



UPSC MAINS - Test 2

Duration: 3 Hrs

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| NAME: | UJJWAL PRIYANK | PHONE NO: | |
| DATE: | 26.07.25 | No of Questions Attempted: | 20 - |
| Email ID: | | | |


(Please fill your details correctly)

Medium:

English



HINDI

| INDEX NUMBER | | | INSTRUCTIONS |
|--------------|---------------|-----------------|---|
| Q.NO. | Maximum Marks | Marks Obtained. | <p>Please read each of the following instruction carefully before attempting the questions:</p> <ul style="list-style-type: none"> • There are TWENTY questions printed in ENGLISH and HINDI. • All questions are compulsory. • The number of marks carried by a question/part is indicated against it. • The answers must not exceed the prescribed word limit indicated against each question. • Answers must be written in the medium authorised 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 authorised one. • Checking to be done with main aim of evaluating a candidate's ability of express ideas in lucid manner. • Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off |
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| TOTAL: | 250 | | <p>Signature of the Student: </p> <p>Invigilator's Signature:</p> |

DETAIL FEEDBACK

ALL THE BEST

प्रश्न 1. सार्वजनिक ऋण को परिभाषित करें और भारत में सार्वजनिक ऋण प्रबंधन से जुड़ी प्राथमिक चिंताओं की रूपरेखा तैयार करें। इन चिंताओं को दूर करने के उपाय प्रस्तावित करें।

Q1. Define public debt and outline the primary concerns associated with public debt management in India. Propose measures to address these concerns.

(Answer in 150 words)

Public debt refers to the government borrowings to meet its expenditure.

- Fiscal deficit represents the total borrowing requirements of the government

Public debt and concerns involving its management

1. High public debt causes increased interest payment
↳ Burden on future generation
2. Public debt management is necessary for financial stability, long term investment and growth in economy.
3. Reducing fiscal deficit due to burden on government treasury

4. Public debt is a huge chunk of Indian government borrowing
5. India aims to reduce the debt-to-GDP ratio to $50 \pm 1\%$.

Measures to address these concern

1. Recommendation of NK Singh Committee report 2016.
2. Reduction of revenue budget deficit.
3. Focusing on quality of capital expenditure for multiplier effect.
4. Reducing fiscal deficit with target of 4.5% (FY 2026)

Public debt management is crucial for fiscal responsibility and balancing growth with inflation.

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प्रश्न 2. खाद्य प्रसंस्करण कृषि उपज के मूल्य को बढ़ाने और आर्थिक विकास में योगदान देने में महत्वपूर्ण भूमिका निभाता है। चर्चा करें।

Q2. Food processing plays a crucial role in enhancing the value of agricultural produce and contributing to economic growth. Discuss.

(Answer in 150 words)

Food processing industries in India is to become a valuation of \$535 billion by 2025.

Enhancing the value of agricultural produce

1.) Affordability of food.

Increased shelf life and long duration of ripening of produces → reduce loss.

2.) Availability of quality food.

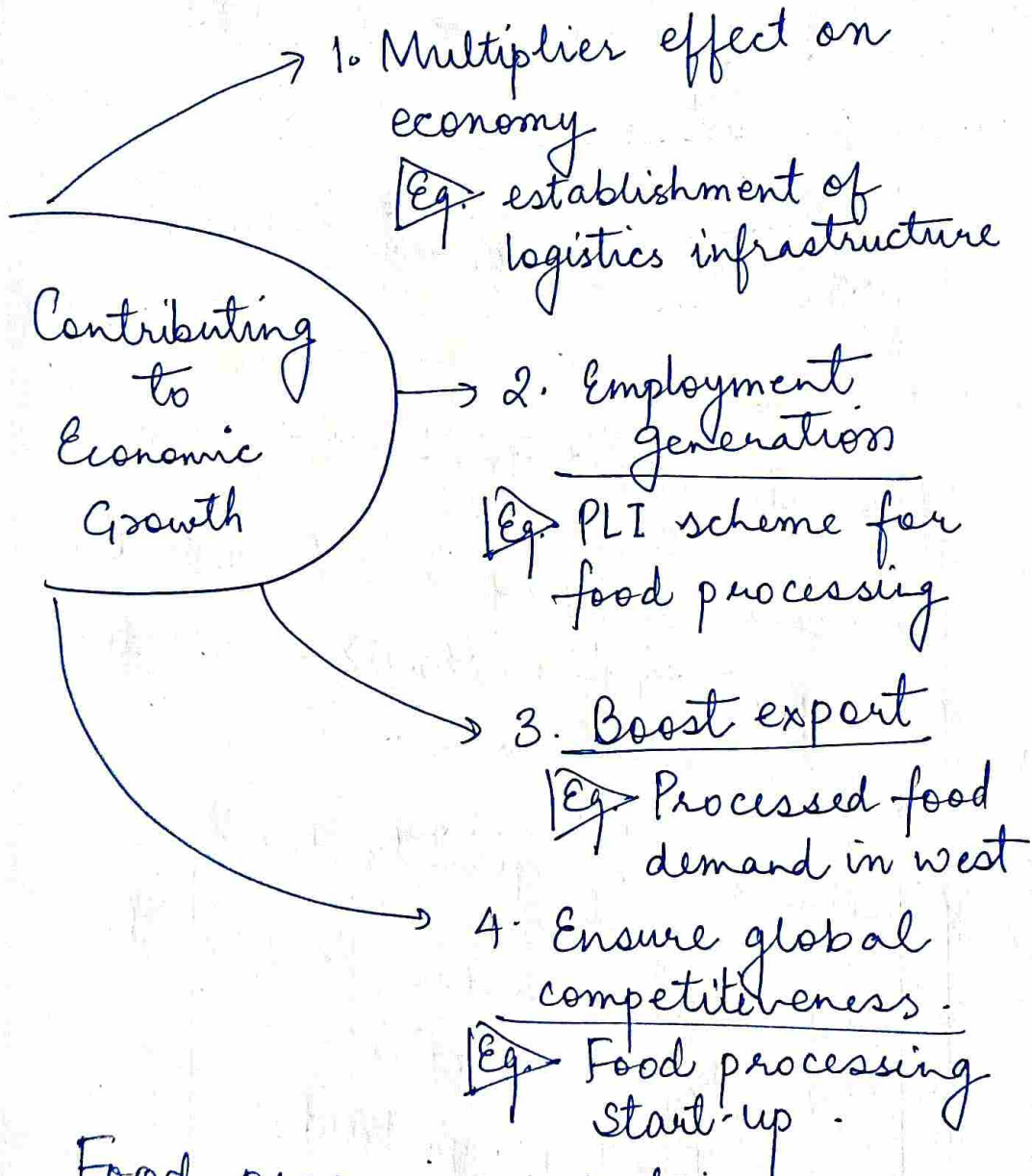
Reduced post harvest loss and creation of value chain

eg. Food Mega Parks.

3.) Utilisation: Biofortification of foodgrain to solve "hidden hunger".

4. Doubling Farmer's income

Value generation for grain producer, dairy farmers, meat producer etc.



Food processing industries can help realise the dream of

"Agri-preneur" for Viksit Bharat @ 2047

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प्रश्न 3. सार्वजनिक वितरण प्रणाली (PDS) की दक्षता और पारदर्शिता में सुधार में प्रौद्योगिकी की भूमिका की जांच करें।

Q3. Examine the role of technology in improving the efficiency and transparency of the Public Distribution System (PDS).

(Answer in 150 words)

Public distribution system (PDS) refers to the provisioning of essential items such as grains, kerosene, etc to the eligible beneficiaries at subsidised cost through Fair Price shop.

Technology to improve efficiency of PDS

1. Digitisation of beneficiary
 Eg → one nation - one ration for availing benefit across states
2. Blockchain technology
 Improves supply chain and traceability of consignment.
3. Use of Artificial Intelligence and IOT → This ensures quality control and better designing.

4. Use of irradiation technology and biofortification

↳ Improved shelf-life and better nutritional values

Technology for transparency of PDS

1. Digitisation of distribution process.

↳ checks "ghost" beneficiary.

2. Use of biometrics of beneficiary

↳ Prevents leakage and corruption

3. Direct Benefit Transfer.

↳ cash transfer to beneficiary as recommended by Shanta Kumar Committee.

4. Digital real-time grievance redressal → reaching last mile

Technology can revolutionise the way governance is carried out in the country.

Feedback (For office use only)

Structure/Presentation

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प्रश्न 4. समावेशी विकास पर वैश्वीकरण के प्रभाव का विश्लेषण करें। राष्ट्र वैश्वीकरण के नकारात्मक परिणामों को कम करते हुए इसके लाभों का उपयोग कैसे कर सकते हैं?

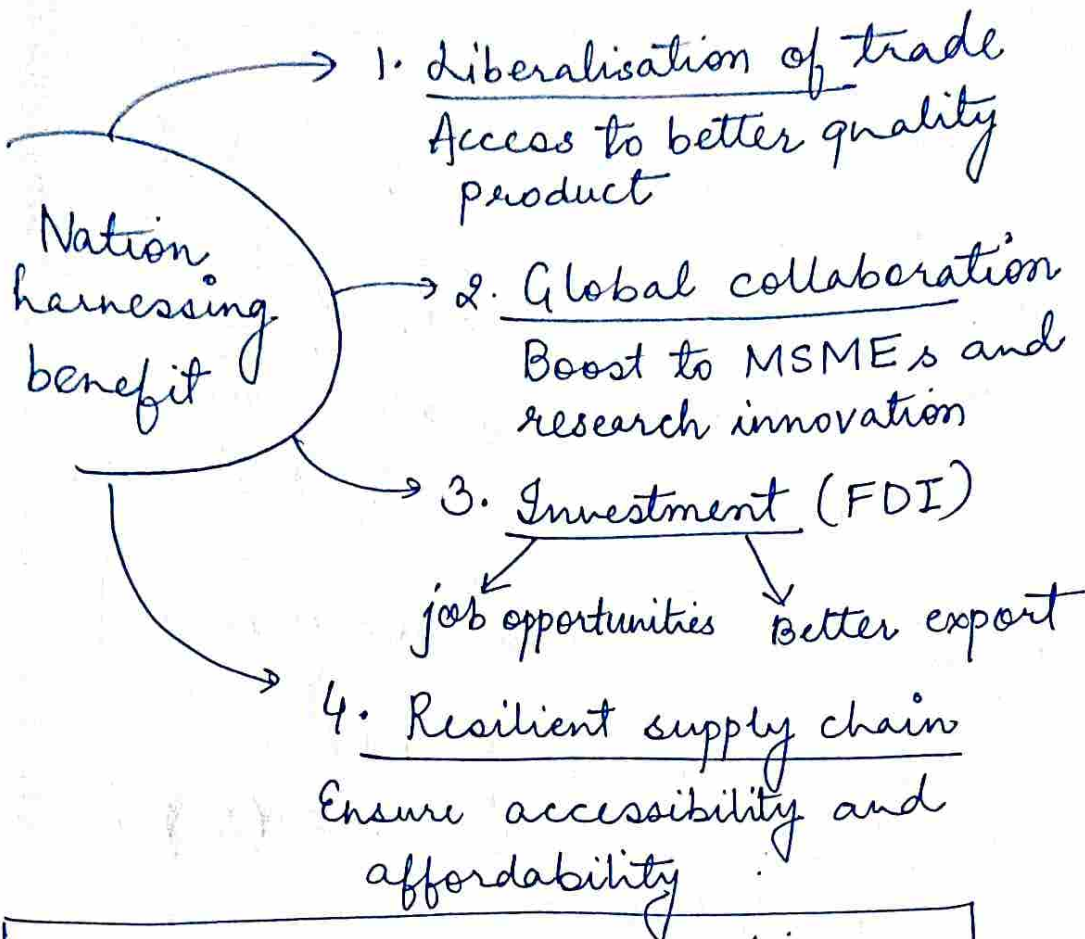
Q4. Analyze the impact of globalization on inclusive growth. How can nations harness the benefits of globalization while mitigating its negative consequences?

(Answer in 150 words)

Globalisation is the process of global integration where the markets and value chain gets integrated or unified as one.

Globalisation → inclusive growth

1. Better opportunities of livelihood.
 [Eg.] Global Capability Centre (GCC) in India.
2. Ensure equitable distribution of resources
 [Eg.] global competitiveness through transfer of technology.
3. Women empowerment :
 ↳ Increase in income due to gig economy.
4. Education :
 Better outcomes due to access to digital learning across globe.
5. Agriculture → integration of value chain.



Ways to mitigate the negative consequences of globalisation

1. Maintain strategic autonomy
Focus on self-reliance while trading with partners [Eg] Atmanirbhar Bharat
2. Diversify supply chain to prevent monopolisation.
3. Protecting interest of local manufacturers.

Globalisation is not a monolith - it has its harms and benefit - thus requires a balanced approach.

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प्रश्न 5. भारतीय संदर्भ में कृषि उत्पादों के परिवहन और विपणन से जुड़ी जटिलताओं का विश्लेषण करें।

Q5. Analyze the intricacies associated with the transportation and marketing of agricultural products within the Indian context.

(Answer in 150 words)

Agriculture in India employs over 45% of workforce and is source of livelihood. However, post-harvest loss is a major concern eclipsing agriculture.

Intricacies associated with transportation

1. Short shelf life of agricultural produce
 ↳ Horticulture produce, milk etc.
2. Poor logistic infrastructure
 ↳ low cold-chain warehousing.
3. Distance between fields and markets is long → thus requires fast and efficient transportation
4. Low availability of funds with farmers.
 ↳ Inability to hire reefer trucks etc.

The marketing of agricultural products are also beset with various challenges.

1. Network of intermediaries
↳ Reducing profit share of farmers.
2. Lack of proper information and awareness of market
3. Poor warehouse facility at APMC mandis.
4. Farmers have poor bargaining power vis-a-vis intermediaries

WAY FORWARD.

1. Food processing industries
↳ PM-SAMPADA, Food Mega Park, etc.
 2. Multi modal connectivity project
[Eg] PM Gati Shakti
 3. Digital technology such as e-NAM for efficient marketing
 4. Utilisation of Farmer Producer Organisation (FPO)
- Agriculture sector is beset with various challenges, but a way forward will ensure that the agriculture starts reaping benefits.

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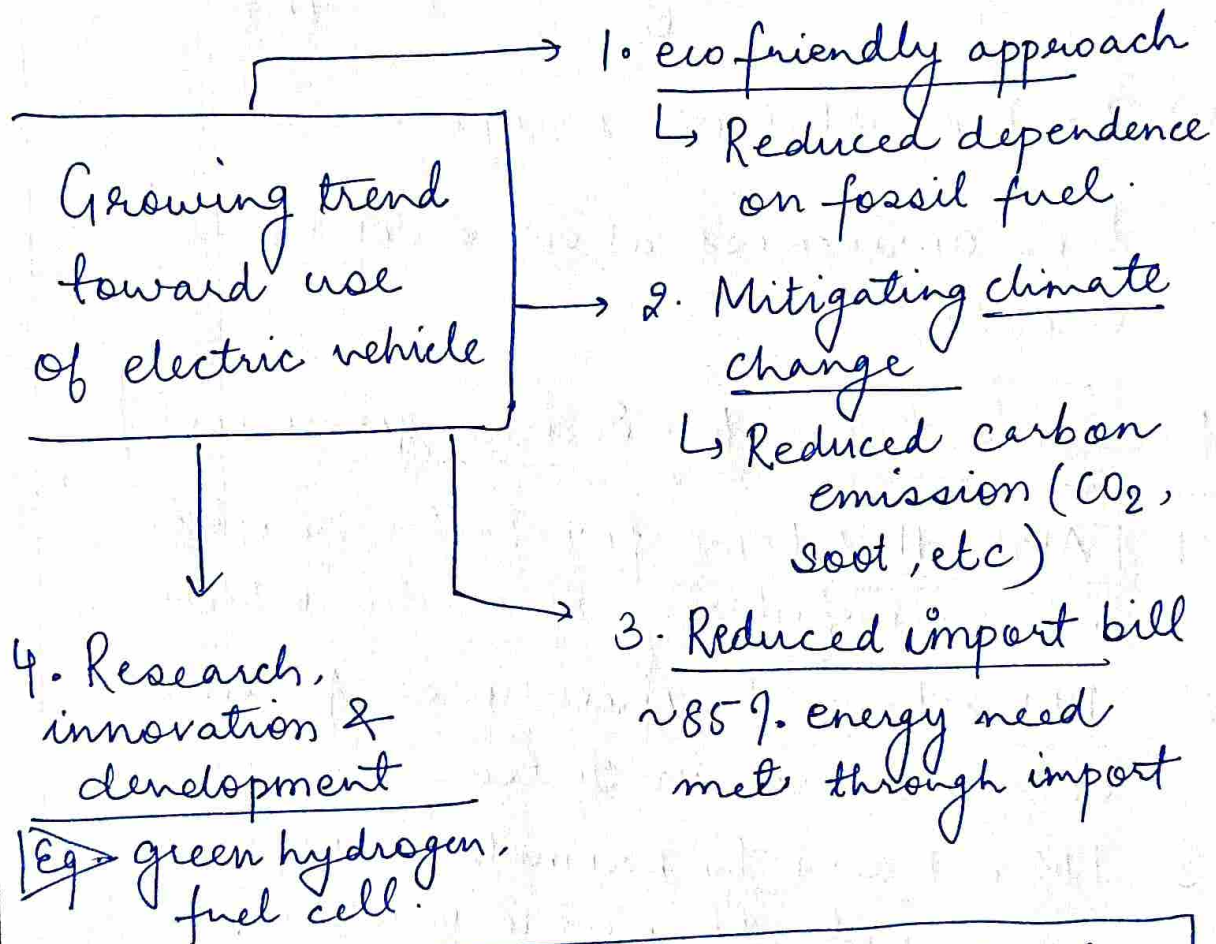
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प्रश्न 6. हाल के दिनों में इलेक्ट्रिक वाहनों के उपयोग की ओर रुझान बढ़ा है। भारतीय बाज़ार में वर्तमान में कौन सी बाधाएँ मौजूद हैं, और भारत सरकार ने उन्हें संबोधित करने के लिए क्या उपाय लागू किए हैं?

Q6. In recent times, there has been a growing trend towards the use of electric vehicles. What obstacles are currently present in the Indian market, and what measures have the Indian government implemented to address them?

(Answer in 150 words)

Electric vehicles have been seen as the solution to climate change due to their potential to lower emission.



Obstacles currently present in Indian market

1. Availability of raw materials → Import

dependence on China for battery.

2.) Low technological level

↳ Absence of processing technology for critical minerals like cobalt, lithium etc.

3.) Infrastructural bottleneck.

Issues with integration of supply chain

4.) Lack of skilled manpower.

5.) Poor awareness about electric vehicle.

Measures taken by Indian government

1. FAME-II scheme for faster adoption and manufacturing of electric vehicle
2. PLI scheme to incentivise Advanced Chemical cell in India
3. PM e-Drive to promote awareness and sale of electric vehicle

Electric vehicles can help realise India's ambition of Panchamrit goal and achieve net-zero by 2070.

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प्रश्न 7. भारत में वस्तु एवं सेवा कर (जीएसटी) व्यवस्था लागू होने से कराधान संरचना में आमूल-चूल बदलाव आया है, लेकिन कुछ कमियों के कारण इसकी प्रभावशीलता कम हो गई है। चर्चा करें।

Q7. India's roll out of Goods and Services Tax (GST) regime heralded a paradigm shift in taxation structure but it has been marred down with certain glitches downgrading its effectiveness. Discuss

(Answer in 150 words)

Goods and Service Tax (GST) was constitutionalised via 101st constitutional amendment and enforced through GST council (article 279A).

Roll out of GST → Paradigm shift in taxation structure

1. Aimed at motto of "one nation - one tax" : uniform tax across India
2. Removed the cascading impact of input tax
 ↳ Inverted duty structure
3. Bring transparency through collaboration of state
4. Cooperative federalism boosting the taxation and related revenue benefit sharing.

5. Digitisation → helps in seamless movement of goods across country

Glitches downgrading its effectiveness.

1. Various tax slabs -
↳ creates ambiguity in tax collection
2. States losing revenue due to letting go their share
3. Sudden rollout had a dampening impact on market
↳ This led to confusion among retailers, wholesaler; etc.
4. Centre-~~state~~ state clash leads to poor outcome of GST council
5. Several items like Petrol, diesel, alcohol, etc are still outside GST

A calibrated reform in GST Slab structure can lead to better outcome due to rationalisation.

Feedback
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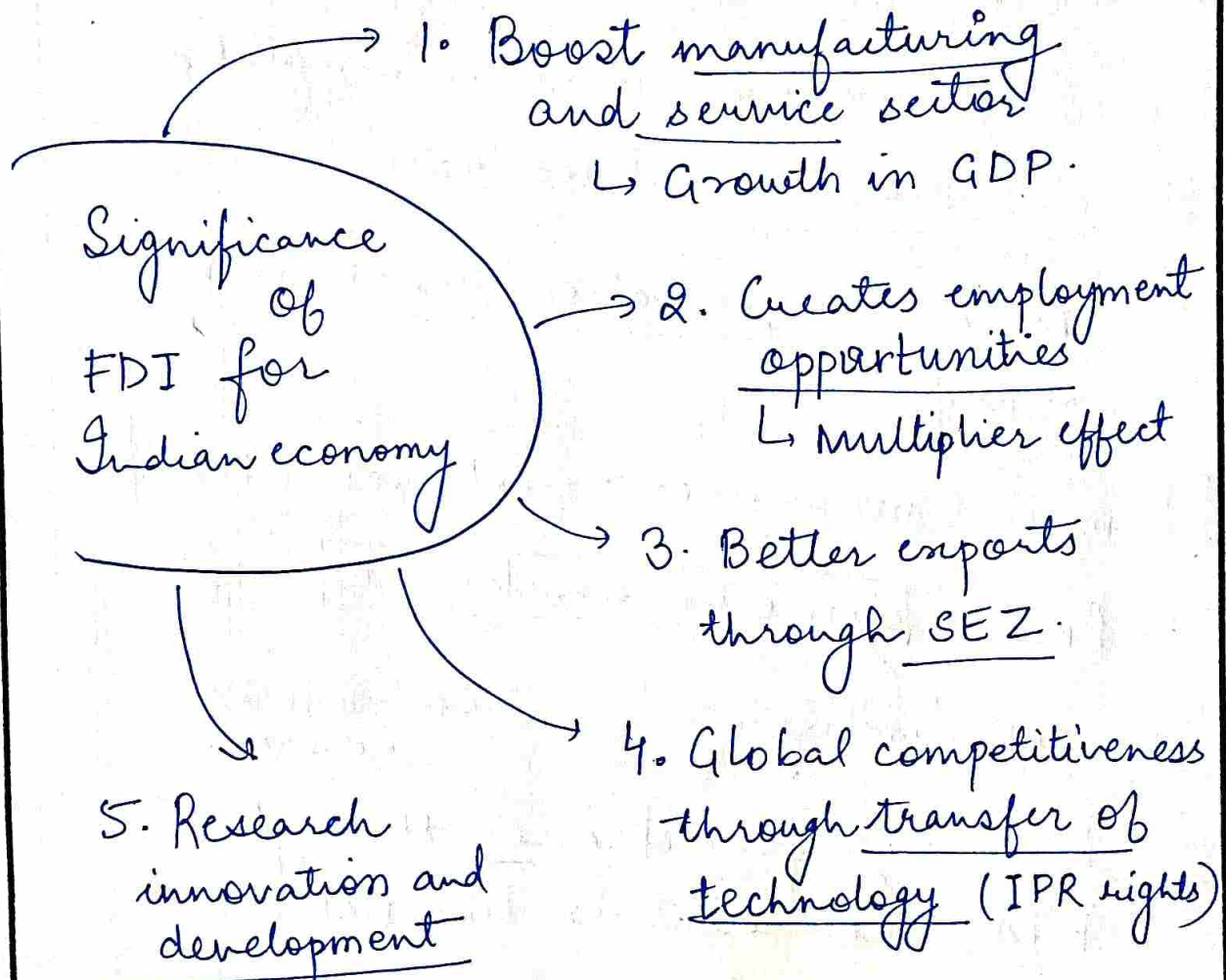
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प्रश्न 8. भारतीय अर्थव्यवस्था के लिए प्रत्यक्ष विदेशी निवेश (FDI) के महत्व को समझाएं और FDI प्रवाह में हालिया गिरावट के पीछे के कारणों का विश्लेषण करें। भारत में FDI बढ़ाने के लिए उपचारात्मक उपाय सुझाएं।

Q8. Explain the significance of foreign direct investment (FDI) for the Indian economy and analyze the reasons behind the recent decline in FDI inflows. Suggest remedial measures to enhance FDI in India.
(Answer in 150 words)

Recent data suggests that India has achieved a cummulative FDI of over \$1 trillion since the start of 21st century.



Mayaram Panel defines FDI as any investment which
↳ over 10% in listed companies
↳ any investment in unlisted ones.

Reasons for decline in FDI inflows

1. Threat of global recession :
due to global polycrisis.
2. Tensions in middle East →
negative impact on supply chain
3. Trump Protectionist Policy :
Reduced investment across globe.
4. Inflation and interest rate
5. Trade weaponisation and heavy tariffs

Remedial measures to enhance FDI

1. Ensure domestic resilience
 inflation targeting Stable forex reserve
2. Promoting free trade through
FTA with countries like UAE, UK etc
3. Promote SEZ (Baba Kalyani committee)
 India with a growth rate of 6.5%
 in uncertain global order presents a
 case of thinning economy.

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प्रश्न 9. भारत में डिजिटल परिवर्तन के लाभ और चुनौतियाँ क्या हैं? डिजिटल अर्थव्यवस्था में सुचारू और समावेशी परिवर्तन सुनिश्चित करने में विभिन्न हितधारकों की भूमिका पर चर्चा करें।

Q9. What are the benefits and challenges of digital transformation in India? Discuss the role of various stakeholders in ensuring a smooth and inclusive transition to a digital economy.

(Answer in 150 Words)

Digital economy contributes to about 11.7% of India's GDP with a potential to bring drastic changes in market and value chain.

Benefits of digital transformation

1. Inclusive growth

↳ Bring revolution to education and health sector with digital technology

2. Equity and empowerment

↳ e-commerce, e-governance, etc.

3. Transparency

Direct Benefit Transfer using JAM trinity

4. Participatory governance

use of social media, etc.

Challenges associated with digitisation

1. Digital divide

Rural digital literacy is mere 24%.

2. Evolving threats
cyber crime cases increased by 29.4%
as per NCRB 2022 report
3. Threat to privacy
cyber espionage, data breach etc.
4. Digital reach is still low in
remote areas.

Transition towards a digital economy

1. Government schemes such as
Bharat Net Project, PM-WANI etc
2. Role of civil society in awareness
about cyber security
3. Parents → ensuring safe use of
digital technologies by children
4. Media and communication →
responsible use of digital tools

Thus digital technology can
bring growth and employment if
managed properly.

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प्रश्न 10. हाल ही में, RBI ने अपनी क्लीन नोट नीति के तहत उच्च मूल्य वाले मुद्रा नोटों को वापस ले लिया है। भारतीय अर्थव्यवस्था पर इसके प्रभाव पर विचार करते हुए, इस कदम के संभावित लाभों और कमियों का विश्लेषण करें।

Q10. Recently, the RBI has withdrawn the higher value currency notes as part of its Clean Note policy. Analyze the potential benefits and drawbacks of this step, considering its implications on the Indian economy.

(Answer in 150 Words)

RBI recently decided to withdraw the ₹ 2000 currency notes from economy.

Potential benefits of Clean Note Policy.

1. Withdrawal of currency notes with low soil rate.
↳ low usage indicate speculative demand
2. Higher value currency easier to store large amount → leading to corruption in India
3. Higher value currency creates problem for low value transaction
↳ Problem of returning change for purchase of small value items

4. Transparency in governance.

Drawbacks of the Clean Note Policy

1. Frequent withdrawal after its launch in 2016 (post demonetisation)
↳ creates economic problem.
2. Reduces confidence in Indian currency notes.
3. Problem faced by household in returning to banks.
4. Creates shortage of demand in market → affecting trade and sale of good & services.

Thus, a pragmatic balanced approach should be taken to handle such decision of money and currency note to avoid market disturbance.

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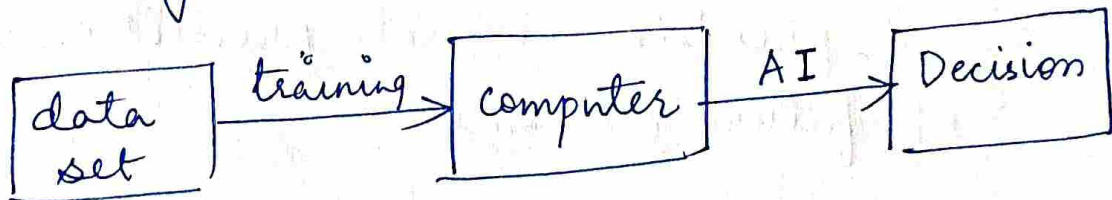
प्रश्न 11. आर्टिफिशियल इंटेलिजेंस (एआई) की अवधारणा को समझाएं। AI नैदानिक निदान में कैसे मदद करता है? क्या आपको स्वास्थ्य देखभाल में AI के उपयोग से व्यक्ति की गोपनीयता को कोई खतरा महसूस होता है?

Q11. Introduce the concept of Artificial Intelligence (AI). How does AI help clinical diagnosis? Do you perceive any threat to privacy of the individual in the use of AI in healthcare?

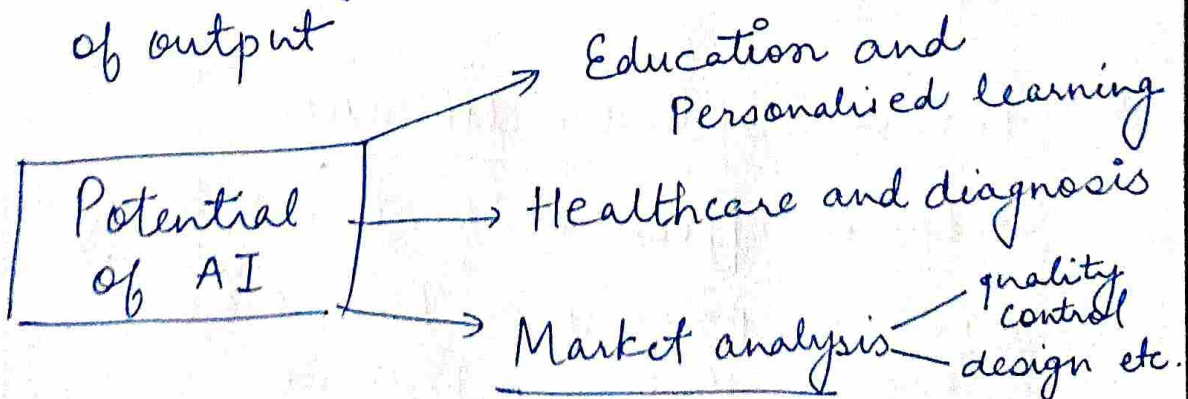
(Answer in 250 Words)

Artificial intelligence (AI) refers to the technology where a trained computer or machine can take decisions like human based on training with rich data set.

- Machine learning uses various algorithm to train a computer.



Thus AI is based on data — richer the quality of data — better the quality of output



AI help in clinical diagnosis

1. Early diagnosis of disease

↳ Preliminary inquiry about disease based on common traits

2. Research and innovation

↳ "generative AI" can provide deep insights into clinical issues

3. Predictive models.

AI can monitor patient's health and provide accurate prediction of future outcomes

4. Management of disease & epidemic

Use of AI to predict the peaks of epidemic such as covid 19.

5. Personalised healthcare

Helps in efficient treatment through medicine prescription based on holistic data of patient.

Potent threat to privacy of individual

1. Constant monitoring of patient's data may to privacy issue
2. Threat of cyber espionage and data breach
3. Data may get used for profit through genetic data without informed consent
4. Data bias may lead to ineffective results

Way Ahead

1. Promote a strong check on patient's data.
 2. Principle of informed consent → This is must to utilise genetic information
 3. Cyber security must be strengthened
- AI can bring radical changes to the way healthcare is perceived through ethical and accountable means.

प्रश्न 12. अंतरिक्ष प्रौद्योगिकी के प्रसार को बढ़ाने और अंतरिक्ष अर्थव्यवस्था को बढ़ावा देने के लिए, निजी क्षेत्र के लिए भारतीय अंतरिक्ष क्षेत्र का सरलीकरण (को खोलना) महत्वपूर्ण है। टिप्पणी करें।

Q12. In order to enhance the diffusion of space technology and boost space economy, opening up the Indian space sector for the private sector is important. Comment.

(Answer in 250 Words)

The recent news of world's first ever private spacewalk through Polaris Dawn Mission funded by tech billionaire Jared Issacman has brought the role of private sector to the front.

Role of Indian space sector for Private sector

A. Enhance diffusion of space technology

a. Research innovation and development

↳ Eg. Agnikul cosmos made "Agnibaan" through 3D printing

b. Ensure participation from society via industry-academia linkage.

c. Promote indigenisation of space economy via Public-Private Partnership

↳ skyroot Aerospace using launch Pad at Sriharikota

d. Promote skill-based training at young age to get better outcomes.

B. Boost Space Economy

a. India's share in global space sector is about 2%

↳ Ambition for five-fold increase via private participation.

b. Private sector ensuring quality of technology along with profitable operation

↳ Efficient utilisation of scarce resources.

C. Global cooperation in space

[Eg] AXIOM mission for sending Indian astronaut to ISS.

Challenges.

1. Threat to security of national interest
↳ Access to critical data
2. Profit orientation may not augur well with national cause
3. Threat to India's strategic autonomy due to multiple stakeholders

Despite challenges, role of private sector can be realised through their achievement in launch of space craft.

Private sector may prove effective in realising India's dream of own space station by 2035.

प्रश्न 13. कई क्षेत्रों में समकालीन सफलताओं को आगे बढ़ाने के लिए प्राचीन भारतीय ज्ञान को एकीकृत करने की क्षमता पर चर्चा करें। इस संबंध में प्राचीन भारतीय वैज्ञानिकों की उपलब्धियों का भी उल्लेख है।

Q13. Discuss the potential of integrating ancient Indian wisdom to drive contemporary's breakthroughs across multiple domains. Also mentions about achievements by ancient Indian Scientist in this regard.

(Answer in 250 Words)

Ancient Indian wisdom can be beneficial in driving contemporary's scientific developments via sustainable integration.

Potential of ancient Indian wisdom and linkage to present day science

1. Role of indigenous knowledge about turmeric

↳ Role as antiseptic due anti bacterial properties

2. Utilising traditional tribal knowledge to solve contemporary issues

↳ water shortage and storage of massive water in Indian laurel tree

3. Medicine and Healthcare

a) Role of Ayurveda and medicines of Charak Samhita

b) Sushruta considered father of plastic surgery

4. Life and wellness

Role of Yoga and meditation for healthy life.

5. Astronomy and Mathematics :

Role played by Varahamihir and Aryabhatta.

Achievements by ancient Indian scientist

1. Chemist Nagarjuna has talked about conversion of matter and "elixir of life"

2. Particle theory given by Kanad to describe atoms and molecules.
3. Mathematician such as Bhaskaracharya and Brahmagupta contributed to Vedic mathematics.
4. Rigveda talks about first ever prosthetic limbs
 [Eg.] Vishpala who had this process due to injury in war.

The concepts of "Sawve Bhavantu Sukhina" inscribed in Indian text can be realised through utilisation of knowledge. The "Traditional Knowledge Digital Library" (TKDL) is a sunshine step in the direction

प्रश्न 14. भारत में इंजीनियरिंग स्नातक तेजी से सेवा क्षेत्र की नौकरियों में जा रहे हैं जो सीधे उनके तकनीकी डोमेन से संबंधित नहीं हैं। भारत की आर्थिक विकास रणनीति के साथ-साथ इंजीनियरिंग शिक्षा की प्रासंगिकता के परिप्रेक्ष्य से इस प्रवृत्ति का आलोचनात्मक विश्लेषण करें।

Q14. Engineering graduates in India are increasingly moving into service sector jobs not directly related to their technical domains. Critically analyze this trend from the perspective of India's economic growth strategy as well as relevance of engineering education.

(Answer in 250 Words)

The service sector contributes about 55% of India's GDP, while the contribution of manufacturing sector is about 17%.

Strengths of engineering graduate in India moving into service sector

(A) India's economic growth

1. India as a net exporter of service
2. Generates employment
3. Global competitiveness.
India as "GCC capital of world"
4. Potential to further boost economy through upcoming startups such as OLA, Zomato etc.

(B) Relevance of engineering education

1. Multi-dimensional scope of engineering field.
2. Showcase better job opportunity post graduation -
3. Investment in India through various service based MNCs.

However this creates a challenge for technical domains due to various reasons.

(A) Threat to engineering education

1. Poor industry-academia linkage.
2. Reduced research innovation
→ India has just 260 researchers per lakh population, while China has 1602 per lakh.
3. Reduces relevance of engineering in designing and invention

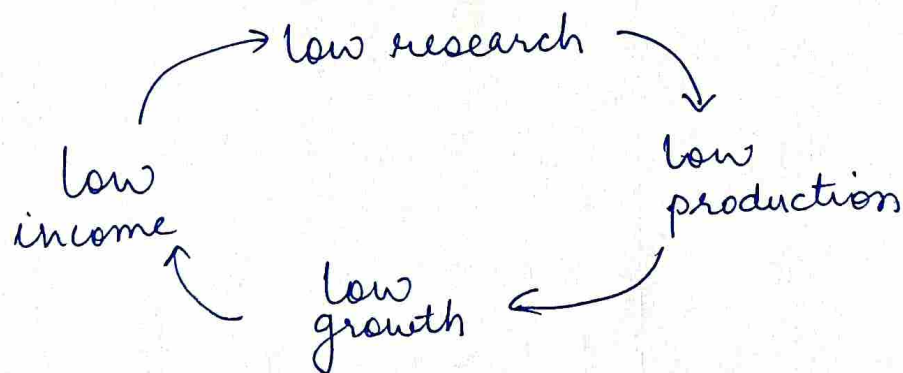
4. Low public expenditure on research which is just 0.6% of GDP.

(B) India's economic growth strategy

1. Inability to indigenise the production of AI, cloud service, nanotechnology etc.

2. Threat to global integration in terms of intellectual property, etc.

3. Creates a vicious trap



Thus India must move towards Industrial revolution 4.0 to reap the benefits of its young demographic dividend.

प्रश्न 15. पिछले कुछ वर्षों में भारत के रक्षा निर्यात क्षेत्र की प्रगति और चुनौतियों का विश्लेषण करें। रक्षा निर्यात और स्वदेशीकरण को बढ़ावा देने के लिए सरकार द्वारा उठाए गए उपायों पर चर्चा करें।

Q15. Analyze the progress and challenges of India's defense export sector in the last few Years. Discuss the measures taken by the government to promote defense exports and indigenization.

(Answer in 250 Words)

India is focusing on defense indigenisation with production exceeding ₹1.2 lakh crore.

Progress of India's defense export

1. India exporting defense equipment to countries like USA, France, Armenia etc.

2. Global collaboration for efficiency in defense production

↳ India-Russia joint venture for Brahmos missile

3. Promoting global competitiveness

↳ Light combat aircraft Tejas.

4. Credibility of Indian arms

↳ Akash surface to air missile

5. Defence deal with like minded allies

↳ Pinaka multibarrel rocket exported to Armenia

Challenges of India's defense sector

1. Expenditure on capital budget of defense must increase.

2. Promoting indigenous development of critical technology

↳ LCA Tejas is dependent on imported engines.

3. Meeting deadline for efficient supply chain

↳ Delay in development due to DRDO.

4. Transparency and accountability

↳ Bureaucratic red tapism.

5. Resource constraint in terms of

fund, technical experts and infrastructure bottlenecks.

Measures taken by government to promote defense export and indigenisation

1. Dedicated funding mechanism such as ADITI
2. Indigenisation of production through iDEX
3. Collaboration with international expert through VAJRA
4. Promoting MSME in defense sector which are currently ~16000 in number

Defense export is an ambition to realise the complete benefit from 2025 as the "Year of reform"

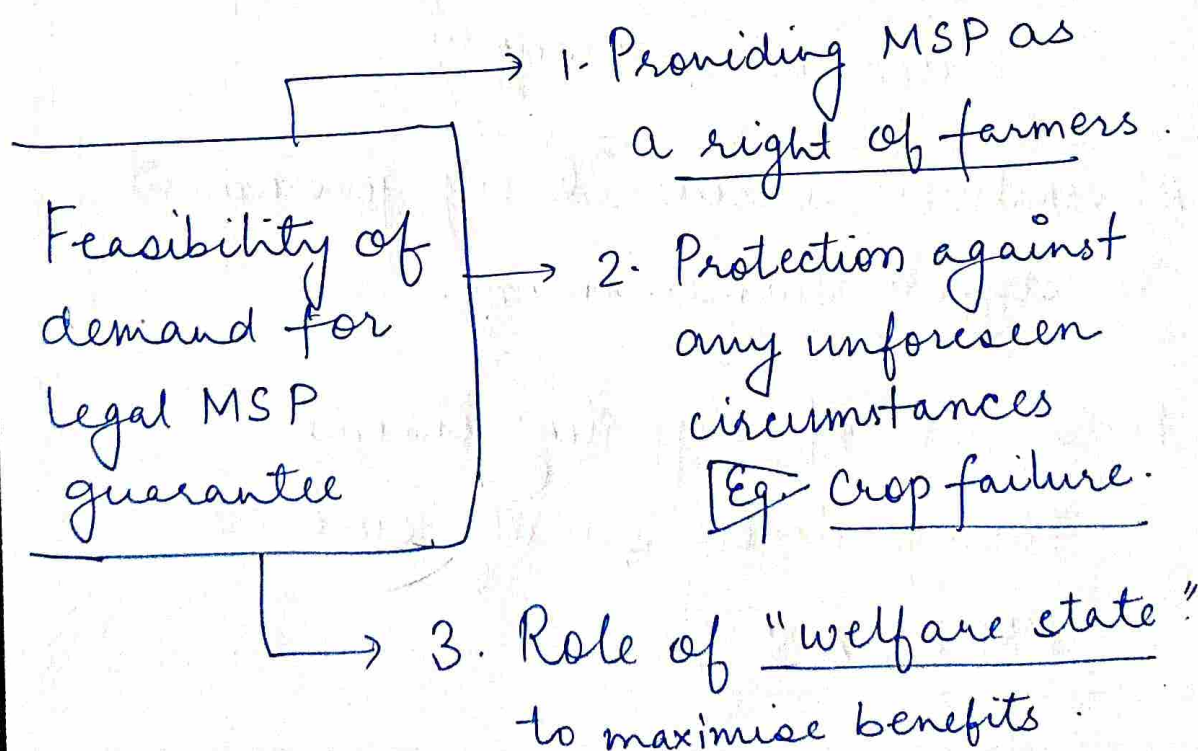
प्रश्न 16. कानूनी MSP गारंटी के लिए किसानों की मांग के पीछे व्यवहार्यता और आर्थिक तर्क पर चर्चा करें? सरकार कानूनी MSP गारंटी के बजाय किसानों की आय का समर्थन करने के लिए किन विकल्पों पर विचार कर सकती है?

Q16. Discuss the feasibility and economic rationale behind the farmers' demand For legal MSP guarantee? What alternatives can the government consider to support farmer incomes instead of a legal MSP guarantee?

(Answer in 250 Words)

Minimum Support Price (MSP) is the government assurance to farmers for public procurement at the floor price.

- MSP is currently decided on $(A2+FL)$ $\times 150\%$ formula; and declared before each cropping season by cabinet Committee on Economic Affairs (CCEA)



However, economic rationale provides challenges to government

1. Huge fiscal burden on government
 - ↳ Increased revenue expenditure
2. Limitation on part of government to store foodgrains
 - ↳ Eg → overflowing FCI godown
3. Lack of ability of government to purchase entire foodgrain
 - ↳ Destabilise market forces of demand and supply

Alternatives considered by government to support farmer income

1. Schemes of supporting income through direct subsidy such as PM KISAN

2. Adoption of MSP formula based on Swaminathan committee (linked to C2)
3. Price deficiency support scheme
 [Eg.] PM AASHA for pulses, oilseeds
 MP's Bhavantar Bhugtan Yojana
4. Role of private mills in providing remunerative prices such as for sugarcane.
5. Providing cheaper access to credit to farmers such as Kisan Credit Card.

MSP needs rationalised approach as it has led to over production of wheat-grain duo. Thus an initiative for crop diversification is required

प्रश्न 17. विश्व बैंक और ADB जैसे बहुपक्षीय संगठन विकासशील देशों में विकासात्मक पहलों का वित्तपोषण कैसे करते हैं?

Q17. How do multilateral organisations like World Bank and ADB finance developmental initiatives in developing countries? Explain.

(Answer in 250 Words)

Multilateral organisations like World Bank, IMF and Asian Development Bank help in ensuring loans and aid-in grant to developing countries.

Role of World Bank in developing countries

1. Access to funds for development
2. Promotes sustainable development.
3. Sponsors schemes of government

↳ Atal Bhujal Yojana sponsored by World Bank.

4. Coordinating global cooperation

↳ Role in Indus Water Treaty in 1960 -

Role of Asian Development Bank

1. Mobilise funds from partner countries like USA, Japan, etc.
2. Ensures holistic development not only in Asia but from other countries
3. Inclusive growth with ecological consideration.
4. Loans for improving quality of human life



Other multilateral organisation

- IMF for solving Balance of Payment crisis
- Asian Infrastructure Investment Bank (AIIB) with proactive role of China

Challenges faced

1. Ensuring fair transfer of funds.
2. Maintaining consistency and coherency
3. Western hegemony :
low representation of developing nations
4. Moving on "one size fits all" approach.

There is a need to reform
multilateral organisation to promote
global south-south cooperation and
provide for sustainability.

प्रश्न 18. भारत के विनिर्माण क्षेत्र की निर्यात प्रतिस्पर्धात्मकता को तय करने वाले प्रमुख कारक क्या हैं? इस क्षेत्र में भारत की कमियों को उजागर करते हुए आलोचनात्मक मूल्यांकन करें।

Q18. What are the key factors deciding the export competitiveness of India's manufacturing sector? Where does India lack on this front? Do a critical assessment.

(Answer in 250 Words)

India's manufacturing sector contributes about 17% of national GDP. However, in terms of merchandise trade, India faces deficit on BOP account.

Factors deciding export competitiveness of India's manufacturing sector

1. Cost of labour : India struggle to compete with China and Vietnam.
2. Skill set of labour : India has a low skilled labour base, thus making the manufacturing sector low competitive.
3. Level of infrastructure → India lacks

in vertical and horizontal integration
of supply chain

4.) Logistics issue → warehousing and
connectivity issue

5.) Level of technology → low adoption
of automation and poor research
innovation in industries.

6.) Supply chain resilience

Over dependence on imports for
key ingredients such as critical
minerals

7.) Lack entrepreneurship and
self-employment.

However, India provides an aspiration
for rising global competitiveness.

1.) Skilling labour through PM Kaushal

Vikas Yojana, Vishwakarma scheme,

2) Promoting entrepreneurship

Startup India, Standup India

3) Multimodal connectivity scheme
through PM Gati Shakti

4) Diversification of export market

[Eg] FTA with UK, EFTA, etc.

5) Resilient supply chain via
National Critical Minerals mission

6) Promoting export through SEZ,
GIFT city etc.

India can achieve the goal
of its National Trade Policy 2023
to increase export and leverage
from China + 1 strategy

प्रश्न 19. रोबोटिक्स को शामिल करके भारत के विनिर्माण और औद्योगिक क्षेत्र को कैसे आधुनिक और स्वचालित किया जा सकता है और इसे प्राप्त करने के लिए किन प्रमुख चुनौतियों का समाधान करने की आवश्यकता है? विश्लेषण।

Q19. How can India's manufacturing and industrial sector be modernized and automated through the incorporation of robotics and what are the key challenges that need to be addressed to achieve this? Analyse.

(Answer in 250 Words)

Robotics provide the way ahead for capital-intensive production based on automation of repetitive task.

Modernizing India's manufacturing and industrial sector

1.) Infrastructure upgrade

↳ Mechanisation and assembly-line production through robotics.

2.) Efficiency in production

↳ Better output level

3.) Speed and quality

↳ Reduced chance of error in production and uniformity.

4.) Shifting labour to complex tasks such as AI, blockchain etc.

Automation through Robotics.

- 1.) Better designing through Computer-aided development.
- 2.) Additive manufacturing leads to reduction of waste in production
- 3.) Robotics can promote quality control in production
- 4.) Effective life cycle of production

Key challenges that are to be addressed

- 1.) Infrastructural gaps in industries such as low technology adoption.

2. Threat to employment due to loss of jobs of unskilled labour
3. Huge investment requirement for initial set up
4. Low level of expenditure on research innovation

WAY FORWARD

1. Promote skilling of labour through various e-learning platform
2. Research development expenditure
→ India already ranked 39 on Global Innovation Index
3. Bringing investment to economy
↳ National Infrastructure Pipeline
Robotics can solve productivity issue. However it must balance labour oriented production.

प्रश्न 20. भारत का फार्मास्युटिकल उद्योग जैव प्रौद्योगिकी में प्रगति से कैसे लाभान्वित हो सकता है, और इस क्षेत्र में नवाचार और निवेश को प्रोत्साहित करने के लिए कौन से विशिष्ट कदम उठाए जा सकते हैं? चर्चा करें।

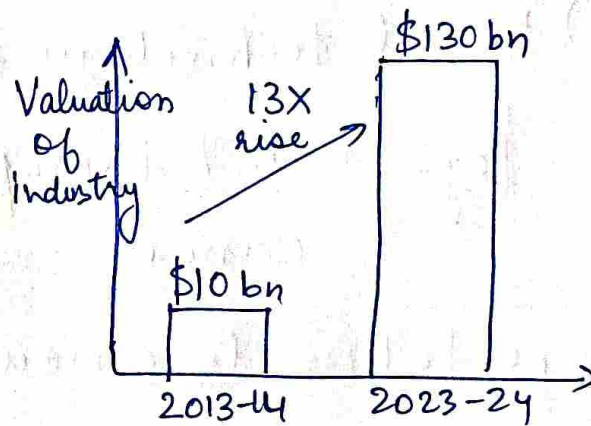
Q20. How can India's pharmaceutical industry benefit from advancements in biotechnology, and what specific steps can be taken to encourage innovation and investment in this field? Discuss.

(Answer in 250 Words)

India's pharmaceutical industry has brought it the title of the "Pharmacy of the World".

Advancement in Biotechnology →
Impact on Pharmaceutical industry

India's biotechnology sector has shown rapid increase in its market valuation.



- 1) Personalised healthcare →
Benefit from genetic information
- 2) Gene-editing technology
↳ Crispr Cas 9

3) Research over pharmaceutical ingredient : Leads to affordable generic medicine

4) Vaccine development

Biotechnology brought innovations such as DNA based vaccine, recombinant vector based, etc

5) Novel technology for treatment
Eg → CAR-T therapy for treating cancer.

Steps taken to encourage innovation in Biotechnology

1.) Dedicated research development framework such as ANRF.

2.) Genome India Project → Better data about genetics.

- 3.) National BioTechnology Mission
To provide specific support and aid to researcher.
- 4.) Fellowship programme for research as VAIBHAV

Investment in Biotechnology

- 1.) Startup India scheme, StandUp India to promote entrepreneurship
- 2.) Promoting biotechnology with global collaboration.

Biotechnology can bring revolution not just for medicine but rather food security, waste management, etc for inclusive growth.