

NEXT IAS

NEXTIAS (Head Office) : 27-B, Pusa Road, Metro Pillar no. 118, Near Karol Bagh Metro, New Delhi-110060

Bhopal Centre: Plot No. 46, ZONE-2, M.P. Nagar, Bhopal-462011

Ph: 8081300200, 8827664612 | E-mail: mts@nextias.com | Web: www.nextias.com

(To be filled by candidate)

Name of Candidate :

Forkhanda Gureshi

NEXT IAS Roll No.:

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SUBJECT/PAPER
GENERAL STUDIES

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Evaluator Code :

Q.No	Pg No.	Maximum Marks	Marks	Total
1	1			
2	3			
3	5			
4	7			
5	9			
6	11			
7	13			
8	15			
9	17			
10	19			
11	21			
12	24			
13	27			
14	30			
15	33			
16	36			
17	39			
18	42			
19	45			
20	48			
Grand Total				

Signature

MACRO COMMENTS

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1. उपभोक्ता मूल्य सूचकांक (CPI) एवं थोक मूल्य सूचकांक (WPI) के बीच अंतर स्पष्ट कीजिए। क्या आपको लगता है कि WPI की तुलना में CPI मुद्रास्फीति का बेहतर माप है? सिद्ध कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक
- Differentiate between Consumer Price Index (CPI) and Wholesale Price Index (WPI). Do you think that CPI is a better measure of inflation as compared to WPI? Substantiate. (Answer in 150 words) 10 Marks.

There are myriad ways to measure the level of inflation and the purchasing power of the consumers - some are Consumer Price Index [CPI] and Wholesale Price Index [WPI].

Different between CPI and WPI

CPI	WPI
1) It measures the prices based on the <u>consumer's side</u>	1) It measures the prices based on the <u>producer's or wholesaler's side</u>
2) Concerned about the <u>demand side</u>	2) Concerned about the <u>supply side</u>
3) <u>RBI</u> uses it to measure inflation since 2014.	3) This does not give entire picture so not used to measure inflation.
4) Includes <u>good & services both</u> .	4) Includes only <u>goods</u> .
5) Retailer's perspective is considered.	5) Wholesaler's perspective is considered.

CPI is a better measure to calculate inflation than WPI because :-

- ①. CPI has comprehensive coverage as it includes goods & services both.
(manufacturing)
- ②. It picks up the bargaining capacity of the lowest rung of the economy i.e., end users.
- ③. Allows easier calculation of inflation.
- ④. Reduces the cascading effect seen during inflation.
- ⑤. Effective decisions can be taken by RBI through monetary policy if CPI considered.

Concerns → It excludes bulk manufacturing
→ The concerned GDP - GVA gap cannot be decreased through it.

Thus CPI & WPI both being apt indicators can be reformed to capture the real inflation surfacing the economy.

2. रोजगारविहीन संवृद्धि भारत के विकास पथ का एक अंतर्निहित लक्षण है। भारत में उच्च बेरोजगारी दर के पीछे प्रमुख कारण क्या हैं? भारत में समग्र रोजगार वृद्धि दर में सुधार हेतु उपचारात्मक उपाय सुझाइए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Jobless growth is an inherent feature of India's growth trajectory. What are the major reasons behind the high unemployment rate in India? Suggest remedial measures to improve the overall employment growth rate in India.

(Answer in 150 words) 10 Marks

Jobless growth refers to the GDP growth despite high unemployment level in the country. The unemployment rate in the country is nearly 7% in rural and urban areas. It is inherent in economy most evident since 1991 LPG reforms.

Reasons behind high unemployment rate

- ① Leapfrogging development directly from agriculture (primary) to service sector (tertiary).
- ② Stagnation of manufacturing industry at nearly 25%.
- ③ Covid 19 repercussions
 - Mass layoffs in private sector like Amazon, Twitter.
- ④ Skill gap to take up jobs.
 - Education sector → rote-learning model.

⑤. Less recruitments issued.

eg Nearly 1 million vacant posts.

⑥. Lack of skilled workforce.

⑦. Poverty $\Rightarrow$ Illiteracy $\Rightarrow$ Unemployment.

eg 21% people below poverty line &
75% illiterate.

Remedial measures $\rightarrow$ multi pronged approach

Rights based

- Skill development
- Reskilling & up-skilling
- eg Leverage the PM Kaulshal Vikas Yojana
- Promote Food Processing sector
- eg Incentivise through PMFME scheme

Policy measures

- Urban Employment Guarantee scheme (UEGS) can be started on a pilot basis.
- Promote employment in private sector through open recruitments.
- Educate (universal education) people with vocational training as envisaged in NEP 2020.

The unemployment & jobless growth be tackled by Capability Development in varied sectors to generate economies of scale.

3. यूरिया को NBS योजना के तहत लाया जाना भारत में सर्वरक सब्सिडी से संबंधित सभी मुद्दों के साथ-साथ कृषि की पर्यावरणीय समस्याओं के लिए समबाण के रूप में देखा जा रहा है। यूरिया प्रबंधन से संबंधित मुद्दों पर प्रकाश डालते हुए भारत में टिकाऊ रूप से यूरिया के उपयोग में आवश्यक सुधारों हेतु सुझाव दीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Bringing urea under the NBS Scheme is seen as the panacea for all the issues related to fertiliser subsidies in India as well as for the environmental problems of agriculture. Highlighting the issues related to urea management, suggest reforms are required to improve the usage of urea in a sustainable manner in India.

(Answer in 150 words) 10 Marks.

Nutrient Based Subsidy [NBS] scheme is a programme initiated for fertiliser distribution based on the requirement of soil & farmers rather than reckless selling.

Issues related to urea management -

- ①. High subsidies amount to urea
High sales & improper usage.
- ②. Inadequate balance of urea usage has its own problems.
N:P:K - ideal is 4:2:1 but due to urea usage it is 8:3:1.
- ③. Centralised sale of urea.
- ④. Low prices create incentive to use more.
- ⑤. It causes imbalanced soil growth
↓
Soil degradation & loss in productivity
If urea brought under NBS scheme then it can be beneficial in some ways.

- (i)- Price control measures will be undertaken.
- (ii)- Disbursal according to soil health card scheme.
- (iii)- Environmental damage can be halted.
- (iv)- Subsidy burden decrease $\Rightarrow$ Fiscal deficit in control.
- (v)- Environmental sustainability ensured.

But it is not a panacea to all fertilizer problems like unsustainable consumption, soil reclamation & losses, eutrophication & groundwater contamination.

Reforms :-

- ① Urea price should be based on the soil health & not been demand-supply based.
- ② Create awareness amongst farmers about the ill of fertilizer overusage.
- ③ Fertilizer R&D in universities of agriculture be expedited.
- ④ Import of fertilizer be curbed through indigenous manufacturing.

The One Nation, One Fertilizer scheme is ~~one~~^a step taken in right direction.

4. भारत की खाद्य सुरक्षा को न केवल घरेलू कारकों बल्कि वैश्विक कारकों से भी चुनौतियों का सामना करना पड़ता है। टिप्पणी कीजिए। भारत की खाद्य सुरक्षा को सुदृढ़ बनाने वाले कुछ उपायों की चर्चा कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

India's food security faces challenges from not just domestic factors but also global factors. Comment. Discuss some ways to strengthen India's food security. (Answer in 150 words) 10 Marks.

Food security refers to the availability of food to all irrespective of the money power and it should be able to fulfill basic consumption requirements.

3 elements are



Challenges from domestic factors

① Spiralling high inflation rates.

eg Recent tomato inflation.

② Seasonal insecurity to farmers between post harvest and reaping season.

③ Food wastages due to insufficient storage infrastructure.

eg 30% of the food grain wasted in India [FAO data].

④ Leakages in the PDS coverage.

eg Exclusion errors of nearly 45% (CAG).

Global factors affecting food security :-

- ①. Russia - Ukraine war & disruption in supply of sunflower oil, fertilizer, etc.
- ②. Covid 19 pandemic exacerbated the supply chain disruptions.
- ③. Logistics cost high.
- ④. Free Trade agreement (FTA) cause dumping of products & raises costs.
- ⑤. Sea lanes of communication affected by trade routes & blockages.
eg Suez canal ship blockage.

To strengthen food security :-

Rights based approach

- 1) NFSA, 2013
- 2) Antyodaya Yojana
- 3) Mid day meal scheme.

these should be robustly strengthened

- 4) Foster e-technology to reduce loss of crops.

- 1) Follow Araukono strategy

- 2) Food fortification
eg Polished rice.

- 3) Dissemination of folic acid tablets

eg Anemia Mukh Bharat.

The country must move towards food secured nation status by leveraging buffer stocks and food storage distribution.

5. हाल ही में भारत नासा के नेतृत्व वाले आर्टेमिस समझौते पर हस्ताक्षर करने वाला 27वाँ देश बन गया है। भारत में अंतरिक्ष अन्वेषण कार्यक्रमों के संदर्भ में इस समझौते के निहितार्थों का आलोचनात्मक विश्लेषण कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Recently, India became the 27th signatory to the Artemis Accord led by NASA. Critically analyse its implications for the space exploration programmes in India. (Answer in 150 words) 10 Marks.

India joined Artemis Accord during the PM's visit to USA. It is an accord to unleash space exploration especially moon mission.

Implications for space exploration :-

① Provide new state-of-the-art technologies for future explorations.

② Create robust ISRO-NASA functional linkages.

⇒ Boost NISAR mission.

③ The Chandrayaan series can take help of these.

④ Provide a suitable platform to pursue space missions.

⇒ Aditya L1 mission.

Challenges / Concerns -

- 1) Could dominate USA's approachment on India's missions.
- 2) Import may become higher
↳ concern & hinder the indigenisation of technologies.
- 3) cause the countries competitiveness to reduce the morale.

Although, Artemis is a breakthrough deal that can potentially create a robust space technology and responsible missions for future.

6. मिट्टी में कार्बनिक पदार्थ का अपघटन कार्बन चक्र में किस प्रकार योगदान देता है, और इस प्रक्रिया को प्रभावित करने वाले प्रमुख कारक क्या हैं? (150 शब्दों में उत्तर दीजिए) 10 अंक

How does the decomposition of organic matter in the soil contribute to the carbon cycle, and what are the key factors that influence this process? (Answer in 150 words) 10 Marks.

Soil is the upper most layer of the crust which is made up of organic matter and has the most rich content for the biospheric activities to take place.

Decomposition of organic matter $\rightarrow$ carbon cycle

The leaf, litter and the water combine to create a sludge

$\Downarrow$
decompose by the air in the presence of oxygen

$\Downarrow$
oxygen & the constituents taken up by the plant & ~~phy~~ through photosynthesis leads to creation of $O_2 - O_2$ cycle to the earth.

Factors influencing the process-

- ①. Level of aeration in the soil.
- ②. Micro-organisms present in the soil & bacteria.

⇒ Leguminous crops have higher amount of aerobacter, rhizobium ⇒ soil carbon process.

- ③. Soil ^{organic} carbon stock ^{that was} discussed earlier

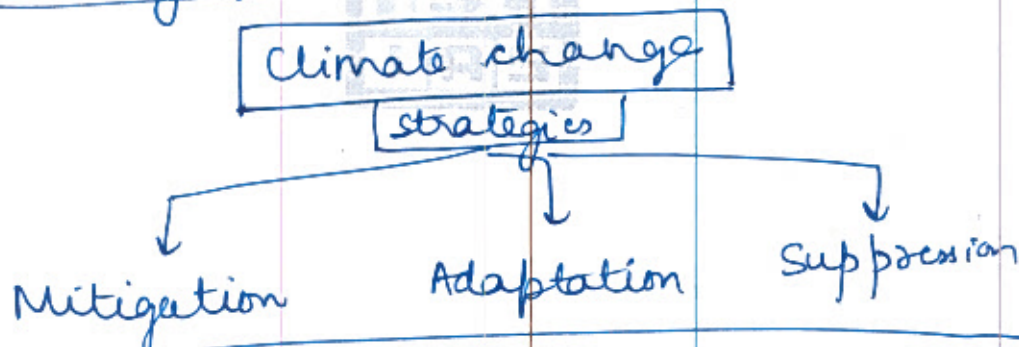
- ④. The sulphur, phosphorus & oxygen cycle also influence it.

The soil-carbon cycle organic links create a very well-knit natural organisation that provides survival of life easier & swift.

7. जलवायु परिवर्तन पर शमन और अनुकूलन रणनीति न केवल भविष्य के उत्सर्जन को कम करने से संबंधित है, बल्कि इसमें वायुमंडल में पहले से उत्सर्जित कार्बन को सक्रिय रूप से हटाना भी शामिल है। इस संदर्भ में आप कार्बन संकलन, उपयोग और भण्डारण (CCUS) की अवधारणा से क्या समझते हैं? इससे संबंधित अंतर्राष्ट्रीय समुदाय की प्रगति पर चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

Climate change mitigation and adaptation strategy is not only about reducing future emissions but also involves active removal of already released carbon into the atmosphere. In this context what do you understand by the concept of Carbon Capture, Utilisation and Storage (CCUS) and discuss the progress of the international community in this regard. (Answer in 150 words) 10 Marks.

Climate change is the long term
~~term~~ changes in the weather &
seasons such as warming temperatures,
sporadic & erratic rains, wild fires,
melting glaciers & sea level rise.



CCUS is an effective step → it refers to the storage of carbon present in environment for the reduction of climate change and utilise it in the future as & when need arises. It consists of following -

- 1). Storage in mined areas / ores which are now empty.
- 2). Oceans as carbon sinks.

③. Geological trapping mechanism → most effective.

④. Biofarming practices.

Progress of International community in this regard -

- 1). The Artificial volcano to reduce emissions.
- 2). Mirrors technique
- 3). Soil carbon uptake by the soil mulching methods are practiced.
- 4). Smog Towers.
- 5).

CCUS is in nascent stage it should be tried by the countries to check its effectiveness. India should harness its potential to create carbon neutrality by 2070.

8. इमारतों की घटिया डिजाइन, भवन संहिताओं और अग्नि सुरक्षा मानदंडों का घोर उल्लंघन तथा बढ़ती भीड़भाड़ शहरी क्षेत्रों में आग के उभरते खतरे के लिए जिम्मेदार है। विवेचना कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

Poor building design, flagrant violations of building codes and fire safety norms and overcrowding of spaces are responsible for the rising risk of fires in urban areas. Discuss.

(Answer in 150 words) 10 Marks.

Fires in urban areas are recently seen abruptly in the Delhi, Cochin, Indore cities.

Reasons for the fire -

- 1). Lack of fire extinguisher tools in public places.
- 2). The fires engulfed due to the problems in electricity lines -
- 3). Buildings designed to accommodate more people than its carrying capacity.
- 4). The Fire safe codes are not ~~so~~ clear & adhesive.
- 5). People remain in area with high consumption of energy that trigger fires.

6). Short circuits in electric lines.

Solutions - multi dimensional
steps needed -

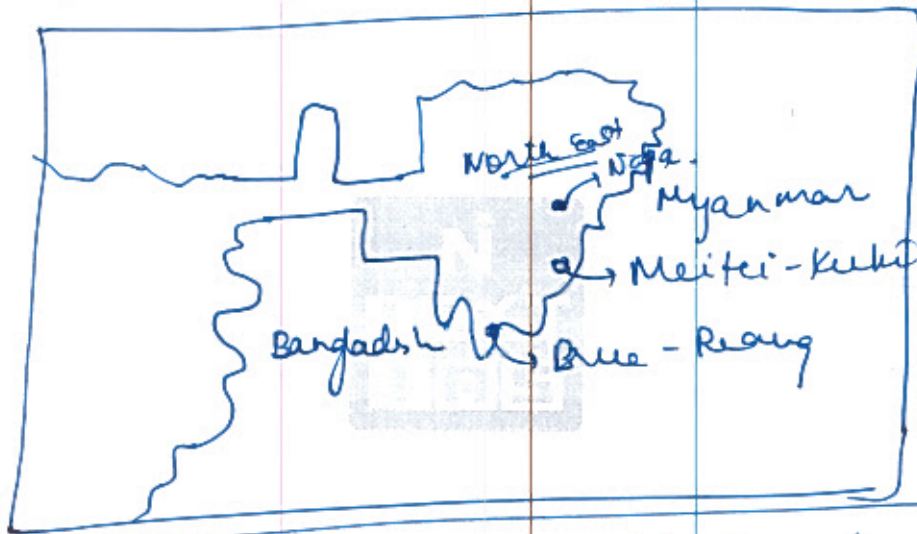
- 1). A special Fire control unit
be set up in each district under
the head of SP.
- 2). Building codes be made &
mandatorily implemented.
- 3). Fire safety walls and fire proof
structures can be constructed.

The risk of fires also hampers
the forest fires to expedite.
Thorough expeditions steps are the
need of the hour.

9. भारत-म्यांमार तथा भारत-बांग्लादेश सीमाओं पर होने वाले नृजातीय संघर्ष और सीमा-पार प्रवासन भारत की आंतरिक सुरक्षा को प्रभावित करते हैं। टिप्पणी कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

Ethnic conflicts and cross-border migration along India-Myanmar and India-Bangladesh borders impact India's internal security. Comment. (Answer in 150 words) 10 Marks.

India's boundary in ^{North} Eastern India is quite porous, open and rough & tough terrain.



Ethnic conflicts & cross border along border

- ①. Naga conflicts & demand for Greater Nagalim has induced tension & conflicts.
- ②. Meitei-Kuki conflicts triggered nearly 40,000 people to migrate internally & to Myanmar.
- ③. Blue-Reang tribesmen also suffer refugee problem in Indo-Myanmar border.
- ④. Rohingya conflict — their arrival from Bangladesh to India.

Impact on India's internal security :-

①. Economic distress → burden on India's
resources & capital.
↳ loss of investment.

②. Socio-cultural Issues :-
↳ conflicts due to demographic changes
eg Assam - NRC issues.

③. Security -
↳ migration of criminals & the
assailants, drug mafias to
the country
↓
affect internal security, law & order.

④. The issue of police & para-military
seen

⑤. Radicalisation by non-state actors
fuel insurgency.

The people to people connect &
soft power should be promoted to
handle this.

10. धन-शोधन के मामलों की जाँच करने और अभियोग चलाने में कानून प्रवर्तन एजेंसियों के सामने कौन-कौन सी प्रमुख चुनौतियाँ आती हैं तथा उन चुनौतियों को कैसे दूर किया जा सकता है? (150 शब्दों में उत्तर दीजिए) 10 अंक

What are the main challenges faced by law enforcement agencies in investigating and prosecuting cases of money laundering, and how can they be overcome? (Answer in 150 words) 10 Marks.

Money laundering is the illegal concealing of the money earned by illicit purposes & bringing it back to the legitimate financial economy.

eg Hawala transfers.

Money laundering takes through 3 processes

- 1) Concealing
- 2) Layering
- 3) Placement.

Challenges in investigation -

- ① Large scale anonymity in such cases.
- ② Trans-national nature of crimes
↳ so difficult to extract information and extradition process is tough.

- ③. The parallel black economy hinders the investigation process.
- ④. Tax evasion & laws like DTAA act as leeway to avert prosecution
eg Paradise papers.
- ⑤. Foreign business & shell companies
- ⑥. Internet revolution → complicates the process.

Way forward / Solution -

- ①. The PMLA act & ED should be made robust & unbiased.
- ②. Democratise right to information
- ③. ~~and~~ strengthen the training of officials not crimes online.
- ④. Different avenues be searched that trigger the laundering
- ⑤. Ban on cryptocurrency (Surish Chandra Garg committee).

The collaboration & enhancing the capacity of agencies like CBI, ED, CVC may help to cater the challenges.

11.

निम्न कर उत्प्लावकता प्रायः उच्च घाटे और ऋण में तब्दील हो जाती है। क्या उच्च प्रत्यक्ष कर दर लागू करके भारत में समग्र कर-जीडीपी अनुपात में सुधार किया जा सकता है? भारत की समग्र कर संरचना में सुधार के लिए अन्य कौन-कौन से कदम उठाए जा सकते हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक

Low tax buoyancy often translates into higher deficits and debt. Can a higher direct tax rate improve the overall tax-to-GDP ratio in India? What other steps can be undertaken to revamp the overall tax structure in India? (Answer in 250 words) 15 Marks.

Tax structure in India comprises of direct tax and indirect tax mainly consisted of GST. The tax buoyancy is the coverage of people and the base of tax payers that provide revenue to the exchequer.

Why low tax-buoyancy?

- High tax exemptions & tax expenditures
 - ↳ Agriculture income untaxed, small MSMEs.
- Informal nature of economy
 - ↳ nearly 90% people in informal sector.
- GST excludes aviation fuels, petrol, real estate, electricity.
- Tax evasion
 - ↳ loopholes in the laws used.
- Parallel economy - black money.
- Non-utilisation of double taxation avoidance agreement (DTAA).

This leads govt. to borrow more internally & externally.

Direct tax can improve tax to GDP -

Direct tax

Income tax

Corporation tax.

- ① It has the tax incidence & impact on the same person → so realises tax submission.
- ② Being progressive in nature
↳ help in higher tax collection.
- ③ Help in burden sharing & distributive justice due to progressive nature.
- ④ Include all the exempted categories in tax base list.
- ⑤ Enhances the tax base & so the buoyancy.

But it has its own concerns

May trivialise the lowest rungs of society
↳ Poor.

Proportionality nature can cause concern.

Other steps ✓

- ①. Rationalise tax structure & prioritize the tax slab in GST.
- ②. Tax the cryptocurrency users base and their incomes/profits.
↳ keep a tab on them.
- ③. The e-technology be used in Income tax collection to reduce interface of people & officials.
(Paperless, contactless, seamless connect).
- ④. People also be made aware.
- ⑤. Collaboration between CBDT & CBIC.

Tax structure can be included with Equalisation levy and Digital tax collection in a inclusive & sustainable manner to create revenue resiliently.

12.

स्टार्टअप तेजी से बदलती आधुनिक अर्थव्यवस्था के प्रेरक इंजन हैं। भारतीय स्टार्टअप अपनी क्षमता का उपयोग करने में क्यों विफल रहे हैं? भारत में स्टार्टअप्स की लाभप्रदता और प्रदर्शन में सुधार हेतु कौन-कौन से कदम उठाए जा सकते हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक

Startups are the driving engines of the fast-changing modern economy. Why have Indian startups failed to realise their potential? What steps can be undertaken to improve the profitability and performance of startups in India? (Answer in 250 words) 15 Marks.

Startups are the young enterprising units that work on the youth engagement and experience of the skilled businessmen.

Start-ups as driving engines of fast-changing economy

Demographic dividend utilized

Boost the entrepreneurship economy.

Innovation and R&D expunged

skilled & semi-skilling options prioritised

Futhers the cause of growth with jobs rather than jobless growth.

Indian startups despite been given exposure failed to realise their potential :-

Reasons →

- ①. Credit disbursal and fund issues.
- ②. Youth not energised to come to entrepreneur field.
- ③. Risk taking & business profit-loss deter entrepreneur activity -
- ④. Platforms have not enough skills to create a larger impact on society.
- ⑤. Human resource & social capital lacking.
- ⑥. Administrative delays in approval of startups
 ↳ Red tapism
 ↳ Favoritism
 ↳ Corruption.

Govt. steps are →

- ①. Start-up India scheme → help in realisation of credit availability & SC/ST/women entrepreneurs.

- ②. "Make in India" mission .
- ③. PM Kaushal Vikas Yojana (PMKVY) →
to provide skills.
- ④. NIPUN scheme .
- ⑤. PM-MUDRA Yojana - gives shishu &
Tarun loans .

Steps needed are -

- 1). Behavioural & attitudinal change to
accept startup ecosystem .
- 2). Optimisation of credit & resources
for spurring economic growth .
- 3). Provides economies of scale to the
startups .
- 4). Incentivise through interest subvention
the acceptance of startup .
- 5). Special program for women entrepreneurs
to achieve the aim of startup boosting .

The startup being a survive
sector needs sufficient organic
linkage through government - academic -
industry collaboration .

13.

भारत के आयात बिल में खाद्य तेलों का आयात एक बड़ा हिस्सा है। इस संदर्भ में हाल ही में शुरू किए गए खाद्य तेल एवं तेल पाम पर राष्ट्रीय मिशन (NMEO-OP) के महत्त्व का मूल्यांकन कीजिए। भारत में बढ़ते पाम तेल उत्पादन से संबंधित पर्यावरणीय चिंताएँ क्या हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक

Import of edible oils forms a major part of India's import bill. In this context, evaluate the importance of the recently launched National Mission on Edible Oils and Oil Palm (NMEO-OP). What are the environmental concerns related to increasing palm oil production in India? =

(Answer in 250 words) 15 Marks.

Edible oil imports consists of a major component in trade basket. India imports nearly 60% of edible oil requirements mainly from South East Asia (Indonesia, Malaysia).

To address this, the NMEO-OP was launched.

Importance :-

- 1). It finds new areas of suitable palm oil cultivation in India.
↳ based on soil health and climatic conditions.
- 2). Import bill → reduction and reduce trade deficit ⇒ Balance of payment stabilisation.
- 3). Create India as a hub of edible oil & palm oil production.
- 4). Diversify agricultural productivity of India.

⑤. Boost the farmers income $\Rightarrow$
doubling farmer income (Dadwani
panel recommendation)

But, there are environmental
concerns related to palm oil production

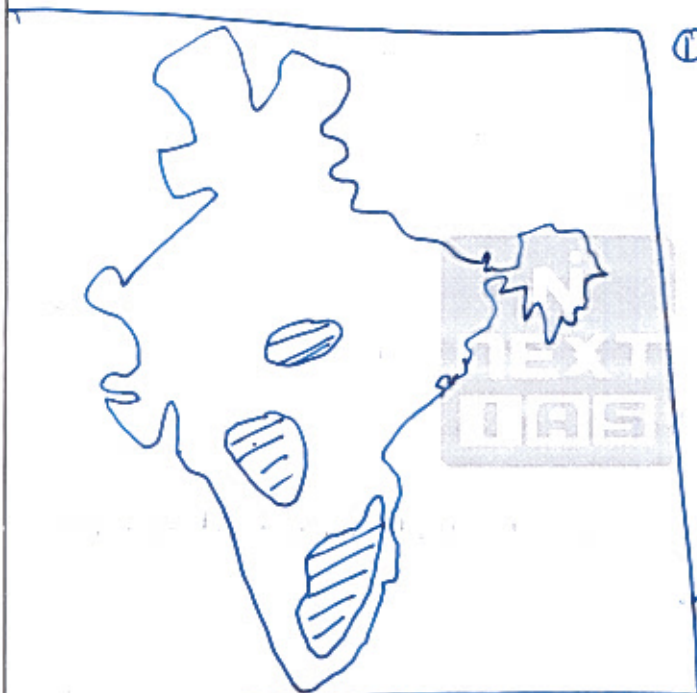


Fig. $\rightarrow$ Palm oil
(potential areas)

①. It requires
large amount of
water

$\hookrightarrow$ and country
already under
water stress

②. The growing
season is
quite large
as farmers would
get income for a
long time.

③. Nearly 51% of

land under rainfed in India, but
palm oil will require irrigation.

④. Cause damage to soil health.

⑤. Problems of eutrophication can
emerge through its residue.

Way forward -

- Select potential sites & pursue areas for palm oil & oil production (Pilot basis).
- Irrigation utilisation be augmented.
- Learn techniques from Indonesia regarding production.

Oil seeds & palm oil are good sources to agriculture climatic regionalisation. It should be grown sustainably based on nature based solutions.

14. एक सुवृद्ध पशुधन अर्थव्यवस्था कृषकों की आय के एक समानांतर स्रोत के रूप में कार्य कर सकती है। भारत के कृषि क्षेत्र में पशुधन अर्थव्यवस्था की भूमिका पर प्रकाश डालते हुए इसके समक्ष आने वाली चुनौतियों पर चर्चा कीजिए। ऐसे उपाय सुझाइए जो किसानों के समग्र कल्याण में योगदान देने के लिए पशुधन क्षेत्र को सशक्त कर सकें।

(250 शब्दों में उत्तर दीजिए) 15 अंक

A robust livestock economy can act as a parallel source of farmers' income. Highlighting the role of the livestock economy in the agriculture sector in India discuss the challenges faced by the livestock sector in India. Suggest interventions that can strengthen the livestock sector to contribute to the overall well-being of the farmers.

(Answer in 250 words) 15 Marks.

Livestock rearing is the use of animal husbandry to create incomes based on animal & animal products.



Role of livestock economy -

- ① Adds to the employment of the country. (2 million)!
- ② Diversification of agriculture.
- ③ Supports mixed farming activities.

- ④ Create forward & backward linkages thus supporting the food processing sector.

②. Export potential of processed livestock foods.

Challenges faced -

- ①. Fisheries industry - blast fishing practices reduce the fish in nets.
 ↳ tropical country - faces the brunt of fish catch ^{being} loss.
 ↳ Low incomes.
 ↳ Bottom trawling & fishermen issue in Sri Lanka.
- ②. Poultry sector → less incentive to pursue it.
 ↳ loss of checks to huge heat & insulation.
- ③. Meat industry - face stigma issues.
 ↳ Delhi case study.

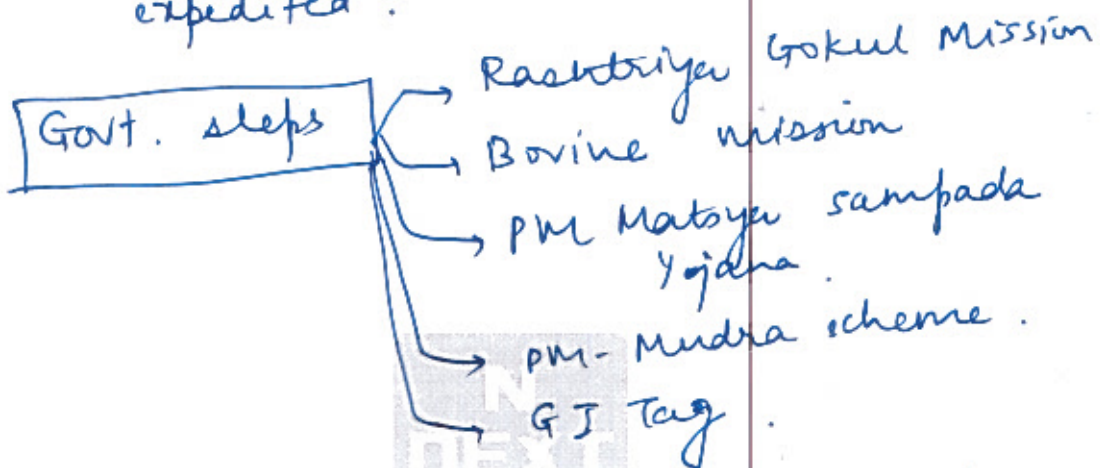
Interventions can be in following way

- ①. Create a e-technology based unified market to link sellers with the buyers.
- ②. Use devices like GEMINI to alert

fishermen. during weather alerts.

③. Fish rearing be boosted through inland fishing standards of Japan.

④. Credit disbursement be made quick & expedited.



The livestock sector contribute nearly one quarter of agriculture GDP. so, it should be adequately addressed.

15. परमाणु संलयन को भविष्य का ऊर्जा स्रोत माना गया है, जिसमें स्वच्छ, सुरक्षित और वस्तुतः असीमित ऊर्जा प्रदान करने की क्षमता है। परमाणु संलयन के पीछे के वैज्ञानिक सिद्धांतों और व्यावहारिक अनुप्रयोगों के लिए इस तकनीक के उपयोग में आने वाली चुनौतियों और अवसरों पर चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

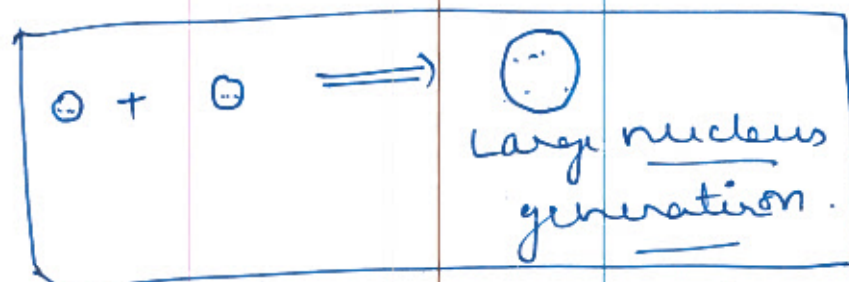
Nuclear fusion has been hailed as the energy source of the future, with the potential to provide clean, safe, and virtually limitless energy. Discuss the scientific principles behind nuclear fusion and the challenges and opportunities in harnessing this technology for practical applications.

(Answer in 250 words) 15 Marks.

Nuclear energy is a renewable source of energy that uses Uranium, Plutonium, Thorium to generate large amount of energy. They add to the diversity of energy mix of India.

Scientific principles behind nuclear fusion :-

The grouping of two nuclei of atom leads to creation of a large nuclear atom thereby producing expressively higher amount of heat & energy that can drive a large nuclear chain reaction.



There is a free radical nuclei generated at the end of product.

Nuclear fusion is natural seen in sun's outer surface (corona) & sunspot cycle.

→ These principles used in the ITER, Tokamak reactor and by China in its nuclear experiments.

Challenges in nuclear fusion -

- ①. The large nuclear residue & its management poses environmental hazards.
- ②. Chain reaction is infinite & needs large energy to stop it.
- ③. The health & man's concerns → the nuclear explosion can create catastrophic damage.
- ④. The nuclear storage personnel can create health impacts due to severely harmful cadmium & uranium particle emission.
- ⑤. Large amount of land required to set up such plants.
→ protests in India against Kudankulam nuclear power plant (T.W.).

Opportunities :-

- ① India is the largest producer of thorium (21% of world) → so could use it.
- ② Small nuclear reactors are viable in any place.
- ③ Enough reserves of U, Th can create nuclear energy a success.
- ④ Large scale researches have shown optimal ~~results~~ results about it.
- ⑤ Environment friendly → no green house gas emission.

The countries like France, Germany produce most of its energy from nuclear sources. The possibilities of nuclear fusion & fission can be considered to create environment sustainable energy consumption.

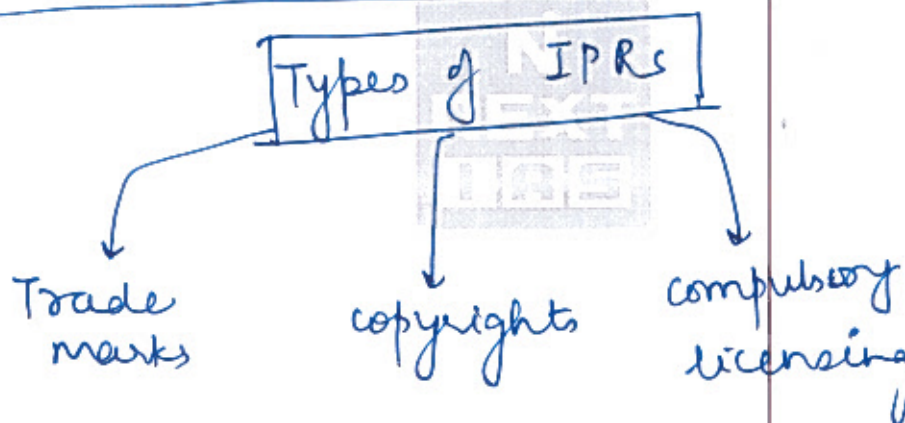
16.

भारत में आईपीआर के प्रशासन में कौन-कौन सी कठिनाइयाँ रही हैं? भारत में नवाचार आधारित अर्थव्यवस्था को प्रोत्साहित करने के लिए आईपीआर के प्रशासन में सुधारात्मक उपाय सुझाइए। (250 शब्दों में उत्तर दीजिए) 15 अंक

What have been the difficulties in the administration of IPRs in India? Suggest measures to improve the administration of IPRs in order to encourage an innovation-led economy in India.

(Answer in 250 words) 15 Marks.

Intellectual Property Rights (IPRs) are the patents registered by a company / entity / individual to protect their new innovation from future use by any 3rd party.



IPRs are the basis of scientific, R & D and individual property protect. But ^{face} certain difficulties.

Difficulties in IPRs in India :-

- ①. Low spending on IPR
 - ↳ < 0.8% of GDP in India.

- ② Concerns by USA → as it has added India under US 301 report (Watch List category).
- ③ Evergreening of the patents.
- ④ Compulsory licensing clause breaches the innovation of IPRs.
↳ it allow government to use the product without the permission of patent holder ~~without~~ for national security (health).
- ⑤ No policy on privacy laws of movies OTT.
- ⑥ online hacking of IPR database is a potential threat.
- ⑦ Use of AI, GPT, to breach privacy concerns.
- ⑧ Less awareness among people about IPR registration process.

Measures to improve IPR -

- ① Innovation led IPR policy be revitalised & reinvigorated.
- ② Streamline the IPR to the localised needs of people.
- ③ Inclusion of various exemptions like seed patents under PVFR Act.
- ④ Enough funding → nearly to 2% of GDP for IPR be earmarked.
- ⑤ Compulsory licensing be seen as a last resort
↳ otherwise it reduces the trust amongst people.

The IPR Policy 2017, INSPIRE Programme & UNNATI scheme & are steps in the right direction.

17. वन्यजीव संरक्षण अधिनियम में हालिया संशोधन जंगली जानवरों और पौधों के अवैध व्यापार को रोकने के लिए एक रूपरेखा प्रदान करते हैं ताकि यह सुनिश्चित किया जा सके कि उनके अस्तित्व को खतरा न हो। इस संबंध में भारत में अवैध वन्यजीव व्यापार के निहितार्थों का उल्लेख कीजिए तथा इस मुद्दे को हल करने के लिए हाल के संशोधनों की प्रभावशीलता का विश्लेषण कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

The recent amendments in the Wildlife Protection Act provide a framework to prevent illegal trade in wild animals and plants to ensure that their survival is not threatened. In this regard, mention the implications of illegal wildlife trade in India and analyse the effectiveness of the recent amendments to address the issue. (Answer in 250 words) 15 Marks.







18. उन कारकों का विश्लेषण कीजिए जो शहरी क्षेत्रों में बाढ़ की घटनाओं एवं विनाशकारिता को बढ़ाने में योगदान देते हैं तथा उन उपायों का भी विश्लेषण कीजिए जो जोखिम को कम करने और आबादी की सहनशीलता बढ़ाने के लिए अपनाए जा सकते हैं। (250 शब्दों में उत्तर दीजिए) 15 अंक

Analyse the factors that contribute to the increased incidence and severity of floods in urban areas and the measures that can be taken to reduce the risk and enhance the resilience of the population.

(Answer in 250 words) 15 Marks.

Floods refers to the inundation of the land and habitable population by breach of the water level to floodplains.

Factors contributing to increased floods in urban areas.

- ① Climate change induced rainfall pattern changes - like
- ↓ Sporadic rains
 - ↓ Sudden burst of monsoon with a large delay
eg Kerala (2023).
 - ↓ Flash floods.

- ② Precipitation changes based on the cloudburst & thunderstorm.

eg Mandakini river breach due to cloudburst in Kedarnath floods (2013).

③. Rapid industrialisation and
urbanisation ↓

encroachment of river water & lakes
eg Germany floods (2022) &
Delhi floods (2023) due to
encroachment of Yamuna khadar
areas.

④. El Niño, Indian Ocean Dipole
conditions inter-connectedness creates
large rains.

⑤. The deforestation & desertification
impacts the rainwater to
surface runoff.

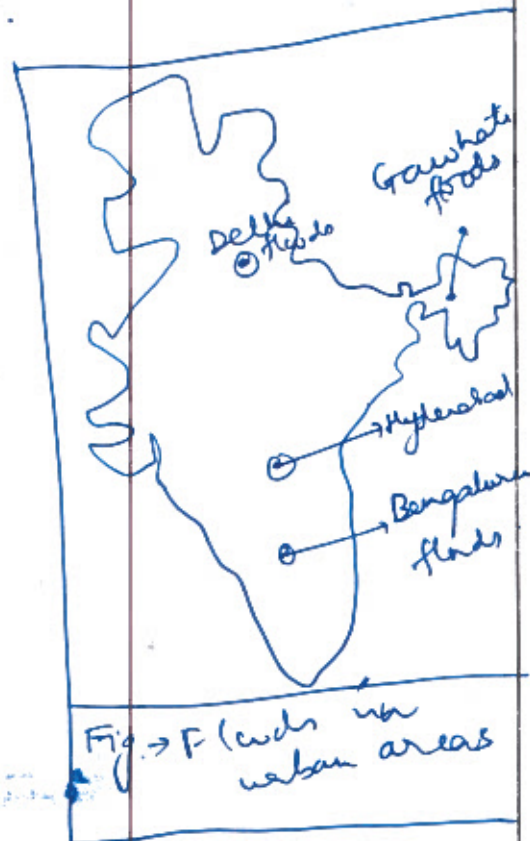
⑥. Hilly areas - excessive infrastructure
creation & urban heat islands
generation trigger heavy rain.
eg Shimla, HP. recently.

Measures needed -

①. Declare heavy rains as a
state calamity
& as done in ~~Uttarakhand~~
Himachal Pradesh.

- ②. Strengthen NDRF & SDRP
↳ create mock drills
- ③. Manuals be made to aware the citizens to be safe during disasters
- ④. Policy level intervention
↳ National Flood Planning Board
can be entrusted with powers to manage floods.
↳ Policy meetings intermittently
↳ The capability enhancement of the people & force.
↳ Coordination between police - NDRF - Navy - Airforce.

The floods could be tackled by 3Cs -
collaboration -
coordination &
cooperation of all stakeholders.



19. क्या आपको लगता है कि भारत में आसूचना विभाग तथा विधि प्रवर्तन एजेंसियों के पास संगठित अपराध और आतंकवाद के गठजोड़ से प्रभावी ढंग से निपटने के लिए आवश्यक संसाधन और क्षमताएँ हैं?

(250 शब्दों में उत्तर दीजिए) 15 अंक

Do you think that intelligence and law enforcement agencies in India have the necessary resources and capabilities to effectively tackle the link between organised crime and terrorism?

(Answer in 250 words) 15 Marks.

Organised crime and terrorism are the twin evils of internal security challenges. They are linked to each other and create havoc to the socio-political milieu of society.

Link between organised crime & terrorism

- Dependence for funds, weapons, armoury.
- Drug trafficking & syndicate, mafias are linked for better coordination at border with terrorist.
- Organised crime act as a eyes & ears for terrorist groups.
- Support extortion, gambling, human trafficking.
- Both aims are similar → to make funds & extortion, based on bloodshed.

Intelligence agencies & law enforcers in India like IB, RAW, police forces have resources & capabilities to tackle them such as -

(1) NATGRID - data base (centralised) to look into criminal records & track in real-time basis different activities.

(2) Anti-corruption bureau - ED, CBI look into the matters on case-to-case basis.

(3) - The cyber cells working in the big cities help to update the online networks.

(4) - Coordination between departments & agencies is available.

But still some concerns remain in their handling of both the crimes as we see cases of terrorism (J&K, Pulwama attack) & organised crime (drug peddling in Punjab, girls trafficked - max. from M.P.).

The way forward is —

Use of AI, Robotics,
drones (UAVs) to
take a look at it

Enhanced
collaboration
between
varied agencies

IEC (Information
Education,
communication)
can be used to
better cooperate

Regular
patrolling
of borders by
police,
para-militaries

Social media policies
regulation

The way to handle is to
educate people, make borders safe
especially North India (Vibrant
Village Programme) to create
a foster effective regulation.

20. भारत को उभरती आंतरिक एवं बाह्य संचार से संबंधित सुरक्षा चुनौतियों से निपटने और साइबर पारिस्थितिकी तंत्र को अधिक सुरक्षित और संरक्षित बनाने के लिए सूचना प्रौद्योगिकी अधिनियम, 2000 को अद्यतन करने की आवश्यकता है। विवेचना कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

India needs to update its Information Technology Act, of 2000 to deal with emerging internal and external communication security and to make the cyber ecosystem more safe and secure. Discuss.

(Answer in 250 words) 15 Marks.

Information Technology Act of 2000 deals with the issue of data, privacy, security concerns online and cyber security.

It is a breakthrough act for the 21st century but it needs to be updated seeing the various trends in internal security / external security aspects.

Internal security	External security threats
1) Cross border <u>terrorism</u> (urban terrorism) 2) Cyber security <u>issue</u> in communication by drug syndicates 3) Social media <u>proliferation</u> - ISIS recruits online through their app. 4) <u>Drug</u> chain <u>usage</u>.	1) <u>Terrorism</u> (state-sponsored) 2) cyber warfare 3) <u>Ransomware</u> - AIMS <u>hacked</u> for <u>ransom</u> - Akira <u>ransomware</u>. 1) Border challenges - India - <u>China</u>.

Updates in IT Act, 2000 -

- ①. A new cyber security strategy and policy with rules be included in Act.
- ②. A proper SOP (standard operating Procedure) can be finalised.
- ③. Streamline the Act with the policies.
- ④. Make the bodies like CERT-IN, Cyber swachta Kendra to collaborate and help in policy formation.
- ⑤. All stakeholders must be considered while creating law.
- ⑥. No loop holes should be left for use.
- ⑦. Regulation of block chain & block mining.
↳ linked with CBC of India.

Government policies -

- 1) Cyber swachta Kendra.
- 2) Suresh Chandra Garg committee formed, recommended ban on cryptocurrency.

③. Social Media Regulation & Intermediary
Rules.

④. Data Protection Bill, 2023 → passed
recently

India needs to update its laws &
bodies to be future ready as it is
predicted that next war will be
around cyberspace.



Space for Rough Work

Candidates must not
write on this margin