

NEXT IAS

अनुभव 2024

(To be filled by candidate)

TEST CODE : ANV2403

Name of Candidate:NEELESH ROYAL..... Mobile No.

Roll No. :GSMCT24A1433..... Start Time6:30..... End Time.....

Date of Examination:4/9/24..... Medium : English ☒ Hindi ☐

Q. No.	Maximum Marks	Marks Obtained
1.	10	
2.	10	
3.	10	
4.	10	
5.	10	
6.	10	
7.	10	
8.	10	
9.	10	
10.	10	
TOTAL MARKS - 100		

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

GRAND TOTAL -/ 250

EVAL CODE: EVAL DATE:

GENERAL INSTRUCTIONS

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

सामान्य निर्देश

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

REMARKS:

FOR OFFICE USE ONLY

1.

घरेलू बचत भारतीय अर्थव्यवस्था की संवृद्धि में किस प्रकार योगदान देती है? क्या आपको लगता है कि घरेलू बचत दर में गिरावट भारतीय परिवारों में ऋणग्रस्तता और संकट में वृद्धि का संकेत देती है? (उत्तर 150 शब्दों में दीजिए) 10 अंक

How do household savings contribute to the growth of the Indian economy? Do you think that the recent fall in household savings rate marks a rise in indebtedness and distress among Indian households?

(Answer in 150 words) 10 marks

Ans.

Indian economy has been traditionally characterised as having one of the highest saving rates.

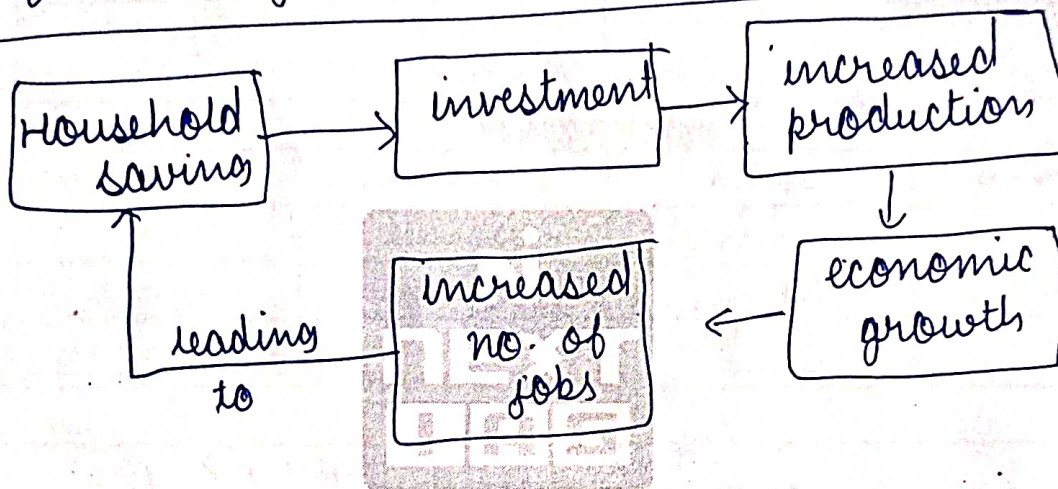


fig. virtuous cycle of investment, savings and economic growth.

Reasons ~~in~~ fall in household saving rate:

- ① Rising consumerism among Indians
 - ↳ due to nuclearisation of family
 - ↳ globalisation → shopping mall culture
 - ↳ e-commerce → attractive offers
- ② Enhanced social security net by government
 - ↳ Health → PM JAY

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Candidates must not
write on this margin

- ③ Informalisation of economy
↳ especially post pandemic

Fall in saving rates → Rise in indebtedness
and distress among Indian households

- ① Increase in Credit card and Buy now
pay later culture

↳ increased indebtedness

- ② Proliferation of lenders

↳ including Chinese apps

↳ coercive recovery

↳ increased suicides

- ③ Unable to cope up with inflation

way ahead

- ① Employment generation

eg ELI scheme

- ② Financial inclusion

eg JAM Trinity

- ③ Further expansion of social security

To achieve the status of developed
nation by 2047, we have to increase our
household savings.

2.

भारत के एफडीआई (FDI) क्षेत्र में उल्लेखनीय गिरावट देखी जा रही है। वे कौन से कारक हैं जो विदेशी निवेशकों के बीच भारत में निवेश करने के प्रति आशंका उत्पन्न कर रहे? सरकार द्वारा इस गिरावट की प्रवृत्ति को उलटने/रोकने के लिए कुछ सुधरात्मक उपाय सुझाइए।

(उत्तर 150 शब्दों में दीजिए) 10 अंक

India's FDI sector is seeing a significant downward trend. What factors are causing apprehensions among the foreign investors to invest in India? Suggest some corrective measures that must be taken by the Government to reverse the falling trend.

(Answer in 150 words) 10 marks

Ans.

Foreign direct investment refers to inflow of foreign capital in economy.

Despite being one of the fastest growing economy (8.2% in 2023-24), India is facing decline in FDI sector.

Factors → causing apprehension among the foreign investors to invest in India:

① Geopolitical events

↳ due to conflicts such as Russia-Ukraine war, Israel-Hamas war, there is an atmosphere of uncertainty.

↳ leading to reduced FDI inflow

② Fed tapering

↳ US fed is signalling to raise interest rates → investors flocking to US treasury bonds.

③ India's indecisiveness on policies

↳ such as recent laptop import ban and reversed later.

④ Parties with vested interest maligning India's image on global level

eg Hindenburg report → Adani issue
Global indices
Poor sovereign ratings → S&P, Moody's, Fitch

Corrective measures → to reverse the falling trend:-

① Clarity in Business policies

↳ ease of doing business

② Incentives to foreign firms to invest

eg PLI → semiconductor

③ Sign MOUs with foreign corporations

eg MoU with EconoCom

Foreign capital brings competition, innovation, technology and management expertise with it. To become \$5 trillion economy, India needs such qualities.

3. कृषि सब्सिडी भारत में फसल विविधता, फसल प्रतिरूप और कृषि संभारणीयता को किस प्रकार प्रभावित करती है?
(उत्तर 150 शब्दों में दीजिए) 10 अंक
- How do farm subsidies impact crop diversity, cropping patterns and agricultural sustainability in India?
(Answer in 150 words) 10 marks

Ans.

Farm subsidies are given by government of India to farmers, in order to increase farmer's income, enhance food productivity and overall economic growth.

Various farm Subsidies

- Fertilizer subsidy
- electricity subsidy
- MSP
- PM-KISAN etc.

Impact of farm subsidies on Crop Diversity:

- ① In principle, 22 crops are covered under MSP. However procurement is skewed towards rice and wheat
↳ leading to monocropping practices
- ② In states like Haryana → Government is providing ₹ 17,500/- per acre for crop

diversification.

↳ However, Acc. to Prof. Ashok Gulati, it is not sufficient to motivate farmers to move away from rice and wheat.

Impact of farm subsidies on cropping patterns

① Multiple crops in a year.

↳ due to irrigation facility

↳ water & electricity subsidy

② Lack of subsidy/incentives

↳ for zero tillage farming

↳ stubble burning

+ GHG emission

Impact of farm subsidies on agricultural sustainability

① Fertilizer subsidy → overuse of fertilizers

↳ water pollution

↳ soil degradation

② electricity subsidy → groundwater exploitation

eg Delhi, Punjab, Haryana

↳ >90% groundwater exploited

→ rationalize subsidies eg nutrient based subsidies

→ precision farming

→ crop diversification eg millet, pulses

way forward

4. "परिशुद्ध कृषि" के सिद्धांतों पर चर्चा करते हुए, परिशुद्ध कृषि में "इंटरनेट ऑफ थिंग्स" के उपयोग को विस्तार से समझाइये।
(उत्तर 150 शब्दों में दीजिए) 10 अंक
- While discussing the principles of "precision agriculture", elaborate on the uses of "Internet of Things" in precision agriculture. (Answer in 150 words) 10 marks

Ans Precision agriculture is a method of farming using technology that minimizes inputs and maximizes output / productivity.

Examples of precision farming

- ① Precision irrigation
 - ↳ reduces wastage of water
 - ↳ fertigation
- ② Soil health card
 - ↳ using fertilizers as per the need of soil and crop
- ③ Hydroponics
 - ↳ using mineral rich water as per requirement of crop

Use of Internet of Things (IoT) in precision agriculture

- ① use of sensors to monitor soil's moisture content, temperature etc.

↳ apply irrigation, fertilizer accordingly

② For weather observation

↳ such as Relative humidity,
heat, wind etc.

③ For monitoring any pest attack or
other diseases in plant.

④ During Harvest, use of sensors to
minimize wastage.

India's case in precision farming

① We have <10% of precision farming.
(irrigation)

② Due to lack of awareness
+ high upfront cost
+ high maintenance cost
+ lack of maintenance personnel in rural areas

way ahead

→ Subsidy on capital investment
eg nozzles, pumps
→ skilling rural youth to take up maintenance.

Precision agriculture can be useful
in doubling the farmer's income.

5. लघु मॉड्यूलर नाभिकीय रिएक्टर (SMR) क्या हैं? लघु मॉड्यूलर नाभिकीय रिएक्टरों को पारंपरिक नाभिकीय ऊर्जा संयंत्रों का सुरक्षित विकल्प क्यों माना जाता है? (उत्तर 150 शब्दों में दीजिए) 10 अंक
- What are Small Modular Nuclear Reactors (SMRs)? Why are SMRs considered a safer alternative to conventional Nuclear Power Plants? (Answer in 150 words) 10 marks

Ans-

Small Modular Nuclear Reactors (SMRs) are type of nuclear power generating plant, ranging from 30 MW - 300 MW

Advantages of SMRs :-

① Useful for remote areas eg NE region
↳ assemble and start generation

② Capacity addition → much faster & easier
eg existing capacity 100 MW.

↳ need 200 MW now

↳ bring another unit of 100 MW,
and you have 200 MW power.

③ Lesser cycle time than conventional nuclear power plant

↳ no construction required.

④ Due to smaller size, safer to operate.

Safer alternative to conventional nuclear powerplant :

① Safety mechanism

↳ conventional plant have electric + diesel powered safety mechanism
↳ may fail in emergencies
eg Chernobyl accident

↳ in SMRs

fuel rod will fall under the influence of gravity in case of any fault

② Operating temperature

↳ SMRs operate at lower temperature compared to conventional plants

③ Radioactive waste

↳ less radioactive waste
↳ reused in stage-II reactor

SMRs can be used to energise remote parts of India thus fuelling socio-economic growth.

6. विश्व भर में जूनोटिक रोगों की घटनाओं में अकस्मात वृद्धि में किन कारकों का योगदान है? जूनोटिक रोगजनकों के कारण होने वाली महामारियों के हालिया उदाहरणों पर प्रकाश डालिए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

What factors have contributed to the sudden rise in the incidences of zoonotic diseases across the globe? Highlight the recent examples of pandemics caused by zoonotic pathogens.

(Answer in 150 words) 10 marks

Ans

Zoonotic diseases are spread from animals to human beings.

Factors contributing to sudden rise in incidences of zoonotic diseases across the globe

① Anthropogenic factors

↳ due to their habitat destruction, animals are coming to human settlement

↳ increased interaction

↳ transfer of disease

eg Monkeypox

② Climate change

↳ due to rising global temperatures

zoonotic pathogens are able to survive for long.

③ Globalisation

↳ Pandemics such as COVID-19, owe their worldwide spread to globalisation

Recent examples of pandemics caused by zoonotic pathogens

① COVID 19 → corona virus, originating from bats, locked the entire world down.

↳ millions of human lives were lost

↳ Economic recovery has not been completed till date.

② Monkeypox - 2024

↳ In few countries of Africa it has been declared pandemic.

③ Swine flu

↳ About a decade ago, it claimed several lives.

way ahead

① Development of vaccination techniques

↳ m-RNA vaccine

② Boosting immunity of young ones

↳ Mission Indradhanush

To fulfill SDG-3, we need to take above steps to prevent zoonotic diseases.

7. भारत में बड़े सामाजिक-धार्मिक समारोहों और समागमों में भीड़ नियंत्रण की प्रमुख चुनौतियों पर चर्चा कीजिए। एनडीएमए के "सामूहिक समारोहों के आयोजन स्थलों के लिए भीड़ प्रबंधन योजना की तैयारी हेतु सुझावात्मक रूपरेखा" के आलोक में, भगदड़ की घटनाओं को रोकने के उपाय सुझाइए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss the major challenges of crowd control in large socio-religious gatherings and congregations in India. In the light of NDMA's "Suggestive Framework for Preparation of Crowd Management Plan for Events Venues of Mass Gathering", suggest measures to prevent stampede incidents. (Answer in 150 words) 10 marks

Ans. Recent incident of 'Hathras Stampede' in state of UP, highlighted where 123 innocent people lost their lives, highlights the importance of effective crowd management.

Major challenges of crowd control in large socio-religious gatherings and congregations in India

① No surity about numbers of participant

eg in Hathras stampede actual numbers were 3-4 times of estimated.

② Charged atmosphere in such gatherings

↳ due to some charismatic personality or event

③ Presence of women and children

in crowd

↳ make use of force difficult

④ usually infrastructure and personnels are not sufficient

⑤ unruly behavior by crowd, in the name of religious sentiments.

Measures to prevent stampede incidents

① Ensure entry through pass only

↳ exact no. of participants known

↳ better crowd management

② Ensure accountability of organisers

↳ sufficient and strong enough infrastructure

↳ permission from administration

③ Ensure law and order in event

↳ sufficient police personnel

↳ proper planning of traffic

loosing so many innocent lives in such unfortunate incidents raise questions on administration. Government should make sure that these incidents are avoided.

8.

'संयुक्त राष्ट्र हाई सी ट्रीटी 2015 के पेरिस समझौते की महत्ता और सार्थकता के बराबर है।' इसके संदर्भ में, समुद्री जैव विविधता के संरक्षण और निष्पक्ष व न्यायसंगत संसाधन-साझाकरण के लिए संयुक्त राष्ट्र हाई सी ट्रीटी के महत्व पर चर्चा कीजिए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

'The UN High Seas Treaty is comparable to the 2015 Paris Agreement's importance and significance'. In the context of this, discuss the importance of the UN High Seas Treaty for the conservation of marine biodiversity and fair and equitable resource-sharing.

(Answer in 150 words) 10 marks

Ans 2015 Paris agreement is regarded as a milestone in efforts towards climate action.

Similarly UN High seas treaty formulates rules to ensure conservation of marine biodiversity and fair and equitable resource sharing.

About UN High seas treaty

① Prohibits unsustainable fishing practices in high seas.

eg Bottom trawling

② Allows nations for scientific research and exploration in high seas but in sustainable fashions.

③ No nation, should claim high seas as their monopolistic area of operation.

Importance of UN high seas treaty for the conservation of marine biodiversity and fair and equitable resource-sharing:

① Will discourage unsustainable fishing practices

↳ by China, Indonesia

② Puts onus on countries to share marine resources with all nations in region

↳ fair and equitable resource sharing

③ Helpful in taming China's expansionist policies → in South China sea

However

India has not ratified the UN high seas treaty till date as it will be unprofitable for our fisherman and marine industry.

Therefore, while UN High seas treaty is environmentally beneficial, it must also ensure economic justice, like CBDR in Paris agreement.

9. जनरेटिव एआई (Generative AI) के अवैध प्रयोग से उत्पन्न नए साइबर खतरे क्या हैं? हाल ही में हस्ताक्षरित बैलेचले घोषणा के आलोक में, भारत एआई द्वारा उत्पन्न खतरों के विरुद्ध अपनी साइबर सुरक्षा ढाँचा को किस प्रकार मजबूत कर सकता है?

(उत्तर 150 शब्दों में दीजिए) 10 अंक

What are the new cyber threats posed by the illicit use of Generative AI? In the light of recently signed Bletchley Declaration, how can India beef up its cybersecurity structure against threats raised by AI?

(Answer in 150 words) 10 marks

Ans.

Generative AI is part of AI capable of producing unique text, picture or video using large language model.

Cyber threats posed by illicit use of Generative AI

① Deepfakes

↳ used to manipulate elections, tarnish the image of a celebrity.

eg Deepfake video of Sachin Tendulkar

② Plagiarism

↳ Gen AI has been accused of reproducing copyrighted content.

③ Threat to privacy

↳ unlocking face ID on phone

④ Threatens national security

eg deepfakes circulated in social media.

To address the concerns arising out of illicit use of AI, Bletchley declaration was signed in UK.

India → countermeasures' to threats raised by AI

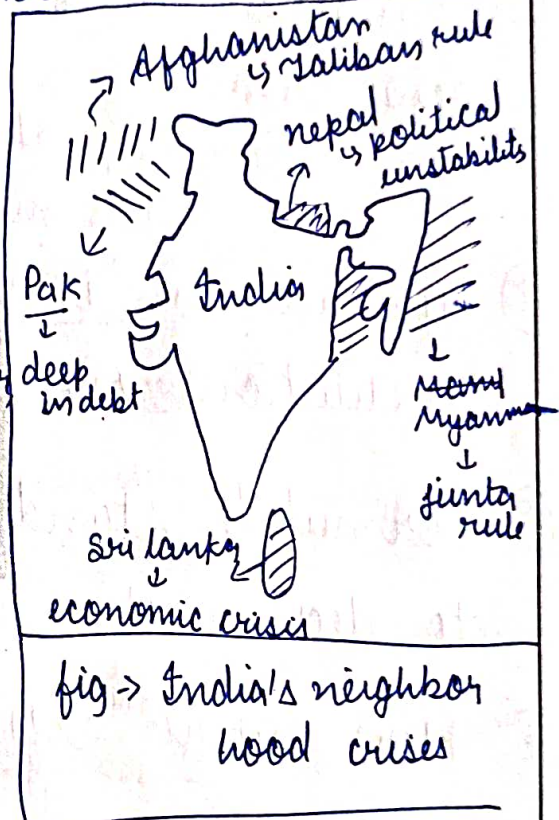
- ① strengthen the laws to include these new crimes
 ↳ Deepfake issue addressed in this manner.
- ② Upgrade the infrastructure at premium institutions such as - CERT-IN, NIC, CDAC
- ③ Formulate standard operating procedure to deal with these situations.
- ④ Hire expert software engineers.
- ⑤ global collaboration for
 ↳ new technology
 ↳ best practices

AI is an immensely potent tool, if not used wisely, it can work against us. But used prudently, India can emerge as a developed nation.

10. पड़ोसी देशों में बढ़ते राजनीतिक संकट के कारण भारत की सीमा सुरक्षा गंभीर दबाव में है। विस्तार से समझाइये।
(उत्तर 150 शब्दों में दीजिए) 10 अंक
- India's border security is under severe pressure due to the rising political crisis in neighbouring countries. Elaborate.
(Answer in 150 words) 10 marks

Ans. Recent ouster of long
reigning Bangladeshi PM, Sheikh Hasina,
deepened India's neighborhood crisis.

Apart from
Bangladesh, ~~other~~ other
neighbours such as -
Nepal, Afghanistan, Myanmar,
Sri Lanka etc. are also
going through political
crisis.



India's Border Security is under severe pressure due to this crises

① Mass influx of Refugees

- ↳ Rohingyas from Myanmar and Bangladesh
- ↳ Hindu, Christian and other religious minorities from Bangladesh, Pakistan, Sri Lanka

② The China factor

↳ Experts argue that some of these crisis are created by China through its debt trap policy to keep India Bored up in South Asia

③ Smuggling of Arms, drugs, counterfeit currency:

↳ due to ungoverned spaces in neighbourhood, such activities are mushrooming

↳ proximity to arc of instability

↳ golden triangle (Laos, Thailand, Myanmar)

↳ golden crescent (Pak, Afghan, Iran)

④ Cross Border terrorism

↳ state sponsored by Pakistan

↳ Pro-China parties in Bangladesh, Myanmar supporting anti-India activities.

Steps taken
by India

→ enhanced border security
↳ use of technology as drones
→ diplomatic efforts to curb anti-India activities

External Affairs Minister S Jaishankar
said - Peace in neighborhood is essential our growth

11. "कौशल के बिना व्यक्ति संपत्ति नहीं बल्कि राष्ट्र के विकास पर एक दायित्व है"। प्रासंगिक कौशलों का समावेश भारत के जनसांख्यिकीय लाभार्थ में किस प्रकार योगदान देता है? युवाओं में कौशल अंतर को कम करने के लिए सरकार द्वारा हाल ही में कौन सी पहल की गई है? (उत्तर 250 शब्दों में दीजिए) 15 अंक

"A person without skill is not an asset but a liability on the nation's growth". How infusion of relevant skills contribute to the demographic dividend of India? What recent initiatives have been undertaken by the Government to reduce the skill gap among young Indians?

(Answer in 250 words) 15 marks

Ans.

Demographic dividend

refers to the potential benefits that a country can reap by virtue of its favourable demography.

India has >65% of its population in the working age group (15-64%). However, lack of skills remain a roadblock in reaping the demographic dividend.

lack of skills
in Indian
Youth

- >50% of college graduate are not employable.
- outdated curriculum being continued in schools and colleges

Infusion of relevant skills → contribute to demographic dividend of India:

① Service sector

↳ imparting soft skills

↳ use in industries such as call centres

↳ imparting coding / software skills

↳ IT industry

↳ education sector, sales & marketing

② Manufacturing / Industry

↳ vocational training in
school / college.

↳ female participation

↳ ↑ female LFPR

③ Primary sector

↳ agriculture → training to
increase productivity

↳ animal husbandry, pisciculture

Initiatives undertaken by government to
reduce the skill gap among young
Indians:

① PM Kaushal Vikas Yojna

↳ skill training to youth

↳ stipend based on performance

↳ tie up with industries

② Employment linked incentive scheme

↳ Internship of 1 lakh youth in top-500 companies.

↳ incentive to trainee as well as trainer.

↳ provide relevant skills to interns.

③ Skill India mission

↳ PPP mode

↳ paid training → to ensure seriousness of candidates.

④ Drone Didi scheme

↳ training women to use drones in agriculture

↳ ↑ FLFPR

⑤ Vishwakarma scheme

↳ incentive to artisans

↳ upskilling and reskilling

way
ahead

→ involvement of private sector
(economic survey)

→ employment generation to absorb skilled youth.

India still has a window of
about 20 years to realise demographic dividend.

12.

भारतीय विमानन क्षेत्र में देश में परिवहन का प्राथमिक साधन बनने की अपार संभावनाएँ हैं। भारत के विमानन क्षेत्र में संवृद्धि को बढ़ावा देने वाले कारक क्या हैं? इस क्षेत्र के समक्ष आने वाली चुनौतियों पर प्रकाश डालिए और इसमें सुधार के उपाय सुझाइए।

(उत्तर 250 शब्दों में दीजिए) 15 अंक

The Indian aviation sector has immense potential to become the primary mode of transportation in the country. What are the factors propelling growth in India's aviation sector? Highlight the challenges that the sector faces and suggest measures for improvement.

(Answer in 250 words) 15 marks

Ans

According to a report by IMF, Indian aviation sector is one of the fastest growing in the world.

A humongous order of 500 Aircrafts placed on Boeing by Indian carrier - Tata airlines, is a testimony to the above report.

Factors propelling growth in India's aviation sector:

① Largest population in the world
↳ UNFPA estimated India's population as 142.9 billion.

② Rising middle class income
↳ People choosing time over money.

eg → Delhi Mumbai
flight - 2 hrs journey
Train - 20 hrs journey

③ Private investment in aviation sector → cheaper fair, better services

↳ Privatisation of Air India

④ Overcrowding of Road and Railway infrastructure

↳ Railway → 140% utilization of tracks

⑤ Increased infrastructure

↳ UDAN scheme

↳ airports in tier II cities

Challenges faced by Aviation sector

① Regulatory challenges

↳ price ceiling by government

↳ high cost of compliance by airlines

② High fuel cost

↳ Aviation Turbine fuel getting costly due to geopolitical crises such as - Israel Hamas war

③ Insufficient infrastructure

↳ some of the airports are overcrowded.

eg Delhi - IGI airport

④ Economic unviability of certain routes

eg NE routes, tier-II, III cities routes under UDAN scheme

Measures for improvement

① PPP mode for infrastructure development.

② Relax FDI norms further, to get access to capital and better facilities for travellers.

③ Privatise Airport operations
↳ increased efficiency

Increased connectivity is a catalyst for growth of a country.

Indian aviation sector, by becoming primary mode of transportation, can fuel India's growth story.

13. किसान उत्पादक संगठन (एफ.पी.ओ.) कृषि-नवाचार के इंजन हैं। इस संदर्भ में, कृषि में विखंडन और आधुनिकीकरण के अभाव की समस्या के समाधान में एफ.पी.ओ. के भूमिका की चर्चा कीजिए। कृषि में एफ.पी.ओ. की भागीदारी को बढ़ावा देने के लिए सरकार द्वारा की गई पहलों पर प्रकाश डालिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक
- Farmer Producers' Organizations (FPOs) are engines of agri-innovation. In this context, discuss the role of FPOs in addressing the issue of fragmentation and lack of modernization in agriculture. Highlight the initiatives the Government took to promote the participation of FPOs in agriculture. (Answer in 250 words) 15 marks

Ans -

Farmer producer's organisation is a type of co-operative, where a few farmers come together to synergise their inputs and augment their bargaining power in market.

FPOs are engines of agri-innovations

By pooling their resources

① Farmers can purchase high qualities of inputs such as - HYV seeds, fertilizer etc.

② Economy of scale → reduces input cost
↳ improves productivity

③ lost harvest → with augmented bargaining power, they can get better prices for their produce

④ Food processing sector

↳ FPOs can also engage in primary food processing, thus enhancing income of farmers

↳ Sahayadri FPO in Maharashtra crossed 1000 Cr in turnover recently.

Role of FPO in addressing the issue of fragmentation and lack of modernisation

① In India, >86% of farmers are small and marginal farmers, owning <2 Acres of land.

↳ This fragmentation of land has reduced their productivity.

② FPOs, by pooling farmer's land as one unit, can ensure economy of scale. → better productivities.

③ In India, Farm mechanisation is <20%, compared to 95% in USA.

↳ because of fragmented land-holding, lack of financial resources.

- ④ FPO can ensure increased mechanisation of farms by pooling resources.

Initiatives taken by government to promote participation of FPOs in agriculture

① Ministry of ^{co-operatives} ~~co-operation~~, eased the process of registration of FPOs.

② Ministry of agriculture and farmer welfare encouraged farmers to form FPOs.

③ FPOs are allowed to procure crop from farmers without APMC

④ For taxation purpose, FPOs are treated as co-operations.

As suggested by prof. Ashok Gulati, involvement of FPOs has the potential of making farming lucrative for farmers.

14. भारतीय अर्थव्यवस्था के सबसे मजबूत विकास इंजनों में से एक होने के बावजूद, कुछ अपस्ट्रीम और डाउनस्ट्रीम मुद्दे हैं जो भारत में खाद्य प्रसंस्करण उद्योगों के विकास को प्रभावित कर रहे हैं। चर्चा कीजिए। भारत में खाद्य प्रसंस्करण उद्योगों के समग्र विकास को मजबूत करने के उपाय सुझाइए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

Despite being one of the strongest growth engines of the Indian economy, there are certain upstream and downstream issues ailing the growth of food processing industries in India. Discuss. Suggest measures to strengthen the overall growth of food processing industries in India. (Answer in 250 words) 15 marks

Ans

Food processing industry

remains one of the strongest growth engines of Indian economy. Efforts of government by establishing several mega food parks highlights its importance.

However, this sector is reeling under certain issues:

Upstream issues ailing growth of food processing industry

① Inconsistent supply of raw material

↳ due to climate related stress

↳ Heatwave reduced yield
↳ excess rain damaged standing crop.

② Existence of middle man

↳ absence of contract farming

↳ increased cost

③ Government policies

↳ such as MSP distorting market

Downstream issues ailing growth of
food processing industry

① Issues in export

↳ SPS (sanitary & phytosanitary measures)

↳ leading to export ban

② Lack of domestic market

↳ unlike western countries,

Indian market is not yet
mature for processed food

③ Supply chain issues

↳ lack of integration in
supply chain

Measures to strengthen overall growth of
food processing industries in India

① Increase expenditure on R&D

↳ technology upgradation

↳ increased variety in
processed food

eg Irradiation technology

↳ ↑ shelf life of product

- ② Enhance public awareness
against use of antibiotics for
livestock / pisciculture
↳ fight SPS bans
- ③ Firm regulations
↳ increased private
investment
- ④ encourage contract farming
↳ increased efficiency
- ⑤ incentivise setting up
food processing industry
↳ through subsidies,
tax breaks etc.

Indian food products are in
great demand in western market. By
augmenting our capabilities in food
processing industry, we can capture this
demand and ensure economic growth.

15. कृषि विज्ञान व सांख्यिकी के क्षेत्र में क्रमशः डॉ. एम.एस. स्वामीनाथन और डॉ. सी.आर. राव के योगदान से भारत को क्या लाभ हुआ? (उत्तर 250 शब्दों में दीजिए) 15 अंक

How was India benefitted from the contributions of Dr M.S. Swaminathan and Dr C.R. Rao in the fields of agricultural science and statistics respectively?

(Answer in 250 words) 15 marks

Ans

Recently Dr. M.S. Swami-nathan was awarded Bhart Ratna for his contributions in the field of agriculture.

Dr. C.R. Rao was an extraordinary statistician, who inspired huge no. of people in this field.

Dr. M.S. Swaminathan's role in Indian agriculture:

① called Father of Green Revolution in India.

↳ worked with Norman Borlaug to develop HYV of rice and wheat suitable to Indian conditions.

② contributed extensive research and field experiments

↳ resulted in multifold increase in crop production. (50MT → 350MT)
(1950) (2023)

↳ awarded first world food prize for this

③ worked as advisor to government of India, suggested

- i) electrification of villages
- ii) irrigation facilities
- iii) development of transport facilities (roads)

to ensure that green revolution is sustainable.

④ worked as head of Indian rice research institute and International rice research institute, Philippines.

⑤ gave model to sustainably dispose off stubble after harvesting.

However Green revolution, had some side effects:

- ① excessive use of fertilizers and pesticides → water pollution / soil degradation
- ② water guzzling crops → ground water exploitation
- ③ cereal centric → hidden hunger

Despite these shortcomings, Dr. M.S. Swaminathan achieved India self-sufficiency in food production.

Contribution of Dr. C.R. Rao in field of statistics

- ① encouraged research in the field of statistics.
- ② Devised new methods of data analysis → better estimation of GDP growth, literacy growth etc.
- ③ Dr. C.R. Rao served as an inspiration to many students.
↳ inspired excellence

People like Dr. M.S. Swaminathan and Dr. C.R. Rao have helped India reach today where it is - an aspiring world power - providing leadership to global south.

16.

कृत्रिम बुद्धिमत्ता (AI) समग्र बौद्धिक संपदा प्रतिमान को किस प्रकार चुनौती दे रही है? नवप्रवर्तन को बढ़ावा देने और कृतियों एवं आविष्कारों को प्रोत्साहित करने के लिए कृत्रिम बुद्धिमत्ता को बौद्धिक संपदा के साथ कैसे संतुलित किया जा सकता है?

(उत्तर 250 शब्दों में दीजिए) 15 अंक

How is Artificial Intelligence (AI) challenging the overall intellectual property paradigm? How can AI be balanced with intellectual property to foster innovation and incentivize creations and inventions?

(Answer in 250 words) 15 marks

Ans.

Artificial intelligence refers to ability of computers to learn like humans and perform tasks that are impossible for conventional machines.

Intellectual property, as the name suggests is an exclusive property of an individual, which can only be used by his/her permissions.

AI challenging overall intellectual paradigm

① AI employs large language model to learn and predict.

↳ In this training process, it trains on data available on internet.
↳ may include IPR protected data

② Generative AI is capable of generating unique text, image or video.

↳ while, it uses permutation and combinations of data, it has been trained upon

↳ may violate IPR.

③ unauthorised use of celebrity voice, picture etc.

eg Recently actor Scarlett Johansson complained about uninformed use of her voice.

④ Deepfakes
↳ using Gen AI

Balancing AI with IPR to foster innovation and incentivize creation and inventions

Since data is compulsory for the training of AI,

① we can use informed consent of IPR holder

eg OpenAI signing agreement with harvard university

- ② strict government regulations
↳ to punish IPR violations
- ③ Data protection
↳ Data fiduciaries on internet should encrypt IPR protected data
- ④ Responsible AI
↳ Developers should focus on developing responsible AI
↳ otherwise may be dangerous for humanity

Recent Blatchley declaration is a positive step taken by governments to put regulations on AI.

17. भारत की जैव विविधता को परिरक्षित और संरक्षित रखने में "पश्चिमी घाट" के महत्त्व पर प्रकाश डालते हुए, इस नाजुक और पारिस्थितिक रूप से संवेदनशील क्षेत्र के सामने आने वाले खतरों पर चर्चा कीजिए। पश्चिमी घाट पारिस्थितिकी तंत्र की सुरक्षा के लिए भारत सरकार द्वारा किए गए उपायों को विस्तार से समझाइये। (उत्तर 250 शब्दों में दीजिए) 15 अंक
- Highlighting the significance of "Western Ghats" in preserving and conserving the biodiversity of India, discuss the threats faced by this fragile and ecologically sensitive Region. Elaborate on the measures taken by the Government of India to protect the Western Ghats ecosystem.
- (Answer in 250 words) 15 marks

Ans. Recent devastating landslide in western ghats in waynada, Kerala in which more than 400 people lost their lives, comes as a reminder to humanity to not meddle with fragile ecosystems.

Significance of 'western Ghats' in preserving and conserving the biodiversity of India

- ① Western Ghat is home to numerous endemic species of wildlife and trees. ~~eg~~ Nilgiri Tahr
- ② Dense forests and difficult terrain make it ideal for wild animals in absence of Human intervention.
- ③ South west monsoon, helps it keep its biodiversity.

Threats faced by this fragile and eco sensitive region

① Mining activities

↳ Being resource rich, various illegal mining activities are going on

↳ ↑ landslides, pollution, killing of animals etc.

② Tourism

↳ exceeding its carrying capacity

↳ development of infrastructure such as - hotels, roads etc.

③ Climate change

↳ Increasing temperature

↳ extended dry spells

resulting in extinction of many native species.

Measures taken by Government of India to protect the Western Ghats system

① Extensive study of region under

Cradle committee

and Kasturirangan panel

Based on findings of this committee

② Government banned any illegal mining activities and sand quarrying

③ Environmental impact Assessment (EIA) made compulsory for any project.

④ Declaration of eco sensitive zone

↳ no developmental activities like construction allowed

⑤ Designating national parks and wildlife sanctuaries to protect endangered species.

Despite so many efforts from government, there are not major changes on ground. Being one of the

Biodiversity hotspot of the world, we should ensure it is protected.

18. जलवायु परिवर्तन पर संयुक्त राष्ट्र फ्रेमवर्क कन्वेंशन (UNFCCC) के पक्षकारों के सम्मेलन (COP) के 28वें सत्र के प्रमुख निष्कर्षों का वर्णन कीजिए। COP-28 के दौरान भारत द्वारा शुरू की गई ग्रीन क्रेडिट पहल की क्या विशेषताएँ हैं? (उत्तर 250 शब्दों में दीजिए) 15 अंक

Describe the major outcomes of the 28th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). What are the features of the Green Credit Initiative launched by India on the sidelines of COP-28?

(Answer in 250 words) 15 marks

Ans.

28th session of COP, was a milestone in climate action as it adopted the resolution of transitioning away from fossil fuels.

Major outcomes of COP-28

- ① transitioning away from fossil fuels
 - ↳ However no clear deadline determined.
 - ↳ Supported by underdeveloped and developing countries such as - African countries, India, China

- ② operationalizing loss & damage fund
 - ↳ After more than 5 years of its adoption, it was operationalized.

↳ aims to provide compensation to SIDS (small island developing states)

↳ However no major contribution by global north.

③ First Global Stock

↳ of achievements of targets set under paris deal.

↳ It is found that world is way behind in its efforts to contain temp. rise to 1.5°C

↳ However, India achieved most of its INDCs way ahead of deadline.

④ Global methane pledge

↳ to reduce methane emission by 30% by 2030.

↳ opposed by India, as it is unjust towards agriculture

↳ ~~not~~ ~~ad~~

⑤ Triple nuclear energy

↳ along with renewable energy, nuclear energy is also required.

Green Credit Initiative launched by India:

① Incentivise companies/businesses employing green practices.

② similar to carbon credit mechanisms

③ Trading of green credit is also possible.

To achieve SDG-7, world needs adoption of cleaner fuel and technologies. Resolutions adopted at COP-28 are a step in this direction.

19. शेल कंपनियों ने भारत में धन-शोधन (मनी लॉन्ड्रिंग) के खतरे में किस तरह योगदान दिया है? क्या धन-शोधन रोकथाम अधिनियम, 2005 में हाल ही में किए गए संशोधनों से ऐसी शेल कंपनियों के साथ ग्राहकों की लेन-देन संबंधी प्रकृति की समस्या का समाधान करने में सहायता मिलेगी? (उत्तर 250 शब्दों में दीजिए) 15 अंक

How shell companies has contributed to the menace of money laundering in India? Do you think recent amendments to the Prevention of Money Laundering Act, 2005 will help address the problem of the transactional nature of clients with such shell companies?

(Answer in 250 words) 15 marks

Ans -

Money laundering is an illegal practice that moves black money through unofficial networks such as - 'Hawala'.

Shell companies contributing to menace of money laundering in India

① To convert black money into white
criminals / businessman / actors / politicians etc. move their black money out of India through 'Hawala'

↳ Reinvest this money from tan heavens (through shell company) in India as FDI or FPI

eg Singapore washing

↳ Singapore is hub of such shell companies.

② Panama paper leaks

↳ named many prominent personalities of India, involved in money laundering through shell companies.

Money laundering - Harming Indian economy

① Government deprived of tax money.

② Money draining out of country.

③ money multiplier → investment → profit
↳ not in India but in
tax haven ~~is~~ Panama

④ money going to criminals
↳ terror funding

Recent amendment to PMLA, 2005

① Makes the offence non-bailable,
non compoundable, cognizable.

② Power to government to freeze assets of accused.

③ Proof of burden on accused

Yes, these amendments are helpful in addressing this problem

- ① creates deterrence in minds of criminal.
- ② Freezing of assets, de-operationalise the syndicate.
- ③ Blacklisting the shell companies, prevents any further frauds.

However, more needs to be done

- ① power to attach foreign assets are required.
- ② Expertise in forensics, financial crime is needed.
- ③ International collaboration to discourage such practices.

Money laundering is like a termite weakening economic foundations of country, we must eradicate it.

20. चर्चा कीजिए कि अपराध-उग्रवाद गठजोड़ ने पूर्वोत्तर भारत में जातीय संघर्षों और उग्रवाद की वृद्धि में किस प्रकार योगदान दिया है। इस चुनौती से निपटने के लिए कौन से संस्थागत उपाय किए जा सकते हैं?

(उत्तर 250 शब्दों में दीजिए) 15 अंक

Discuss how the crime-insurgency nexus has contributed to the rise in ethnic conflicts and insurgencies in North-East India. What institutional measures can be undertaken to address this challenge?

(Answer in 250 words) 15 marks

Ans - Ethnic conflict in Manipur has brought out the crime-insurgency nexus that is disturbing harmony in society.

Crime - Insurgency Nexus

when organised crime syndicate uses its funds to support insurgency activities and in return, insurgents provide these criminals with protection.

This nexus leading to rise in ethnic conflicts and insurgencies in N-E India

① Manipur ethnic conflict

↳ between meitei and kuki groups

↳ kuki groups are allegedly supported by insurgent groups

② cross border support

↳ criminals getting drugs and arms from anti-India groups ~~in~~ china

↳ insurgents gives funding training, arms etc.

③ Safe heavens in neighborhood

↳ after committing terror act, these groups go back to Bangladesh / Myanmar

Institutional measures to address these challenges

① Enhance intelligence gathering capabilities

↳ eyes and ears on ground

↳ help of locals

② strong law enforcement

↳ strike against organised crime.

③ Dialogue and discussion with locals

↳ winning hearts & minds

④ Diplomatic efforts to dissuade
anti-Indian elements

⑤ Economic development in
N-E

↳ reduced insurgency

↳ less ethnical conflicts

North-East India is essential
to be peaceful as we are already
surrounded by hostile neighbours
from 2 sides.

Implementing above steps
may establish peace in N-E, which
will ensure socio-economic development
of the region.

NEXT IAS

Space for Rough Work