting up food processing companies in the city
- 4) Healthy ^{fresh} food can be made available

to the urban populace instead of unhealthy
packaged items.

- 5) Carbon sequestration in nearby regions
- 6) Counter Urban-Heat Island effect

Challenges associated with peri-urban agriculture

- 1) Unregulated land use as it is beyond
municipality's jurisdiction
- 2) Water supply issue for irrigation
and can also cause shortages in city
- 3) Lack of basic amenities in peri-urban
areas for farmers.
- 4) Use of pesticides and chemical fertilizers
to boost production to meet large demand
- 5) Factories in cities dump waste water in
rivers. This can lead to polluted water
being used in crop production, causing diseases

Thus, it is important to address
aforementioned challenges before promoting
truck farming

Q6

दलहन और वनस्पति तेलों में आत्मनिर्भरता प्राप्त करने के लिए भारत के कृषि क्षेत्र के समक्ष कौन सी प्रमुख चुनौतियाँ हैं? इन चुनौतियों से निपटने के उपाय सुझाएँ।
 (10 अंक, 150 शब्द)

What are the major challenges faced by India's agriculture sector to achieve self-sufficiency in pulses and vegetable oils? Suggest measures to address these challenges.
 (10 marks, 150 words)

India, despite making tremendous progress in wheat and rice production, struggles with pulses and vegetable oils and is important-dependent for both.

Challenges faced wrt Pulses

- 1) Skewed MSP (Minimum Support Price) Regime promoted wheat and rice
- 2) Area under pulses cultivation has gone down eg Area under moong in Punjab decreased in last 2 decades
- 3) Pest-resistant varieties are available for wheat and rice, but not for most of the pulses
- 4) Low Procurement by FCI despite declaration of MSP, leaves farmers at mercy of private contractors.

Challenges w.r.t vegetable oil

- 1) Setting up palm oil plantation requires large landholding. (India's average = 1 hectare)
- 2) Lack of govt's focus on providing subsidized inputs (like fertilizers).
- 3) Land under sunflower production has reduced over the years due to less profit.

Measures to address challenges

- 1) Promote crop diversification through changes in MSP
- 2) Support palm oil plantations in North East and Islands through NMEO-OP scheme
- 3) Incentivize pulse cultivation through subsidies eg Punjab govt's push to moong
- 4) Collaborate with Indonesia and Malaysia to setup vegetable oils processing companies in India.

It is crucial to gain self sufficiency in pulses and oils to ensure protein security and combat current account deficit

Q.7

भारतीय कृषि की वर्षा आधारित प्रकृति इसे जलवायु परिवर्तन के प्रति अधिक संवेदनशील बनाती है। कृषि की जलवायु-अनुकूलता में गुणवत्तापूर्ण सिंचाई के महत्व पर प्रकाश डालिए। भारत में उपलब्ध सिंचाई प्रणालियों की समग्र दक्षता में सुधार के लिए क्या-क्या उपाय किए जा सकते हैं? (10 अंक, 150 शब्द)

The rainfed nature of India's agriculture makes it more susceptible to climate change. Highlight the importance of quality irrigation in the climate-adaptability of agriculture. What measures can be undertaken to improve the overall efficiency of the available irrigation practices in India? (10 marks, 150 words)

140 million hectares of India is sown every year, with 60 million hectares being rainfed, making it dependent on the vagaries of monsoon rains.

Importance of irrigation in climate adaptability

- 1) Quality irrigation ensures that farmer is less susceptible to rainfall changes
- 2) It promotes multi^{ple}-cropping seasons in the year, providing income security
- 3) Crop diversification is incumbent upon availability of quality irrigation
- 4) Irrigation also ensures other livelihood opportunities like aquaculture, enhancing resilience to climate change

Measures to improve efficiency of irrigation

- 1) Drip irrigation : Per drop more crop
Scheme
(saves 50% water)
- 2) Sprinkler irrigation
- 3) Direct seeding of rice saves 20-30%
water
- 4) ~~Climate~~ = Less use of water guzzling
Crops like sugarcane
- 5) Rationalizing electricity subsidy to
minimize wastage of water
- 6) Use of sensors to detect the
amount of water required
- 7) Mulching to prevent loss of soil
moisture, decreasing need for irrigation

We need to promote precision
agriculture based on sensors and AI
to promote efficient use of water for
irrigation

Q.8

भारतीय कृषि में पशुधन के महत्व को ध्यान में रखते हुए, विश्लेषण करें कि पशुपालन में निवेश भारतीय कृषि को प्रोत्साहित करने में किस प्रकार मदद कर सकता है।
 Considering the importance of livestock in Indian agriculture, analyze how investment in animal husbandry can help in incentivizing Indian agriculture. (10 अंक, 150 शब्द)
 (10 marks, 150 words)

For centuries, mixed farming has been a characteristic feature of Indian agriculture, where food and fodder are grown together.

Importance of livestock

- ↳ Bovine animals provide alternate income source through sale of milk
- ↳ Animals provide natural fertilizers for the crops
- ↳ Acts as an insurance, allowing their sale in case of financial emergencies
- ↳ Nutrition security for the family

How investment in animal husbandry can boost Indian agriculture

- ↳ Investment in research in indigenous

bovine species can help boost milk production, leading to higher incomes

- ↳ Focus on small ruminants can provide raw material for textile and leather industry
- ↳ Can help in making pink revolution (in poultry) a success by promoting exports of Indian eggs
- ↳ India is a leader in meat exports. However frequent bans under WTO AoA's SPS ^{provisions} ~~measures~~ hurts exports. Investment in biotechnology can help.
- ↳ Aquaculture and mariculture must be promoted through investment in processing industries and supply chain.

Animal husbandry must be a priority area for the govt and investment must be encouraged to provide fillip to Indian agriculture.

Q.9

कार्बन क्रेडिट ट्रेडिंग स्कीम (CCTS) 2023 की प्रमुख विशेषताओं की जाँच कीजिए भारत में ग्रीनहाउस गैस उत्सर्जन को कम करने की इसकी क्षमता का विश्लेषण कीजिए।
(10 अंक, 150 शब्द)

Examine the key features of the Carbon Credit Trading Scheme (CCTS) 2023. Analyze its potential for mitigating greenhouse gas emissions in India.
(10 marks, 150 words)

India launched Carbon Credit Trading Scheme in 2023 to reform the existing carbon trading and help promote greener technologies in the nation.

Key features of CCTS scheme

- 1) Every company is obligated to buy carbon credits if it exceeds permissible emission limits
- 2) The scheme envisages an online open-market platform to buy and sell the credits.
- 3) Companies will perform better on green transition will be able to earn by selling credits, thus

getting back returns from investment on green technologies

Potential for mitigating greenhouse gas (GHG) emissions

- 1) The scheme will usher in a paradigm shift in how companies view investment in green technology.
- 2) It will encourage companies to seek carbon-neutrality.
- 3) It will help them improve their ESG credentials, allowing them to seek easier credit from abroad.
- 4) Persistent emitters will be forced to cut down GHG emissions or face financial losses.

CCTS is an appreciable step in attainment of Panchamrit goals set by India for 2030.

- Q.10 लोक लेखा समिति ने हाल ही में प्लास्टिक प्रदूषण के बढ़ते खतरे के बारे में चिंता व्यक्त की है। इस संदर्भ में, प्लास्टिक प्रदूषण को रोकने के लिए सरकार द्वारा हाल ही में प्रारम्भ की गई पहलों पर प्रकाश डालिए। (10 अंक, 150 शब्द)
The Public Accounts Committee has recently flagged concerns about the rising menace of plastic pollution. In this context, highlight the recent initiatives taken by the Government to curb plastic pollution. (10 marks, 150 words)

In 2023, the plastic overshoot day for India occurred in January, alarming the authorities on widespread mismanagement in plastic recycling.

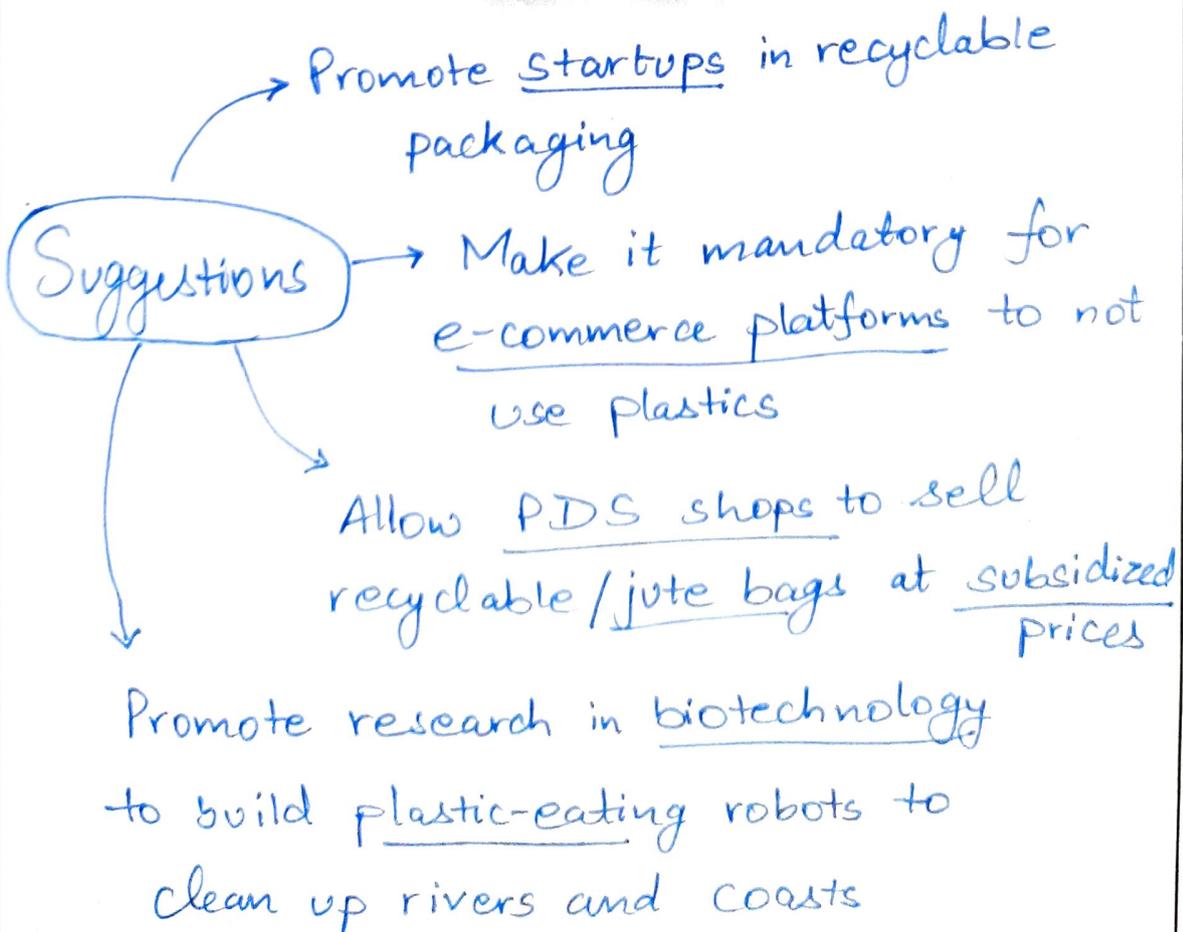
Recent initiatives by Govt. to curb plastic pollution

- 1) Single-use plastic ban since July 2022
- 2) Solid Waste management rules 2016 mandating waste segregation at source
- 3) Promotion of jute packaging through amendment in rules mandating 100% foodgrains and 20% sugar to be packed in jute bags

- 4) Clean Beaches Campaign during Amrit Mahotsav to clean plastics from beaches
- 5) Financing plastic recycling plants
- 6) Municipalities given funding by 15th Finance Commission to curb plastic menace

These steps helped bring the plastic overshoot day to April in 2024.

Still, more needs to be done to address the concerns raised by PAC.



- Q.11 भारत की आर्थिक विकास कहानी प्रायः बेरोजगारी की लगातार चुनौतियों से प्रभावित होती है। संरचनात्मक बेरोजगारी की अवधारणा का विश्लेषण कीजिए और भारत की वर्तमान आर्थिक स्थिति के संदर्भ में इसकी प्रासंगिकता पर चर्चा कीजिए। समावेशी नौकरी वृद्धि को बढ़ावा देने के लिए नीतिगत उपाय सुझाएँ। (15 अंक, 250 शब्द)
 India's economic growth story is often overshadowed by the persistent challenges of unemployment. Analyze the concept of structural unemployment and discuss its relevance in the context of India's current economic situation. Suggest policy measures to promote inclusive job growth. (15 marks, 250 words)

Structural unemployment refers to the condition where economy is undergoing technological transformation and skills demanded by industry don't match with those possessed by workers.

India has had a persistent unemployment problem, leading to critics calling Indian economic growth 'jobless'. The reasons for the same are of significant importance if India wants to achieve inclusive growth:

▷ Jump from agriculture to services in 1990s post LPG reforms led to large number of unskilled and

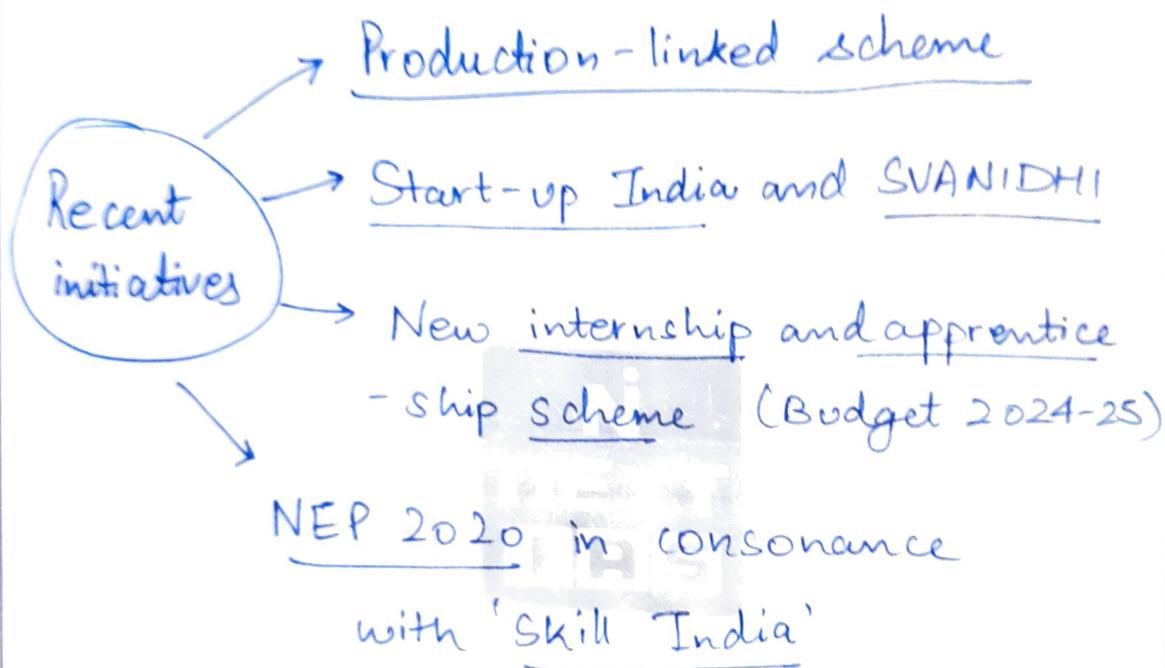
Semi-skilled not getting jobs due to
absence of domestic manufacturing

- 2) Wide gap between academia and industry because of outdated curriculum
- 3) Negligible emphasis on vocational training
- 4) Obsolete labour laws restricting formal employment
- 5) Poor infrastructure becoming a bottleneck in setting up industries

Policies to promote inclusive job growth

- 1) Focus on domestic small firms
eg) MSME should be given incentives
- 2) Labour-intensive industries should be prioritized over capital-intensive
- 3) Education reforms in higher education, vocational training institutes.

- 4) Promote market-driven skilling
campaign in collaboration with industry
- 5) Make infrastructure a catalyst
instead of impediment.



Way forward

While unemployment rate has fallen to 3.2% (PLFS 2023), youth unemployment remains a big concern (>10%). Need to focus on education, skilling and industries together to reap demographic dividend

Q.12 भारत में क्षेत्रीय विकास को बढ़ावा देने में सूक्ष्म, लघु और मध्यम उद्यमों (MSME) की भूमिका पर चर्चा कीजिए। औद्योगिक विविधीकरण और तकनीकी उन्नति को प्राप्त करने में MSME कैसे योगदान दे सकते हैं? (15 अंक, 250 शब्द)

Discuss the role of Micro, Small, and Medium Enterprises (MSMEs) in fostering regional growth in India. How can MSMEs contribute to achieving industrial diversification and technological advancement? (15 marks, 250 words)

Micro, Small and Medium Enterprises (MSMEs) are a significant driver of Indian economic growth, contributing more than 40% to India's GDP and more than 40% to exports.

Role of MSMEs in regional growth

1) MSMEs usually utilize localize resources to promote growth

eg Food processing industries in Punjab - Haryana

2) MSMEs are labour intensive and provide employment to unskilled, semi-skilled as well as skilled.

eg Cycle manufacturers of Ludhiana (Punjab)

3) MSMEs act as catalyst for growth of other sectors in nearby region.

eg) Pharma factories at Bilaspur (Himachal) have given boost to real-estate and rental housing

4) MSMEs provide inputs to larger industries, thereby promoting transport sector development.

5) Traditional artisans are also included in development journey through MSMEs

eg) Toy companies in Rajasthan

MSMEs - driver of industrial diversification

↳ Presence of MSMEs promotes ancillarisation, thereby discouraging in-house production.

↳ MSMEs also cater to external demand, thereby giving boost to diversification based on foreign demand

MSMEs - boost to technological advancement

↳ MSMEs focus on efficiency, thereby promoting innovation

↳ MSMEs adopt foreign technology and modify them according to local needs \Rightarrow electronic devices for Indian kitchen

↳ Chinese technological revolution has been spearheaded by MSMEs in electronics and toy manufacturing

MSMEs are drivers of inclusive

growth, so government should ensure their growth through incentives and infrastructure.

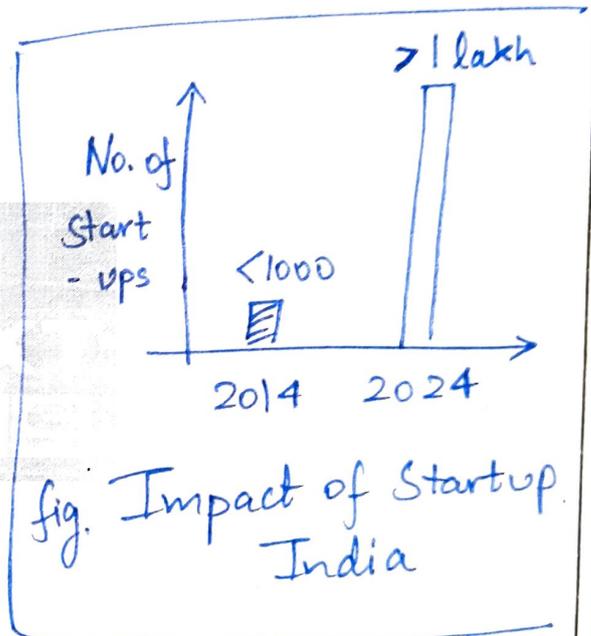
Q.13

जबकि भारत में स्टार्टअप्स ने अर्थव्यवस्था में उद्यमशीलता और नवाचार को बढ़ावा देने में अद्वितीय सफलता हासिल की है, भारत में स्टार्टअप्स की स्थिरता को चुनौती देने वाले कुछ संरचनात्मक मुद्दे हैं। स्टार्टअप्स के सामने आने वाली इन चुनौतियों पर प्रकाश डालें और समस्याओं के व्यावहारिक समाधान सुझाएं। (15 अंक, 250 शब्द)

While startups in India have achieved notable success in fostering entrepreneurship and innovation in the economy, there are certain structural issues challenging the sustainability of startups in India. Elucidate upon these challenges faced by startups and recommend practical solutions to the problems. (15 marks, 250 words)

Startups are nascent companies, (<10 years) with less than 100 crore turnover, which are spearheading innovation in a particular field.

While the number of startups has gone up at unprecedented levels, there are concerns in the market about their sustainability.



Structural issues challenging Startups

▷ Unsustainable funding: There is a concern that many startups got large funds in pandemic but are

now facing growth issues and
subsequent financial crunch

2) Excessive focus on IT sector:

Most large startups are online
aggregator platforms (eg Ola, Zomato)
and the space has been occupied
by many similar startups.

3) Financial services: Startups have
been accused of failing to follow the
regulations, leading to punitive action
(eg Paytm)

4) No free lunch: Exorbitant cashbacks
given by startups to lure customers are
eventually paid by taxpayers as govt.
gives tax holidays.

5) Limited focus on non-services sector

6) Closure of startups as soon as tax
holiday ends

Solutions:

- 1) Govt. must encourage startups in agri-tech to boost farmer income as well as ensure sustainability
- 2) Labour codes must be implemented on war-footing
- 3) Monopolies must be tackled
eg → ONDC to counter Amazon-flipkart duopoly
- 4) Promote startups in food processing and exports
- 5) Infrastructure construction at a rapid pace to catalyze manufacturing
- 6) Rationalize tax holidays at Special Economic Zones to prevent frequent closures.

Startups of today are going to be megacorporations of tomorrow. Thus, it is essential to promote them and resolve their challenges.

Q.14

भारतीय रेलवे के बुनियादी ढांचे के आधुनिकीकरण में सार्वजनिक-निजी भागीदारी की प्रभावशीलता का आलोचनात्मक मूल्यांकन कीजिए। सुरक्षा क्षेत्रक को रेलवे के लिए प्रमुख चुनौतियों में से एक मानते हुए, भारतीय रेलवे के समग्र सुरक्षा मापदंडों में सुधार के लिए क्या उपाय किए जा सकते हैं?

(15 अंक, 250 शब्द)

Critically evaluate the effectiveness of public-private partnerships in the modernization of railway infrastructure in India. Considering safety as one of the major challenges for railways, what measures can be taken to improve the overall safety parameters of Indian Railways?

(15 marks, 250 words)

Public-Private Partnerships (PPP) are agreements between public sector and a private company to undertake a project together and share the risks and revenue in a specified manner.

PPPs are instrumental in creation of infrastructure like railways which is highly capital intensive. There have repeated suggestions by economists and also of Kelkar Committee to modernize railways through PPP.

Advantages of PPP in railway modernisation

↳ Technical Expertise: Private sector has professionals who are trained with new technologies in railway modernization.

- 2) Capital: The huguous costs of infrastructure updation can't be borne by public sector alone. Need ₹ 50 lakh crore till 2030
- 3) Efficient management of private sector can help minimize costs.

Problems with PPP in railway infrastructure

- 1) Safety: Private sector might compromise with regular safety audits to save money
eg seen during Jet airways financial crunch
- 2) Affordability: Private companies are driven by profit and not inclusivity.
Common citizen may suffer.
- 3) Uncertainty: Private company's financial condition may be affected by external situation, leading to delays.

Considering safety as a ~~meas~~ major challenge, following precautionary

measures may be undertaken:

- 1) Price control should be done in consultation with private company, so that it doesn't compromise on safety due to unsustainable business
- 2) Regular audits by Indian railways

Measures to improve overall safety

- ↳ Anti-collision technology (KAVACH)
- ↳ Updation of railway communication network
- ↳ Use of IoT (Internet of things) and smart sensors to detect damage on tracks
- ↳ App/web portal to alert railways about imminent danger on track

Indian railways has on its own electrified

>90% network showcasing its capability. Nonethe

-less, PPP can be to modernize railways

stations like Rani Kamalapati Station (MP)

- Q.15 भारत में खाद्य सुरक्षा सुनिश्चित करने के लिए सार्वजनिक वितरण प्रणाली (पीडीएस) में भारतीय खाद्य निगम (एफसीआई) की भूमिका पर चर्चा कीजिए। एफसीआई की कार्यकुशलता और प्रभावशीलता बढ़ाने के लिए इसके कार्यप्रणाली में आवश्यक सुधारों का सुझाव दीजिए। (15 अंक, 250 शब्द)
- Discuss the role of the Food Corporation of India (FCI) in the Public Distribution System (PDS) to ensure food security in India. Suggest necessary reforms in the functioning of FCI to enhance its efficiency and effectiveness. (15 marks, 250 words)

Food Corporation of India (FCI)

is mandated to procure specified crops from APMC Mandis at Minimum Support Price (MSP) and store it as buffer and supply it to governments to enable its sale through PDS shops (Public distribution system)

FCI's role in ensuring food security

- 1) FCI ensures farmers that their produce will be procured. This encourages them to grow food crops and bring them to APMC Mandi
- 2) FCI's procurement, ^{storage} and sale to states ensures that governments have

- enough buffer stock to supply in case of famine-type emergency.
- 3) FCI also engages in open market sale when prices go beyond targeted inflation. It then enables affordable food crops are made accessible to public.
- 4) FCI's supply to PDS shops has helped tackle the hunger problem of India.

Reforms in FCI's working

Based on Shanta Kumar Committee:

- ↳ Buffer stock norms must be relooked
 - eg 2023: Buffer was thrice the required amount
- ↳ Diversify procurement basket while MSP is declared for 22 crops, wheat and rice are the primary crops

bought by FCI. Need to diversify to promote crop diversification and environmental sustainability.

↳ FCI must be allowed to export to foreign nations for forex income and not just for developmental support

↳ Off-budgetary borrowing through FCI should be discontinued (15th finance Commission)

PDS reforms are intricately linked to FCI reforms. Since the NFSA Act of 2013, India has made progress on combating leakages, which currently stand at 18% (2023 for central procurement)

FCI reforms will go a long way in saving public funds and ensuring efficacy of PDS.

Q.16

भारत में कृषि उत्पादकता और खाद्य सुरक्षा बढ़ाने में नैनो प्रौद्योगिकी की भूमिका पर चर्चा कीजिए। नैनो-उर्वरकों और नैनो-कीटनाशकों के उपयोग के हाल के विकास और संभावित लाभ और जोखिमों पर प्रकाश डालिए।
(15 अंक, 250 शब्द)

Discuss the role of nanotechnology in enhancing agricultural productivity and food security in India. Highlight recent developments and potential benefits and risks of the use of nanofertilizers and nano-pesticides.
(15 marks, 250 words)

Nanotechnology involves use of technology to manipulate atoms or molecules at nanometre scale (1-100 nm), leading to creation of nanoparticles which behave in strikingly unique manners as compared to their normal counter - parts.

Role of nanotechnology in agriculture

It can help boost productivity and ensure food security in following ways:

- 1) Targeted delivery of fertilizers and pesticides preventing misuse and overuse
- 2) Improve soil fertility by precising controlling N:P:K ratio to 4:2:1
- 3) Help in genetic modification of seeds as nanoparticles can act as markers

- 4) Easier fortification of crops like rice, thereby ensuring nutritional security
- 5) Help fight plant diseases through targeted delivery of medicine, preventing the pathogen from ~~prevent~~^{becoming} resistant.

Recent developments

- Nano Urea launched by IFFCO cooperative
- ICAR undertaking research on nanopesticides

Benefits of nanofertilizers and nanopesticides

- 1) Normal urea sac of 45 kg has same effect as 500 ml nano urea bottle
- 2) Nanoureua efficiency: 85-90%
normal urea efficiency: 20-30%
- 3) Nanofertilizers and nanopesticides

can be fed to plants through drip irrigation tubes (fertigation)

4) Minimize overuse of pesticides

Risks associated with nano fertilizers
and nanopesticides

1) Urea in bulk and nanourea molecule have very distinct chemical properties.

Need detailed analysis of any side effects

2) Higher efficiency of nanopesticides might lead to absorption^{by crop} in larger

amounts than permissible, threatening safety of food crop.

3) Farmers will have to properly guided and made aware of harmful effects of excessive usage of nanofertilizers (can affect human neurological system).

Thus, these must be promoted, looking at their huge benefits, but awareness must be generated regarding their judicious use.

Q.17

"अगर उपज समय पर हमारी थाली तक पहुंच जाए तो खेती लाभकारी हो जाती है।" इस संदर्भ में, भारत में कृषि विपणन और परिवहन क्षेत्र के समक्ष आने वाले अपस्ट्रीम और डाउनस्ट्रीम मुद्दों पर प्रकाश डालिए। इस क्षेत्र की समग्र दक्षता में सुधार के लिए कौन-सी पहलें प्रारम्भ की जा सकती हैं? (15 अंक, 250 शब्द)

"Farming becomes remunerative if the produce reaches our plates in time". In this context, highlight the upstream and downstream issues faced by the agriculture marketing and transport sector in India. What initiatives can be undertaken to improve the overall efficiency of the sector? (15 marks, 250 words)

Sluggish transport sector, poor cold storage infrastructure and lack of marketing support has stalled the progress of food processing as well as Indian agriculture.

Upstream issues in agriculture marketing

- 1) Obsolete contract laws prevent marketing teams from tying-up with farmers
- 2) Lack of awareness amongst farmers about new-age technology driven food processing and demand for exotic crops

Upstream issues in transport sector

- 1) Absence of all-weather connectivity in remote areas

- 2) Difficulty in getting credit for buying transport vehicles
- 3) Lack of availability of diesel/petrol in left-wing-extremism affected areas

Downstream issues in agriculture marketing

- 1) Difficult to create ecosystem:
eg Emu eggs fetch high prices but need to build network with dieticians, gyms etc.
- 2) Absence of food processing industry in some regions

Downstream issues in transport sector

- 1) Low number of mobile vans with cold storage facilities leading to wastage
- 2) Expensive logistics raising the price of final producing, thereby decreasing its demand.

Initiatives to improve overall efficiency

- 1) Liberalize contract laws while ensuring farmer rights to prevent litigation like Pepsi - FCS potato seeds case.
- 2) Ensure infrastructure connectivity till last-mile.
- 3) Easy credit to transporters.
- 4) Cold storage warehouses to be setup by govt. *
- 5) Private companies can be encouraged to start cold storage vans in PPP.
- 6) Promote organic farming with indigenous varieties.
- 7) Help build ecosystem for exotic ^{fruits or} crops which are highly remunerative eg Dragon fruit.

Reforms in marketing and transport sector can plug the gaps in food processing supply chain, ensuring better farmer income.

Q.1d

भारत की कृषि संबंधी निर्यात-आयात की नीतियां किसानों के बजाय उपभोक्ताओं की ओर अधिक झुकी हुई हैं। दिए गए कथन के आलोक में, किसानों पर आयात और निर्यात नीतियों के प्रभावों का आलोचनात्मक विश्लेषण कीजिए। किसानों को आयात-निर्यात संबंधी मूल्यों के दहशत से बचाने के लिए क्या उपाय किए जा सकते हैं? (15 अंक, 250 शब्द)

India's agriculture export-import policies are tilted more towards the consumers rather than the farmers. In light of the given statement, critically analyze the impact of import and export policies on farmers. What measures can be undertaken to shield farmers from import-export price shocks? (15 marks, 250 words)

Agroeconomist Prof. Ashok Gulati has criticized Indian government's vacillating stand on international trade of crops produced in the country, thereby causing distress to farmers

Impact of import - export policies

- 1) Abrupt bans on exports: done by govt to tackle domestic inflation ends up depriving farmers of better income
 eg → non-basmati rice export ban
- 2) Cobweb cycle: As highlighted by Economic Surveys, lifting of export bans leads to better incomes, encouraging ^{more} farmers to grow same crop next year thereby causing over production and lower prices.

NEXT IAS

Candidates
write on this

- 3) Changes in import - export policy are so frequent that it prevents farmer from undertaking long term planning
- 4) Export market: ban of on export of rice around 2008-2010 for extended periods led to Thailand and Indonesia capturing markets of Indian farmers.
- 5) It can also have positive impact.
- eg) Ban on poultry imports from US gave fillip to domestic industry

Most of the policy decisions are driven by urge to control domestic retail inflation but it ends up harming the producers (farmers). This excessive focus on consumer-welfare necessitates

measures to shield farmers from impact of export-import policy shocks

- 1) Build cold storage infrastructure to

prevent distress sales.

2) Farmer Producer Organisations should be setup in every district, promoting food processing.

3) Domestic connectivity across all regions must be enhanced so as to enable farmers to cater to domestic demand.

↳ all weather connectivity to Kashmir to allow apple orchards to sell across India

4) Build brand image of Indian exports, making their demand inelastic

5) Diversify export ^{& import} destinations to

include Eastern Africa, Caribbean and Latin America

6) Promote neighbourhood cross border trade.

Above measures can help shield farmers from ex-im policies, even if govt's focus remains on consumer-side inflation.

Q.19

भारत में जैव विविधता संरक्षण में संरक्षित क्षेत्रों की भूमिका का मूल्यांकन कीजिए। भारत की जैव विविधता को संरक्षित करने में राष्ट्रीय उद्यान, वन्यजीव अभ्यारण्य और जैव-मंडल आगर (बायोस्फीयर रिजर्व) कितने प्रभावी रहे हैं? (15 अंक, 250 शब्द)

Evaluate the role of protected areas in biodiversity conservation in India. How effective have national parks, wildlife sanctuaries, and biosphere reserves been in preserving India's biodiversity? (15 marks, 250 words)

Biodiversity conservation is essential to preserve ecosystem's integrity, regional culture and local economy. With the enactment of Wildlife Protection Act 1972, India has brought about 5% of its land under protected areas (PAs).

Role of protected areas

- 1) They ensure no human intervention in the life of protected species
- 2) Enable in-situ conservation, allowing wildlife to grow in natural environment
- 3) Allow threatened species to repopulate areas \Rightarrow Numbers of tigers, an endangered species, doubled in last decade

- 4) Foster research in zoology
 - 5) Promote wildlife diplomacy and global cooperation on biodiversity.
- eg → Crossborder protected areas across Nepal, Bhutan and India.

Effectiveness of national parks (NPs),
wildlife sanctuaries and biosphere
reserves (BRs) (WSs)

- 1) NPs have brought about awareness on necessity, ^{of keeping} wild areas isolated from human intervention
- 2) WSs have generated concern about conservation of specific species, leading to special projects
eg → Cold snow leopard project
- 3) BRs have taught us how to minimize human-wildlife conflicts and live in harmony.

4) These protected areas in North East ensured the success of Project Rhino with no killing in 2023.

5) Project Tiger has showcased the world, India's commitment to biodiversity conservation

However, there have been several instances where these PAs failed to protect wildlife

eg Asian lions - Canine distemper^{virus} killed many of them
Tigers - disappeared in large numbers from Sariska tiger reserves

Jim Corbett NP - criticized by Supreme Court for allowing construction in prohibited areas

It is important to realise that effectiveness of these PAs depends on strict enforcement of laws by forest authorities.

Q.20

भारत में पार्टिकुलेट मैटर (पीएम 2.5 और पीएम 10) और ओजोन प्रदूषण के उच्च स्तर के क्या कारण हैं? पार्टिकुलेट मैटर (कणीय पदार्थ) और ओजोन प्रदूषण को कम करने के लिए सरकार द्वारा उठाए गए विभिन्न पहल कितने प्रभावी हैं? (15 अंक, 250 अंक)

What are the causes of high levels of particulate matter (PM2.5 and PM10) and ozone pollution in India? How effective are the various steps taken by the government to mitigate particulate matter and ozone pollution? (15 marks, 250 words)

Rising air pollution, especially the high levels of PM2.5, PM10 and ozone levels, in India, kills 2 million Indians every year.

Causes of high levels of PM2.5, PM10 and ozone

- 1) PM2.5: 40% of PM2.5 ^{levels} emissions in Delhi are attributed to vehicular emissions.
- 2) PM10: It is often formed as a result of construction activity and vehicular emissions along with soot from industries and farm fires.
- 3) Ozone: Most of the tropospheric Ozone is formed as a secondary

pollutant as a reaction of NO_x with O_2 in sunlight.

- 4) Lack of stringent measures to control industrial and vehicular emissions has led to increase in their levels.
- 5) Rising numbers of cars adds to the problem
- 6) Continuous construction activity in urban areas leads to dust and PM_{10} formation

Steps taken by government

- 1) Promotion of Electric Vehicles through FAME scheme and tax incentives
- 2) Central Pollution Control Bureau (CPCB) issuing stricter guidelines to tackle industrial emission
- 3) Controlling farm fires/stubble burning through incentives and encouraging

adoption of shorter-duration crop varieties

- 4) Graded Response Action Plans for NCR region to tackle rising levels
- 5) National Clean Air Programme which aims to reduce upto 40% pollution by 2025-26.
- 6) National Ambient Air Quality Standards and Air Quality Index to monitor and generate awareness.
- 7) Smog towers being setup in Delhi to filter air and provide cleaner air
- 8) E20 or ethanol blending programme to use upto 20% ethanol in petrol leading to lesser emissions.

Govt. has taken appreciable steps but more needs to be done to handle this silent pandemic caused by air pollution