



VISION IAS

www.visionias.in

VISION IAS

R NO.
N 19 FEB 2022 03

RECEIVED

GENERAL STUDIES (TEST CODE : 1864)

Name of Candidate	Shruti Rajlakshmi		
Medium Eng./Hindi	ENGLISH	Registration Number	483769
Center	ORN	Date	19/02/22

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are **TWENTY** questions printed in **ENGLISH & HINDI** इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. Mukherjee Nagar
Delhi- 110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

1. Agristack can serve as a foundation to build innovative agri-focused solutions, thus enabling creation of a better ecosystem for agriculture in India. Comment. Also, discuss the concerns associated with it.

(150 words) 10

एग्रिस्टैक अभिनव कृषि-केंद्रित समाधान प्रदान करने के लिए एक आधार के रूप में कार्य कर सकता है, इस प्रकार यह भारत में कृषि के लिए एक बेहतर पारिस्थितिकी तंत्र के निर्माण को सक्षम बनाता है। टिप्पणी कीजिए। साथ ही, इससे संबंधित चिंताओं की भी विवेचना कीजिए।

Agristack is an initiative of Ministry of Agriculture to boost digital technology use in agricultural sector.

Foundation to build innovative agri-focused solution

(i) Will aid in land records modernisation, storage,

(ii) Will help design proper solutions based on technology e.g - drones

(iii) Crop assessment, surveys will aid develop land-specific policies

Enable creation of better

ecosystem for agriculture

- (i) Property cards, storage of details in database will aid access to credit for farmers
- (ii) Security of land will free farmers to ^{invest} take investments on land
- (iii) Technology use to increase yields
- (iv) Geospatial based monitoring will aid proper input requirement assessment

Concerns → Privacy violation
 → High cost of building
 May not be accessible
 by small, marginal farmers (86.2%)
 due to high cost
 Agribank can aid in digitization
 of agriculture

2. Despite the advantages of geothermal energy, it has not been adopted on a wide scale in India. Discuss. (150 words) 10

भूतापीय ऊर्जा के लाभों के बावजूद, इसे भारत में व्यापक पैमाने पर नहीं अपनाया गया है। चर्चा कीजिए।

Geothermal energy ~~den~~ refers to energy derived from interior of the earth. There are around 7 geothermal provinces in India.

Advantages of geothermal energy

- (i) Freely available without any limits unlike coal, oil
- (ii) Does not emit green-house gas emissions as use residual heat of earth
- (iii) Low maintenance cost
- (iv) India has potential sources
e.g. - SONATA, Puga Valley
(Son-Nadi-Tapti) (Ladakh)

(v) Can be fairly harnessed with
turbines

Not adopted on large scale
in India

(i) High cost of initial set-up
(ii) Lack of technology development
for use

(iii) Lack of surveys for proper
assessment of potential

(iv) No clear policy adopted

(v) Competition with cheaper
renewable sources - solar, wind
energy

Adopting geothermal energy
will aid in achieving net
zero-emissions by 2070 as

per COP-26

3. While the WTO seeks elimination of subsidies that contribute to IUU (illegal, unreported and unregulated) fishing, there are multiple concerns around it. Discuss while highlighting India's stand on the issue.

(150 words) 10

जहाँ IUU (अवैध, अनरिपोर्टेड या असूचित और अनियमित) मत्स्यन सब्सिडी को समाप्त करना संघारणीय मत्स्यन को सुनिश्चित करने हेतु परिकल्पित है, वहीं इसके इर्द-गिर्द अनेक चिंताएं विद्यमान हैं। इस मुद्दे पर भारत के रुख को रेखांकित करते हुए इसकी विवेचना कीजिए।

World Trade Organization has highlighted the need for elimination of ~~export~~ ^{export} subsidies that lead to illegal, unreported and unregulated fishing.

Why WTO seeks elimination

(i) leads to bottom trawling posing threat to marine ecosystem

(ii) Fishing for species banned under IUCN, CITES continuous unregulated

(iii) Over-exploitation of marine resources leads to inter-country disputes e.g. - India - Sri Lanka

India's stand

- (i) Subsidies are necessary to protect livelihood of fishermen
- (ii) Subsidies given by developed countries in absolute terms much larger than developing countries
- (iii) Necessary to ensure export access to developed countries markets
- (iv) Unregulated fishing could be controlled through policy measures (Deep Sea Fishing Scheme etc.)

Fishing needs to be regulated but livelihood of fishermen should also be protected.

4. There is a view that the current agricultural policies in India are biased against rainfed agriculture. Comment. Also, identify government initiatives in this regard. (150 words) 10

यह विचार दिया जाता है कि भारत में वर्तमान कृषि नीतियां सिंचित कृषि के पक्ष में हैं। टिप्पणी कीजिए। साथ ही, इस संबंध में सरकारी पहलों की पहचान कीजिए।

Rainfed agriculture continues in 51.2% of India's agricultural area as per ICAR.

Current agricultural policies biased against rainfed agriculture

(1) Provision of free groundwater supply does not benefit them

(2) Guaranteed procurements for wheat, rice which need irrigation under MSP not available for millet, pulses cultivators

(3) Lack of promotion of drought-resistant crops, high seed cost compared to irrigated crops

Government initiatives in promoting such farmers

- (i) Micro-Irrigation Fund to promote drip, sprinkler irrigation at low cost
- (ii) 2023 to be International Year of Millets, raising MSP prices for millets, pulses
- (iii) PM-Aasha for procurement of pulses
- (iv) PM-Kisan for income support to all farmers which aids in input provision
- (v) National Mission on Sustainable Agriculture to promote climate resilient crops

Way Forward

Procurement under MSP, provision of inputs, promoting micro-irrigation will benefit rained agriculturalists, most of whom are small and marginal farmers.

5. Enumerate the major causes behind marine heatwaves. Also, discuss their impact on the ocean ecosystem. (150 words) 10

एकल-उपयोग वाले प्लास्टिक क्या हैं और ये पर्यावरण के लिए खतरा क्यों हैं? भारत में एकल-उपयोग वाले प्लास्टिक को चरणबद्ध रीति से समाप्त करने से संबंधित चुनौतियों पर चर्चा कीजिए।

Marine heatwaves refer to the unusual rise in temperatures of seas in coastal areas.

Major causes

(i) Rise of ocean temperature from climate change

(India witnessed 1.1°C rise as per Ministry of Environment report)

(ii) Absence of winds prevents mixing with colder waters

(iii) Warm ocean currents bring warm water, warming the upper layers

(iv) Lack of freshwater supply from rivers warms the ocean,

seas

(v) Pollution from coastal industries
GHG emissions (black carbon
etc) increase temperature

Impact on marine ecosystem

(i) Kills species not adapted to
high temperatures

(ii) Decrease oxygen concentration
due to less solubility

(iii) Increase concentration of
pollutants

(iv) Causes harmful algal blooms
through ~~eutrophication~~ eutrophication
killing species

(v) Affect water quality

Countering marine heat waves
is necessary to achieve SDG-14.

6. Aseismic structures are touted as a viable solution to combat earthquake destruction. In this context, highlight the need of a National Program on Seismic Retrofitting of Buildings and Structures in India. (150 words) 10

भूकंप के विनाश से निपटने के लिए भूकंपीय संरचनाओं को एक व्यवहार्य समाधान के रूप में माना जाता है। इस संदर्भ में, भारत में भवनों और संरचनाओं के भूकंपीय पुनर्निर्माण पर राष्ट्रीय कार्यक्रम की आवश्यकता को रेखांकित कीजिए।

Aseismic structures are structures which are resistant to seismic waves generated by earthquakes.

Viable solution to combat earthquake destruction

- (i) Prevent building collapse
- (ii) Useful as 59% of country vulnerable (Building and Technology Promotion Council)
- (iii) Protects lines, domino effect of building collapses

Need for a National Program on Seismic Retrofitting of Buildings and Structures in India

- (i) Will aid in strengthening structures, buildings to reduce

loss of life

(ii) Will protect critical infrastructure
— security agencies, nuclear
installations which can trigger
disaster of their own

(iii) Will make infrastructure
compliant with global standards

(iv) Will ensure compliance with
building codes, zonation laws
to prevent risks of disasters

(v) Protect industries, which
are vulnerable to chemical leaks,
fires

Complying with such a regulation
will aid in achieving Sendai
Framework targets and save
lives

7. Despite the risks associated with cryptoassets, their underlying advantages should not be overlooked. Discuss. (150 words) 10

क्रिप्टो-एसेट्स से जुड़े जोखिमों के बावजूद, उनके अंतर्निहित लाभों की उपेक्षा नहीं की जानी चाहिए। चर्चा कीजिए।

Cryptoassets are assets generated through blockchain technology i.e. in a decentralised public ledger. Examples - cryptocurrency - Non-Fungible Tokens

Risks associated with cryptoassets

- (i) Losing the key to the wallet prevents access to assets
- (ii) Anonymity misused for paying for drugs, sale of pirated content
- (iii) Have limited acceptance, hence cannot be used to exchange for central bank currencies
- (iv) Mining uses high computing power leading to climate change (Annual 22 MMT emission)

(v) Decentralisation prevents regulation

Underlying advantages cannot be overlooked

(i) Tamper-proof blockchain gives security of ownership to holders

(ii) Public ledger aids in tracking transactions by intelligence agencies, transparency

(iii) Hedge against inflation of central bank currencies

(iv) No 3rd party involvement in asset transfer reduces cost of transfer, promotes privacy



⊙ Cryptocurrencies should be regulated under a law for regulated use while blockchain technologies need to be promoted.

8. Virtual Reality and Augmented Reality (VR and AR) have massive innovation potential across a wide range of industries and research fields in India. Discuss. (150 words) 10

हालांकि, कृषि जैव प्रौद्योगिकी में हमारे कुछ सबसे महत्वपूर्ण मुद्दों के समाधान की अपार क्षमताएं हैं, लेकिन भारत में इसके विकास के समक्ष अनेक बाधाएं विद्यमान हैं। चर्चा कीजिए।

Virtual reality refers to technologies that aid in creating virtual spaces, ~~and~~

Augmented reality combines real and virtual spaces for enhanced user experience

Massive innovation potential across industries

- (i) Gaming industry could make active use of AR, VR
- (ii) Animation movies could be experienced through 4D technology (includes experience of senses)
- (iii) could be used for virtual concerts, celebrations

(iv) Political parties could use them for virtual rallies

(v) Industries could use VR, AR for testing products through simulation

(vi) Will aid in metaverse development for real-time communications in virtual world

Potential in research fields

(i) Will aid in simulation of experiments by creating test conditions

(ii) Can help predict effects of climate change by creating simulated environment

(iii) Aid in creating designs for 3D printing

The recent surge for Animation, Gaming industry as per Budget 2022 will aid in capitalising on these benefits.

9. Discuss the role and functions of Narcotics Control Bureau (NCB) and examine whether the NDPS Act, 1985 needs to be remodelled.

(150 words) 10

नारकोटिक्स कंट्रोल ब्यूरो (NCB) की भूमिका और कार्यों पर चर्चा कीजिए तथा परीक्षण कीजिए कि क्या NDPS अधिनियम, 1985 को पुनर्निर्मित करने की आवश्यकता है।

Narcotics Control Bureau established under NDPS Act 1985 aims to counter illegal sale, use of drugs in India

Role of NCB → Acts as a controller of drug cultivation, proliferation

Function of NCB

- (1) Investigate issues of drug trafficking
- (2) Conduct search, survey operations for drug seizure
- (3) Investigate the syndicate between drug cultivation, organised crime
- (4) Cooperate with other intelligence agencies for achievement of above goals

NDPS Act 1985 needs to be
re-modelled

- (1) Stricter penalties should be incorporated
- (2) Broader coverage of drugs
- (3) Mechanism to counter drug use, happening through ordinary products like glues
- (4) Provision for re-habilitation of offenders to bring them back to society rather than coercion, prosecution
- (5) Penalties to be proportionate to offences e.g. - higher quantity → higher penalties

NDPS Act 1985 needs to be strengthened to counter the menace of drug use and achieve a "Nasha Mukh Bharat"

10. Recent events have raised concerns around the issue of surveillance in India. Do you think surveillance is a necessary evil to tackle crime and terror? Discuss the various arguments on the issue. (150 words) 10

हाल की घटनाओं ने भारत में निगरानी के मुद्दे को लेकर चिंता बढ़ा दी है। क्या आपको लगता है कि अपराध और आतंक से निपटने के लिए निगरानी एक आवश्यक बुराई है? इस मुद्दे पर विभिन्न तर्कों की विवेचना कीजिए।

The surveillance mechanism in India is controlled through Telegraph Rules 1885 and Information Technology Act 2002 in India.

Recent events have raised concerns → Allegations of government using rogue software for surveillance.

→ MHA notification to grant 10 agencies permission for surveillance without any law.

Surveillance is a necessary evil to tackle crime, terror

(i) Tracking nefarious elements necessary to prevent terrorist attacks e.g. - intelligence gathering by NIA

- (2) Aids in proof-gathering against criminals
- (3) Intelligence inputs aid in supporting other countries. e.g. -
India shared inputs on Easter
Attacks with Sri-Lanka

Surveillance is detrimental

- (i) Violates citizen's privacy guaranteed under Article 21 by K.S. Puttaswamy vs Union of India
- (ii) Used for targeting opposition, civil society groups by government
- (iii) Lack of well-defined laws promotes misuse
- (iv) Blanket powers available to Police, intelligence agencies Aiding by the test of proportionality as per K.S. Puttaswamy vs Union of India will aid in controlled me-

11. The decision to grow a particular crop by a farmer is affected by various factors other than the yield of a crop. Discuss this statement and assess the need for bringing a change in the cropping pattern in India.

(250 words) 15

एक किसान द्वारा किसी विशेष फसल को उगाने का निर्णय उक्त फसल की उपज के अतिरिक्त विभिन्न कारकों से प्रभावित होता है। इस कथन की विवेचना कीजिए तथा भारत में फसल पद्धति (क्रॉपिंग पैटर्न) में परिवर्तन लाने की आवश्यकता का आकलन कीजिए।

Cropping pattern refers to the crops grown in a region over a certain duration of time.

Decision to grow a crop affected by decisions other than yield

- (i) Expected returns on the crop e.g. - its Minimum Support Price
- (ii) Market demand for the crop
- (iii) Soil condition, topography suitability e.g. - black soil for cotton
- (iv) Guarantee of procurement e.g. - through FCI procurement of wheat, rice in India

- (v) Cost of inputs - seeds, fertiliser
required
- (vi) Perishability of crop may
deter its adoption if lack
post-harvest processing

Need for changing the cropping
pattern of India

(1) Over-exploitation of groundwater
from over-irrigation due to
high water need of rice, wheat
e.g. - CGWB - over 15% units
over-exploited

(2) Climate change may prevent
growth of certain crops due
to drying up soil moisture,
change in rainfall pattern

(3) Demand for healthier products
like millets rising in the market

(4) Wastage of excess rice, wheat from excess procurement, utilization, in godowns

(5) Current pattern leads to over-
use of fertilisers, pesticides
which deplete soil of its
nutrients

Way Forward

(1) Guaranteed MSP procurement
for millet, horticultural produce

(2) Limits on groundwater use
to be enforced

(3) Inputs should be made
available free of cost

(4) Post-harvest processing, storage
infrastructure to prevent wastage

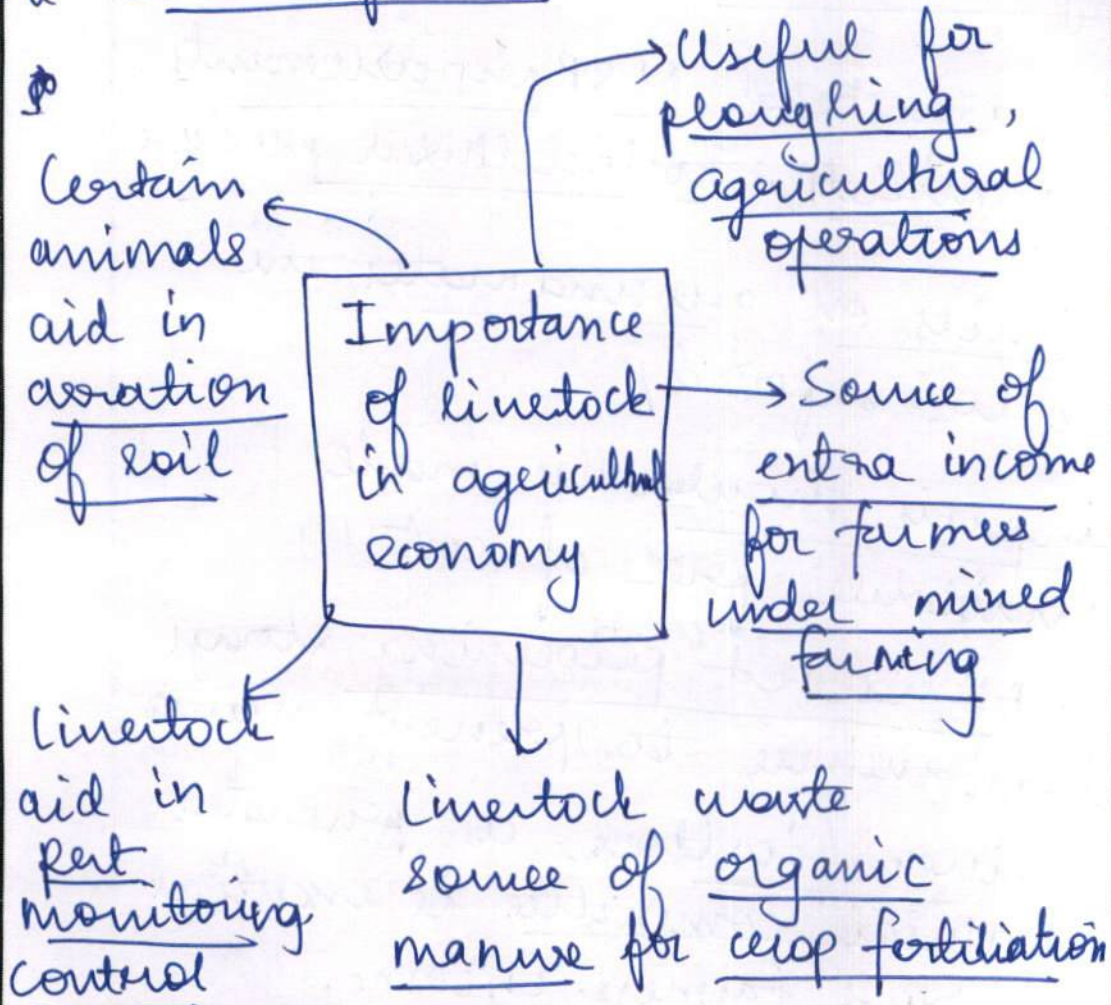
crop diversification, as promoted
by Dalwai committee is essential
to raise farmers' income.

12. Identifying the importance of livestock in the Indian agricultural economy, enumerate the steps taken by the government in this regard. Also, discuss the potential impact of climate change on the livestock sector.

(250 words) 15

भारतीय कृषि अर्थव्यवस्था में पशुधन के महत्व को चिन्हित करते हुए, इस संबंध में सरकार द्वारा उठाए गए कदमों को सूचीबद्ध कीजिए। साथ ही, पशुधन क्षेत्र पर जलवायु परिवर्तन के संभावित प्रभावों पर चर्चा कीजिए।

The Economic Survey of 2021-22 has highlighted the rising share of livestock in the agricultural GVA, which is growing with a CAGR of 8.98%.

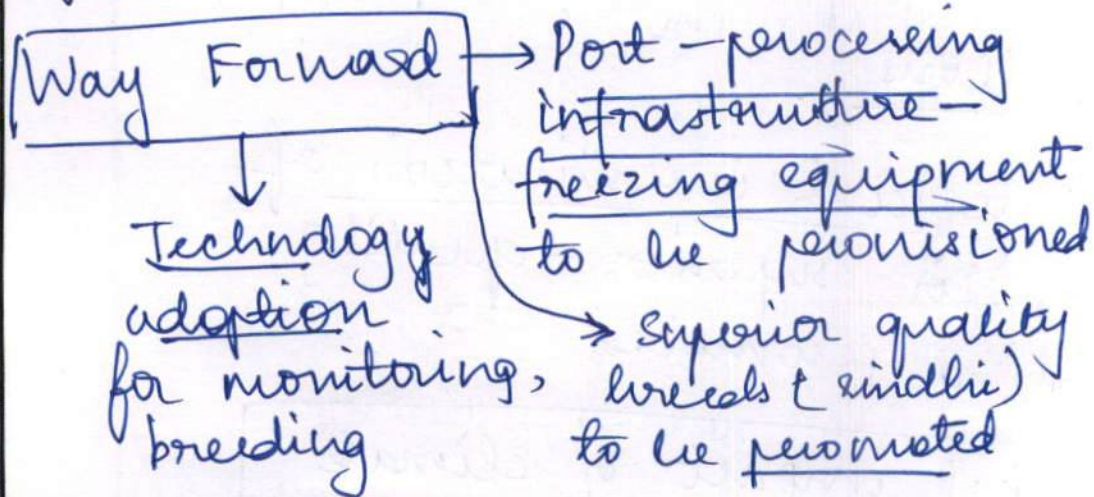


Steps taken by government

- (i) Animal Husbandry Infrastructure Development Fund for meat processing centres, infrastructural requirements
- (ii) Inclusion of livestock under Kisan Credit Card (KCC) for credit needs
- (iii) National Animal Disease Control Programme for countering foot & mouth disease, swine flu
- (iv) Artificial insemination of bulls for superior-quality breeding promoted

Potential impact of climate change on livestock sector

- (i) Fodder crops may be difficult to grow from erratic rainfall
- (ii) Water distress may lead to death of animals
- (iii) Rising temperatures may lead to straggle, spoilage of eggs, meat, milk
- (iv) ~~Change~~ Change in temperatures to affect vegetation quality for grazing



Growth of livestock sector will aid doubling the farmer's income.

13. It has been argued by some economists that supply creates its own demand. In this context, discuss the merits and demerits of reliance on investment in infrastructure to boost the Indian economy.

(250 words) 15

कुछ अर्थशास्त्रियों द्वारा यह तर्क दिया जाता है कि आपूर्ति अपनी मांग को स्वयं सृजित करती है। इस संदर्भ में, भारतीय अर्थव्यवस्था को बढ़ावा देने के लिए बुनियादी ढांचे में निवेश पर निर्भरता के गुण एवं दोषों की विवेचना कीजिए।

World Competitiveness Index - 2019
has ranked India 20/141 countries
in infrastructure investment

Investment in infrastructure
will boost Indian economy

(i) Will aid in employment
creation

(ii) Lower the cost of logistics
(13% of GDP) for faster
transport of goods

(iii) Aid in modernisation of
economy, adoption of
Industry 4.0 e.g - Smart
Cities Mission

- (iv) Will boost agricultural market e.g. - Kisan Rail
- (v) Aid in facilitating exports through port infrastructure e.g. - Sagarmala programme
- (vi) Aids adoption of renewable energy (e.g. - battery charging stations under FAME, battery swapping stations) for impending climate change

De-merits of reliance only on infrastructure investment

- (i) Does not focus on skilling of people for proper infrastructure utilisation
- (ii) Will lead to a large fiscal deficit (Expected deficit - 6.8%)

in 2022-23) as per Economic Survey
2021-22)

(iii) Care of doing business reforms
through procedure simplification
is also needed

(iv) Lack of focus on infrastructure
maintenance, creating demand
for it

(v) Lack of focus on ~~green~~ climate
change compliant infrastructure

Way Forward

(1) Skill development as per PM
Kamhal Vikas Yojana

(2) Facilitating pension fund,
sovereign wealth fund investments
to reduce government burden

Infrastructure promotion, as
envisioned by PM Gati Shakti
mission is necessary to be a \$5 trillion
economy

14. Innovations emerge not just as an opportunity but also as a pre-condition to assure the sustainability of food production. Analyse the statement in context of the food processing sector in India. (250 words) 15

नवाचार, खाद्य उत्पादन की संधारणीयता को सुनिश्चित करने के लिए न केवल एक अवसर के रूप में बल्कि एक पूर्व शर्त के रूप में भी उभरें हैं। भारत में खाद्य प्रसंस्करण क्षेत्रक के संदर्भ में, इस कथन का विश्लेषण कीजिए।

The Food processing sector has been growing at an annual growth rate of 9.99% as per Economic Survey 2020-21.

Innovations in food processing sector are a pre-condition for sustainable food production

(i) Food processing sector will aid in increasing shelf-life of products for greater year-round availability

e.g- onion shortage could be prevented in Sep-Oct

(ii) Value addition to products creates demand for them

(iii) Fortification of nutrients through processing promotes healthy food availability

(iv) Longer shelf-life will help counter climate-change induced temperature rise leading to wastages

(v) Will create market for diversified crops like millets, horticultural fruits and vegetables

(vi) Enhance value of income for farmers

Challenges in food processing sector

(1) lack of technology, mechanisation for processing

(2) lack of funds availability

(3) ~~low~~ less demand for products
like millets

(4) Lack of transport facilities
reduce access to processing
facilities

(5) Lack of private investment

(6) Shortage of infrastructure-
freezing, storing equipment,
market yards at APMC's

Way Forward

(1) Increasing credit supply as
per Scheme for Formalisation of
Micro-Food Processing Centers

(2) Setting up Mega Food Parks

(3) Strengthening infrastructure
availability

Strengthening food processing not
only aids food production, but
also creates jobs.

15. The factors contributing to unemployment in India are not merely a result of the structural issues related to the Indian economy. Discuss. Also, highlight the measures taken to address the problem of unemployment in recent times. (250 words) 15

भारत में बेरोजगारी को बढ़ावा देने वाले कारक केवल भारतीय अर्थव्यवस्था से संबंधित संरचनात्मक मुद्दों का परिणाम नहीं हैं। चर्चा कीजिए। साथ ही, हाल के दिनों में बेरोजगारी की समस्या के समाधान के लिए किए गए उपायों पर प्रकाश डालिए।

Periodic Labour Force Survey
2018 has put India's unemployment
rate at 5.8%.

Role of structural issues in Indian unemployment

(1) Seasonal agriculture on which
42.6% people depend (PLFS)
leads to seasonal work

(2) Dependency on agriculture leads
to disguised employment as
employs more ~~more~~ people than
needed

(3) Lack of skills prevents
industry, service sector employment

Unemployment not only a result
of structural issues

Other reasons

(1) ~~the~~ Skill-job mismatch - Industry
relevant skills not imparted
in schools, colleges

(2) Patriarchy prevents female
employment (26.5% LFR as
per Economic Survey 2020-21)

(3) Lack of capital expenditure
prevents job creation
(only 2% of total expenditure)

(4) Automation of jobs, especially
in IT industries leads to job
loss (Bank of America - 3 million
job losses by FY 2022 in IT
industry)

(5) Large population

~~100~~ (6) COVID-19 led to job losses
as highlighted by CMIE

Way Forward - For Job Creation

- (i) National Urban Employment Guarantee Scheme on lines of MGNREGA
 - (ii) Female skill development, employment schemes
 - (iii) Capital expenditure through PM Gati Shakti, NIP for job creation
 - (iv) Vocational education as per National Education Policy 2020
 - (v) Focus on labour-intensive industries - leather, food processing to absorb excess agricultural labour
- Countering unemployment is necessary to become a \$5 trillion economy.

16. Highlighting the major announcements made by India in the recently concluded COP26, examine India's capabilities in achieving net zero emissions by 2070. (250 words) 15

हाल ही में संपन्न COP26 में भारत द्वारा की गई प्रमुख घोषणाओं पर प्रकाश डालते हुए, वर्ष 2070 तक शुद्ध शून्य उत्सर्जन की स्थिति प्राप्त करने में भारत की क्षमताओं का परीक्षण कीजिए।

COP-26, the annual environmental meet of UNFCCC, concluded at Glasgow, recently in 2021 December.

Major announcements by India in COP-26 - Amit ~~to~~ Goals

- (1) Promised to reduce emission intensity of its GDP by 45% by 2030
- (2) Committed to achieve 500 GW of renewable power by 2030
- (3) Will source 40% of its electricity needs through non-fossil based sources
- (4) Reduce 1 billion tonnes of CO₂ emissions by 2030

- (5) Will reach net zero emissions
by 2070
- (6) Called for environmentally
conscious lifestyle through LIFE
- (7) launched IRIS to support
small, vulnerable island nations

Resilience

India is capable to achieve net
zero emissions by 2070

- (1) Renewable energy capacity
reached 100 GW in Dec. 2021
(Ministry of New and Renewable
Energy)
- (2) Adoption of innovative energy
programs - National Hydrogen
Mission, FAME for electric vehicles
- (3) Forest cover increased to 24%
as per IFSR 2019 (including
tree cover) to capture emissions

(4) India led ISA, leadership for transition Group advocate renewable energy, net zero emissions in industries by 2030

Challenges

- (i) High cost of funds needed
CEEW - Around \$10 trillion worth investment needed
- (ii) Simplification of environmental laws (e.g. - Draft EIA 2020) may prevent forest cover growth
- (iii) Lack of technology development
e.g. - electrolysers for hydrogen.
- (iv) High dependency on fossils like coal, oil continue

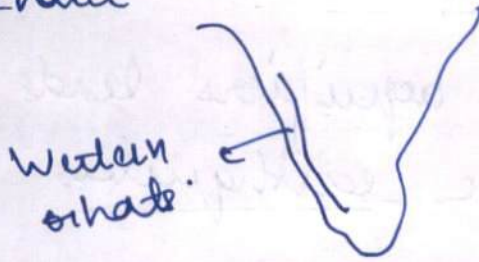
Way Forward

Increasing investments, technology development and strengthening & climatic missions will aid achievement of the goals.

17. While geography plays a definite role in the recurring disasters in Western Ghats, it is the human intervention that has exacerbated them. Discuss. Also, suggest measures to protect Western Ghats from these frequent disasters. (250 words) 15

यद्यपि, पश्चिमी घाट में बारंबार आपदाओं के घटित होने के पीछे भौगोलिक स्थिति एक निश्चित भूमिका निभाती है, तथापि मानवीय हस्तक्षेपों ने उन्हें और बढ़ा दिया है। विवेचना कीजिए। साथ ही, बार-बार आने वाली इन आपदाओं से पश्चिमी घाट को बचाने के उपायों का सुझाव दीजिए।

Western Ghats refers to a chain of mountains on the western coast of India



Role of its geography in recurring disasters

(1) Steepness of the mountains promote landslides
e.g. - 13/14 districts in Kerala's Idukki region prone (GSI)

(2) Presence of large boulders promote avalanches, landslides

(3) Presence near coasts makes them prone to cyclones rising in Arabian sea

(4) Excess rainfall from orographic stepping of moisture laden winds leads to floods
e.g - 2018 Kerala floods

(5) ~~State~~ Presence of ground aquifers leads to hydro-mismic earthquakes (swarms)

Human intervention exacerbated them

(i) Sand mining, quarrying in Kerala makes slopes fragile causing landslides

(ii) Deforestation leads to soil erosion causing mud flows

(iii) Urbanisation makes slopes
vulnerable

(iv) Construction of roads makes
mountains unstable

(v) Indiscriminate agriculture
affects stability

Way - Forward

(i) Adoption of Gadgil Committee
recommendations to mark
Western Ghats as Ecologically
Sensitive Areas

(2) Afforestation, check dams to
check soil erosion

(3) Implementing land zonation
laws to prevent encroachment

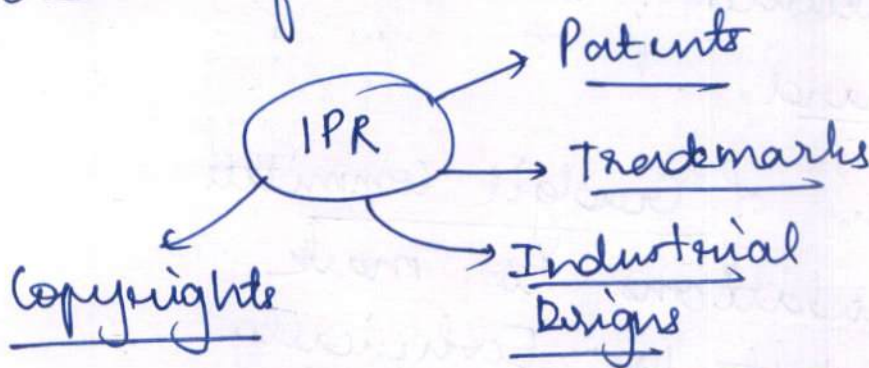
(4) Terrace cultivation, flood retention
walls

Adiding by such principles will
aid in safeguarding Western Ghats.

18. The IPR regime in India is mired by inadequate protection and ineffective implementation. In this context, discuss how the IPR regime can be made more robust and effective. (250 words) 15

भारत में IPR प्रणाली अपर्याप्त संरक्षण और अप्रभावी कार्यान्वयन से ग्रस्त है। इस संदर्भ में, चर्चा कीजिए कि IPR प्रणाली को और अधिक मजबूत एवं प्रभावी कैसे बनाया जा सकता है।

Intellectual Property Regime refers to protection of rights of creators of certain innovations



Inadequate protection of IPR Rights in India

(1) Delays in deciding/granting rights as pointed by Economic Survey 2021-22

(2) Fake products prevent enforcement as pointed by Special 301 report of USA

(3) Renewal of patent allowed
only on innovation, and not
incremental additions to products

(4) Compulsory licensing provisions
detrimental for IP enforcement

(5) PPVER Act 2001 sometimes
~~(2)~~ adversely affects companies
Ineffective implementation

(i) Intellectual Property Appellate
Board's dissolution prevents
active enforcement

(2) Patent rights not enforced
at the ground level

(3) Lack of awareness of laws
like Patents Act 2005

(4) Lack of specialised patent
officers for enforcement.

How IPR Regime can be robust and effective

- (1) Protection enforcement through countering fake products, piracy
- (2) Voluntary licensing to be promoted for peaceful technology transfer
- (3) Special courts, tribunals for faster resolution of rights
- (4) easier procedures for filing patents
- (5) Awareness on IPR laws

Enforcing the IPR regime as per National IPR Policy 2016 will aid India in becoming the business capital of the world.

19. What are the similarities and differences between the activities of terrorists and organized criminal groups? Also, elaborate upon the fact that their linkages occur in both tactical and strategic ways. (250 words) 15

आतंकवादियों और संगठित आपराधिक समूह की गतिविधियों के बीच समानताएं और असमानताएं क्या हैं? साथ ही, इस तथ्य पर सविस्तार चर्चा कीजिए कि उनके संबंध सामरिक और रणनीतिक दोनों तरीकों से होते हैं।

Terrorists organisations work to create havoc in the minds of people, governments through violence to promote their objectives.

Organized criminal groups rely on illegal activities like drug trafficking, human trafficking to fund criminal activities.

Similarities

- (i) Use violent methods
- (ii) Have access to weapons
- (iii) Receive funding from governments/ business groups
- (iv) Work to terrorise people, governments

Differences in activities

Terrorists	Organized criminal groups
<p>(i) Generally work for <u>political objectives</u> e.g. - establishing <u>Islamic law</u> (Taliban)</p> <p>(ii) Make use of <u>large scale</u> destruction through <u>bomb blasts, hijacks</u></p> <p>(iii) Examples - <u>Lashkar-e-Taiba, Taliban</u></p>	<p>(i) Work for <u>economic objectives</u> e.g. - raising funds through <u>poppy cultivation, drug supply</u></p> <p>(ii) Make use of <u>small-scale</u> activities - <u>shootouts, lone killings etc.</u></p> <p>(iii) Examples - <u>Dawood Ibrahim's D-company</u></p>

Linkages occur in both tactical and strategic ways

(i) Organized criminal & groups.

provide funding to terrorist
~~by~~ groups to make governments
helpless in curbing trafficking,
drug supply etc.

(ii) Organized criminal groups
use drug supply to lure
youth to terrorist groups
e.g - India - Pakistan border

(iii) ~~Organized~~ Terrorist groups align
with organized group to procure
arms for their objectives

(iv) Linkages between them gives
better access to each other's
political, business contacts

Way Forward

Strengthening intelligence agencies
is necessary to target their
linkages.

20. There is a view that the 'civil society is emerging as the new frontier of war', in the 4th generation of warfare. Do you agree with this view? Substantiate with logical arguments. (250 words) 15

ऐसा माना जाता है कि नागरिक समाज, युद्ध की चौथी पीढ़ी में एक नए मोर्चे के रूप में उभर रहा है। क्या आप इस विचार से सहमत हैं? उचित तर्कों के साथ पुष्टि कीजिए।

Civil society organisations are 3rd sector of governance which work for the welfare of downtrodden, poor.

Civil society emerging as the new frontier of war

(i) Intelligence reports have highlighted them to be making to affect India's growth e.g. - IB report (2012) - aided by developed countries to decrease India's GDP by 2-3%.

(ii) Frequent protests, property damage point to vested interests

(iii) Misappropriation of foreign funding for illegal activities

like promoting separatism

Ministry of
Home Affairs

→ cancelled 20,000
FCKA licenses
for alleged illegal
activities

(iv) Allegations of syndicate with
organised crime dealers - drug
traffickers, human traffickers

(v) Alleged support - men and
material from enemy countries
like Pakistan, China

Not limited to a frontier of
war

(i) Supplement government
efforts e.g. - Akshay Patra
feeds 18,00,000
children daily

(iii) Uphold women, children
rights e.g. - Balika Bachao

Andolan rescued 9000 children
in COVID-19 pandemic

(iii) Provide criticism for government
initiatives through protests,
research work (e.g. - CMIE on
job losses)

(iv) Many organisations genuinely
use funds for welfare

Way Forward

(i) Compliance with FCRA should
be mandatory

(ii) Facilitating procedures for
genuine organisations

(iii) Registrations to be mandatory
for tracking activities with
safeguards to prevent coercion
CSOs and governments should
work in tandem to uphold
national security.