Improve content in some of the questions.
Your presentation is good.
Do not leave any question.
Keep writting. You have potential to score more.
All the best.

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

92/250

1. Technology minimizes the impact of COVID-19 pandemic in significant manner. Elucidate with examples. (10 Marks, 150 Words)

Covid-19 pandemic has put the world in uncharted territory. The role of technology is to make the journey safer and smoother

Minimising impact of covid-19

- new faster methods of disease detection
- contact tracing
- prevention - vaccine development via gene editing technologies.
- social sector - online education, better PDS distribution
- political impact - online legislative work using internet technology.
- economic impact - online banking that reduces physical contact, direct benefit transfer.

- barcoding of medical waste as per Bio Medical Waste Management Rule 2016.

Way forward].

- coherent state policy to help adapt to new changes eg: Pragyata guidelines for online education.
- increasing digital literacy eg: Digital Saksharta Abhiyan.
- global consensus for equitable sharing of benefits eg: vaccine.

Technological interventions have been the safety net in the pandemic to prevent socio economic collapse.

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

2. Despite being an ICT powerhouse, India has got 48th rank in global innovation index 2020. Critically Examine. (10 Marks, 150 Words)

Global Innovation Index (GII) ranks India at 48, which is far below India's potential. This calls for analysis.

Indian innovation - positives and strengths

- hub of startups - 2nd highest number of new startups in 2021
- space innovation at low cost.
- service sector led innovation is driving India's potential.

Indian innovation - bottlenecks

- budget allocation is poor - only 0.6%

of GDP

- gender inequity - only 15% of STEM researchers are women.
- infrastructure not adequate as pointed out by Gill report.
- very less disruptive technology, mostly imitation of existing solutions.

Way forward.

- larger financial allocation
- foreign collaborations eg: SPARC scheme
- outcome based education system.

India's innovation outcome will help to achieve SDG goals and demographic dividend.

4/10

U.P.S.C

3. Does Antimicrobial Resistance put danger to India's Healthcare? Analyze. (10 Marks, 150 Words)

Antimicrobial resistance (AMR) occurs when microbes (bacteria, parasites etc) do not get killed / weakened by commonly used antibiotics.

AMR → more superbugs → more health insecurity

Danger to India's healthcare system

- larger spending on healthcare
- increased out of pocket expenditure today already 70% of healthcare cost
- overburden system — lack of beds, personnel scarcity
- disproportionate impact on poor

- challenge to universal healthcare coverage - SDG 3 goal

Way forward -

- Red Line Campaign - by Health Ministry to increase awareness, regulate sale of over the counter antibiotics.
- budget allocation raised so that more workforce, hospitals, nurses available,
- innovative solutions - take help of social media influencers for awareness.

WHO calls AMR as one of biggest health risks on the planet. Multi stakeholder approach is needed.

4/10

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

4. How will biotechnology help India to solve the current challenges in food security and malnutrition to make India Atman Nirbhar? (10 Marks, 150 Words)

Biotechnology uses organisms / biological products for benefit of mankind. It has huge forward and backward linkages.

Biotechnology helping solve food insecurity and malnutrition

- resistance to cold, drought, heat etc so greater yeild eg: BT Brinjal
- help reduce issues due to uncertain monsoons - 70% of crop area is rainfed.
- development of environmentally friendly fertilisers.

- increasing seed replacement ratio.
- biofortification that reduces food insecurity and raises nutrient intake eg: iron fortified rice.

Way forward

- increasing industry academia linkages in biotech field eg. as part of Make in India.
- fund for agricultural universities for research eg: ARYA scheme for attracting youth.

Biotechnology has immense potential to end hunger (SDG-2) as well as improve post covid stresses

4.5/10

U.P.S.C

5. Discuss the need and challenges related to intellectual property rights in India. (10 Marks, 150 Words)

Intellectual property rights are rights legalised over intangible creations of the mind. eg: copyrights, patents, trademarks etc.

Need of IPR in India

- protects and encourages innovation
  eg: increase India's rank in Global Innovation Index.
- usage as a marketable financial asset.
- value of soft power.
- in line with self-dependency

Challenges in IPR regime in India

- could be deterrent to innovation as overawed by foreign patents.
- public interest may not be served by patent protection eg: covid vaccine development issue.
- lack of human resource - lawyers, patent professionals.
- commercialization risk of social welfare.

[Way forward]-

- increasing industry academia linkages.
- incentives to private sectors to increase investment in IPR creation.

4.5/10

IP rights in India is sine qua non.

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

6. Artificial intelligence is necessary for India to harness its full potential for inclusive growth. Critically Examine. (10 Marks, 150 Words)

Artificial intelligence involves usage of computational innovations to make machines think like humans.

[Need of AI for inclusive growth].

- better productivity will lead to greater GDP growth - so more finance for social welfare.
- security - better border protection and cyber crime protection.
- weather forecasting
- enhance quality of manufacturing in India.
- environmental protection - better

predict threats, time tune climate change fight policy.

- medical sciences - disease diagnosis faster, effective curative care

Bottlenecks - poor research
- lack industry academia linkages

Way forward
- state focus - eg: National strategy on AI.
- including emerging areas like AI in college curriculum.
- foreign research collaborations eg SPARC scheme.

4.5/10

AI holds vast potential to improve our lives

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

7. The advancements in Quantum Computing and Machine learning are said to be double edge sword for Society. Elucidate. ((10 Marks, 150 Words)

Quantum computing uses quantum mechanics principles like superposition, entanglement etc to vastly improve computational rate and speed.

Benefits of quantum computing

- security - enhances communication security by secure key encryption
- vastly increased computing speed eg: complex mathematical computation

Machine learning

- Smarter devices eg: internet of things (IoT) more effective.
- Smart contracts, value chain management eg: government eVIN

network for vaccine supply chain management.

Issue with QC and ML

- data breach threat
- lack of research in India
- ethical dilemma – identity of ML device.
- democratic rights may be undermined

eg. Cambridge Analytica fiasco used AI, ML and big data analytics.

Way forward

- institutional mechanism for regulation

QC and ML must be used for benefit by coherent policy as well as smart regulation

4/10

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

8. Inter governmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report estimates unprecedented Biodiversity loss in recent times. What are its important observation and discuss efforts towards the conservation and protection of Biodiversity. (10 Marks, 150 Words)

IPBES is an intergovernmental body that acts as a think tank for efforts on biodiversity conservation.

Important observations

- 40% ~~observations~~ amphibian species threatened with extinction.
- 1/3 of corals threatened.
- more frequency of natural disasters due to climate change.
- habitat fragmentation – major cause of biodiversity loss
- invasive alien species responsible for species loss

Efforts towards conservation

- convention of Biological Diversity (CBD) in 1992
- Biosphere Reserves as part of UNESCO.
- Wildlife Protection Act, 1972 – national parks, wildlife sanctuaries etc
- Project Tiger, Project Rhino etc of Indian government.

Biodiversity loss must be controlled with global as well as local initiatives. This will help us to achive UN's SDG goals.

3.5/10

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

9. Does Shailesh Nayak Committee Report on Coastal Regulation Zone promote sustainable development of coastal areas.Discuss the CRZ 2018 in this regard. (10 Marks, 150 Words)

Coastal Regulation Zone (CRZ) guidelines try to give impetus to both development and tourism activities.

Features of CRZ 2018.

- CRZ III - temporary tourist structures allowed in urban beaches.
- easing restrictions for highly populated areas - NDZ - no development zone norms diluted.
- Floor Space Index (FSI) norms eased - so can help in affordable housing development.
- waste treatment plant development rules eased.

[Issue in CRZ norms].

- adverse impact on eco sensitive zones due to commercialization.
- ecotone nature of coastal wetlands can be affected.
- NDZ norms not holistic as sea level rise impact has not been considered.

[Way forward].

- mechanism of citizen feedback window to allow public opinions before starting major developmental projects.

CRZ norms must be seen in context of continuous improvement by involving multistakeholder approach.

4/10

10. What are the opportunities and challenges in the Cyber Security framework in India? (10 Marks, 150 Words)

Cyber space is paramount for India's long term image as well as national security. Cyber security refers to the protection of cyber space and infrastructure.

Opportunities in Indian framework for cyber security.

- critical infrastructure protection eg. banking, defence equipment.
- data protection and its integrity.
- prevention of anonymous hacks, attacks.

eg: role in CERT In in cyber security.

- economic security eg: stock market, financial transactions.

Challenges.

- lack of interministerial cooperation
- no independent cooperating and coordination institution
- human resource crunch - lack of trained experts.
- no national level architecture for cybersecurity unlike EU.

Way forward

- National cyber security Policy 2013 must be implemented in letter and spirit eg: train 500000 professionals
- digital literacy

Multi stakeholder approach is necessary.

4/10

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

11. "Government intervention sometimes though well-intended, often ends up undermining the ability of the markets to support wealth creation and leads to outcomes opposite to those intended". Do you agree? Explain (15marks 250 words)

Government regulation must balance to uphold developmental principles as well as keep up fair market principles

Many acts and their implementation result in overregulation of the market at times.

[Essential Commodities Act, 1955]

- restricts hoarding — so can ensure affordability of essential commodities
- but does not distinguish between firms that genuinely need to hold stocks owing to their operations.
- act. is also ineffective in reducing price volatility.
- disincentivizes investment in storage infrastructure.

[Drug Price Control Order.]

- to ensure access to essential life saving drugs.
- but black marketing as unintended consequence

[Debt waivers]

- had almost no impact on agro productivity.
- does not create any infrastructure.
- puts the burden on taxpayers.
- increased fiscal deficit of the government — breach of FRBM targets

[Overall impact]

- unintended consequence is dent to free market principles

- results in wasteful expenditure that does not create any durable asset.
- allows over regulation rather than smart regulation

Dual regulation such as RBI and State govt. regulation of cooperative banks,etc.

Way forward

- needs amendment to Essential Commodities Act – to use restrictions on hoarding imposed only in exceptional circumstances.

Free market principles must drive wealth creation as well as regulation of government. This balance must be done while maintaining developmental principles

5.5/15

U.P.S.C

12. Discuss the three prominent themes as enumerated in the Union Budget 2020-2021. (15marks 250 words)

Budget 2020-21 has three main pillars -

- Aspirational India
- Economic Development.
- Caring Society

Aspirational India.

Agriculture and rural development.

- Kisan rail
- Krishi udaan.
- one district one product
- PM KUSUM to be expanded

Water and sanitation

- viability gap funding for hospitals in PPP mode.

Education and skills - new education policy.

- greater focus on outcome based learning

U.P.S.C

Economic development
- new Investment clearance cell
- niryat scheme for higher export credit disbursement.
- investment of 100 lakh crore in the next 5 years
- national infrastructure pipeline.

Caring society
- 5 iconic sites to have on site museum.
- proposal to close down old thermal power plants with carbon emission above allowed norms.

Challenges

- agricultural slowdown that is affecting remunerative price realisation for small scale farmers.

- shows progress of internet connectivity project - BharatNet.

Overall, it can be argued that 2020 Budget rightly has tried to remove the shock caused by the pandemic and is line with a resurgent India

6/15

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

13. Aatmanirbar Bharat Abhiyan in the agriculture sector is a step towards the transformation of agriculture into sustainable enterprises'. Clarify it. (15marks 250 words)

Atmanirbhar Bharat Abhiyan was launched to increase proliferance of local products. taking advantage of the need of economic stimulus post covid

Three ordinance were promulgated

- The Farmers Produce Trade and Commerce Ordinance - more optrone to the farmers to buy and sell even outside physical premises of the APMC mandi
- Farmers Agreement on Price Assurance and Farm Service Ordinance
  - to give fillip to contract farming and allow smooth grievance redressal
- Essential Commodities (Amendment)

Ordinance - that liberalizes storage and stocking of farm produce, hence indirectly encouraging investment in storage infrastructure.

Steps towards transformation of agriculture into sustainable enterprises

- market oriented approach that tries to bring in greater private sector participation -
  - storage infrastructure
  - contract farming
  - agri marketing investment

  market oriented approach.

Issue with the steps.

- may disintegrate APMC mandi require

- concern among farmers about MSP regime being discontinued.
- Smaller farmers may get exploited by private players — concerns.

Way forward

- essential commodities (amendment) bill should be passed to liberalise stocking norms.
- focus on food processing industries which are export intensive. eg: PM Kisan Sampada Yojana.

To double farmer's income, there is urgent need bring in market oriented reforms while providing assurance to farmers.

14. What are the major problems in the farm price policy? Evaluate the government measures to address the pressing problem in farm price policy. (15marks 250 words)

Farm price policy refers to all policy measures aimed at ensuring that the farmer gets remunerative prices for his produce

0.5/15

Issues with farm price policy.

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

15. As per World Bank data, post-harvest losses are high in grains storage in India. In this context, critically analyse the issues in food grains storage in India. Also, suggest reforms on improving food storage in India. (115marks 250 words)

Food security has strong forward and backward linkages for India's long term prosperity. In this context, food shortages can play a havoc.

[Issue in food grain shortage of India]

- lack of scientific storage infrastructure
- cold storage facilities do not meet demand.
- grain stock in FCI handle is increasing, but storage gap is also increasing
- Essential commodities Act 1955 discourages private investment in

storage infrastructure.

- hoarding is illegal but EC act does not distinguish between hoarding and genuine need for storing stock

Reforms suggested

Ashok Dalwai committee on agricultural reforms.

- integrated agri logistic systems to reduce wastage
- district and state wise storage plan
- promoting negotiable warehouse receipts in electronic form that can be used as collateral too.

- promotion of self help groups who can pool resources and invest in storage

infrastructure.

- making the accreditation part of cold storage units.
- geotagging of resources
- national live database of all cold storage inventory and their current status.

Food grain surplus and shortage are both stark realities in India. Investment in scientific storage as well as taking laws against genuine stocking must be done

5.5/15

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

16. How could the E-commerce sector impact the Indian economy? Mention its advantages and pitfalls. (15marks 250 words)

E-commerce refers to a business model that allows firms and individuals to buy and sell things over the internet.

Impact on the Indian economy.

- shock absorber for the sudden physical shop closure due to covid induced lockdown
- enhances reach to wide customer base
- India's e commerce revenue is expected to jump to 140 billion USD by 2022

Advantages of e commerce sector.

- heightened productivity and increased competition - leads to creative destruction

- reduced transaction cost for customers
- easier access including cross border trade
- faster integration of global value chains
- greater choice to customers.
- greater export of goods leading to more tax revenue for the government.

Pitfalls of the e-commerce sector

- lack of accountability of e commerce companies
- lack of digital literacy among Indians.

- low turnover generating mom and pop shops may get closed as their business may get replaced by e-commerce giants.
- predatory pricing and deep discounts are detrimental for small sellers.

Show its increasing importance in a graph.

Way forward

- implement Open Network for Digital Commerce (ONDC) that is outside the negative influence of big players.
- legislative base – data protection bill needs to be passed.

E commerce sector is vital to India achieving 5 trillion economy. Smart regulation as well as fair market principles are needed.

6.5/15

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

17. Is e-NAM a game-changer in agricultural marketing in India? How far e-NAM is advancement over APMC? Discuss critically. (15marks 250 words)

electronic national agricultural market is a pan India trading portal for farm produce that aims to create a unified national market.

A national network of mandis il envilage which can be accessed online.

E-Nam - a game changer for agricultural marketing?

- no middlemen involved in buying and selling
- lesser operational cost
- ease of doing business — single licence across the nation
- transparent price discovery

- evidence based policy making due to generation of large amount of user data.
- connects buyers and sellers from different geographic regions.

Hence eNAM is in line with greater market oriented approach.

[eNAM - improvement over APMC]

- eNAM increases choice of farmers as they can sell outside physical boundary of APMC
- still allows mandi to earn market fee
- digitised process in e-NAM hence

paperless and less prone to misuse

- cartelisation very difficult in eNAM framework, hence increased price received by farmer.

Way forward -

- state to upgrade physical infrastructure in mandis
- integration with cashless transactions platforms such as UPI.

eNAM builds on the APMC model and reduces inefficiency. It is in line with goal to increase farmers income.

5.5/15

18. 'A compromised physical component can undermine all additional layers of a systems cyber security to devastating effect'. In this context, discuss hardware cyber security concerns in India. (15marks 250 words)

Cyber systems consist of semiconductor based systems. As of today most of physical component of cyber security components are imported from other countries.

Issues with compromised physical component in Indian context

- prone to malware attacks.
- unauthorised access due to backdoor entry eg: Huawei concerns by USA
- absence of indigenous manufacturing so Indian importers unaware of vulnerabilities of hardware systems.

Steps to be taken by India / already taken

- National Critical Information Infrastructure Protection Centre (NCIIPC) has been established.
- National cyber security policy (2013) creates awareness regarding hardware cyber security problems
- National semiconductor mission that aims to reduce dependency on imports of semiconductor devices
- State level cyber security framework in model of public private partnership
- research – National Technical Research Organisation (NTRO) established.

CERT too.

Way forward

- complement by implementing National cyber security Policy (2013) in letter and spirit eg: training 500000 professionals in cyber security.

India must have multi pronged approach by reducing import dependency on one side as well as increasing human resource and research on the other hand.

6/15

19. Assess the role of Special frontier force and Assam rifles in safeguarding India's border security and internal security respectively. (15marks 250 words)

Special Frontier Force (SFF) and Assam Rifles are responsible for the border and internal security respectively.

Role of SFF in border security.

- are under the operational control of the Army but not part of the Army
- perform a variety of tasks like that of special forces.
- was involved in important operations such as Operation Bluestar.

Assam Rifles.

- central paramilitary force.
- important role in India china war of 1962
- peace keeping in north east areas of India
- but dual regulation by both Home ministry and Defence ministry leads to coordination issues.

Paramilitary forces act as first line of defence as well as can be trained quickly for rapid deployment with advanced warfare.

Mention Challenges and required steps needed for the future.

4.5/15

MAINS MOCK TEST-4 (2021)

APTI PLUS
Academy For Civil Services
The Best IAS Academy In Eastern India SINCE 2006
An ISO 9001 : 2008 Certified Institute

U.P.S.C

20. India recently signed "Christchurch Call to Action" in 2019. In this line, elaborate on what signatory governments and online service providers should commit to address the issue of terrorist and violent extremist content online and to prevent the abuse of the internet. (15marks 250 words)

"Christchurch call to Action" refers to the agreement between government and online service providers to prevent the misuse of internet /social media for terrorism /extremist purposes.

Responsibilities of governments.

- effective enforcement of applicable laws.
- counter drivers of extremist ideology by education and media awareness
- encouraging media outlets to adopt ethical standards

[Responsibilities of online service providers]

- building of community standards by transparent standard operating procedure.
- prevent upload of terrorist/extremist content
- quick deletion of such content.

[Utility of Christchurch call to Action]

- in line with responsibility as social media intermediary
- prevents misuse of public space
- brisk action that prevents spread of hate.

Abuse of internet for nefarious purposes has turned out to be one of the unintended consequences of internet proliferation.

Initiatives like "Christchurch call to Actions" allow for multistakeholder cooperation to prevent such misuse

5/15