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(To be filled by candidate)

Name of Candidate : BORKAR SURESH LILADHARRAO

Roll No. : MT23RCA058

Registration Number : ..... Date of Examination : 14 Aug 23

Exam Centre : Old Rajinder Nagar ☑ Bhopal ☐ Online ☐

Test - 3

Code : TC705

RCA Batch 2023

GENERAL INSTRUCTIONS

This Question-cum Answer (QCA) Booklet contains 56 pages. Immediately on receipt of the 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.

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Candidates should attempt the questions strictly in accordance with the instructions specified in the question paper and in the space prescribed under each question in the booklet. Any answer written outside the space allotted may not be given credit.

Question paper will be provided separately and can be taken by the candidates after conclusion of the exam.

.....

SUBJECT/PAPER
GENERAL STUDIES

Invigilator's Sign. : .....

[To be filled by the STUDENT]

Student's Queries for the Evaluator (if any write them below)

[To be filled by the EXAMINER]

Evaluator's response

(For filling by Examiners only)

Evaluator Code :

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

Signature

MACRO COMMENTS

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Q.1 अप्रत्याशित कर (विंडफॉल टैक्स) से आप क्या समझते हैं? क्या आपको लगता है कि अप्रत्याशित करों से संपदा का प्रभावी ढंग से पुनर्वितरण हो सकता है और अधिक आर्थिक समानता को बढ़ावा मिल सकता है?

(150 शब्दों में उत्तर दीजिए) 10 अंक

What do you understand by Windfall tax? Do you think that windfall taxes can effectively redistribute wealth and promote greater economic equality?

(Answer in 150 words) 10 Marks

Windfall tax refers to taxation on the sudden increase in the wealth of individual / entity.

Eg Recently seen during COVID crisis.

Windfall tax – effective Redistribution of wealth

II) Yes —
- 1) Progressive taxation
- 2) Can improve Government (Fiscal Capacity)
- 3) Prevents Concentration of wealth
- 4) Prevents misuse of Aapada Me Awsar

Eg selling of goods at high price in Crisis.

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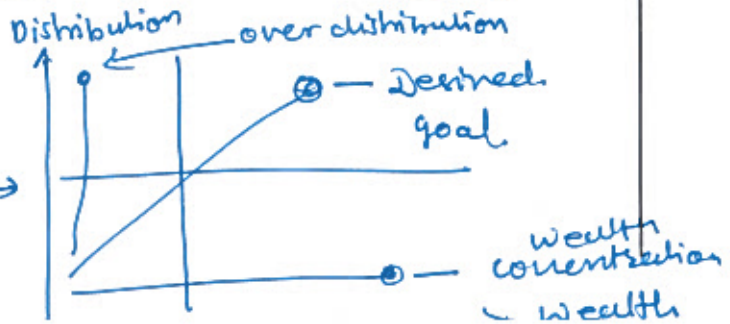
II NO
1) Just Tax Collection does not ensure Re-distribution of wealth
2) Since it is "event based" tax regime., no sustainable source of income

Greater Economic equality

YES
1) Wealth made during crisis is taxed.
2) Government can provide subsidy for other services. eg Health.
3) Prevents excessive Concentration of Wealth.

NO
1) No impact on income generation of masses
2) Not enough to bring economic equality., can serve purpose of welfare policies

Here there is need to form evidence based policy — can be done as pilot project initially



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Q.2 नई मौद्रिक नीति समिति (एमपीसी) व्यवस्था के अंतर्गत मुद्रास्फीति लक्ष्यीकरण को क्रियान्वित करने की कथित सफलताओं और चुनौतियों पर चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

Discuss the perceived successes and challenges of implementing inflation targeting under the new Monetary Policy Committee (MPC) regime. (Answer in 150 words) 10 Marks

Monitary Policy decides the rates of interest of RBI

Success
- 1) Availability of money
- 2) Economic growth
- 3) Better boost to investment
- 4) Ease of doing Business

Challenges
- 1) low cascading effect on general
- 2) Global economic conditions
  - eg Russia Ukrain war etc

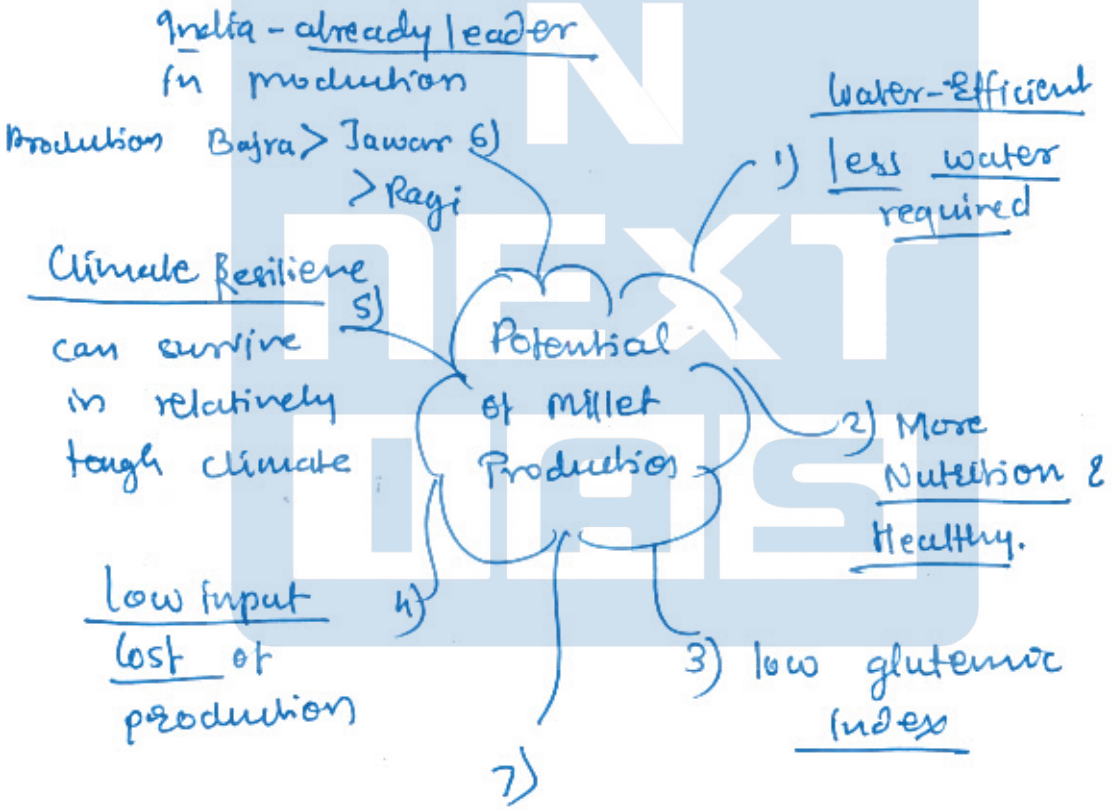
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Q.3 भारत में सतत् कृषि को बढ़ावा देने और खाद्य सुरक्षा में सुधार के लिए मोटे अनाज उत्पादन की क्षमता का आकलन कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

Assess the potential of millet production in promoting sustainable agriculture and improving food security in India. (Answer in 150 words) 10 Marks

Millets includes coarse grains like Bajara, Jawar and Ragi. Year 2023 - is celebrated as the Millet Year.



Considering above factors - Millets can have potential of Sustainable Agriculture.

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Food Security in India

Millet — **Food Security**

1) More Nutrition & Health → can reduce Hidden Hunger.

2) More Resilient Crop → can be source of food in food scarce region.

3) Bajra, Ragi, Jawar. → can be added to mid-day meal food

4) More production of millets → more access → 3A → More Affordability, More Availability.

Here, Millet production in India can contribute for improving food security in country leadings to "Sahi Poshan Desh Roshan"

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Q.4 जल जीवन मिशन में पेयजल की उपलब्धता और पेयजल तक पहुँच में क्षेत्रीय विषमता को समाप्त करने का सामर्थ्य है। मिशन के महत्त्व पर प्रकाश डालते हुए, वांछित उद्देश्यों की प्राप्ति में अंतर्निहित बाधाओं पर चर्चा कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Jal Jeevan Mission has the potential to end the regional disparity in the availability and accessibility of drinking water. Highlighting the significance of the mission, discuss the underlying impediments in achieving the desired objectives.

(Answer in 150 words) 10 Marks

Jal Jeevan Mission is government mission to provide potable tap-water to each household in country.

Reduce Double Burden on women

Significance of Jal Jeevan Mission

1) Safe drinking water to all

2) Better WASH & water, Sanitary & Health Outcome

3) Can reduce Health Vulnerability

Prevention of Diseases like Cholera, jaundice

Candidates must not write on this margin

Impediments in achieving objectives

1) Water-Use efficiency is low in Indian Household.

2) Same water is used for drinking and washing purposes.

3) High cost of building infrastructure like tanks, purification plants etc

4) High population - low resources
17% of world population and 4% of water Resources

5) Effective Co-ordination among center and state governments.

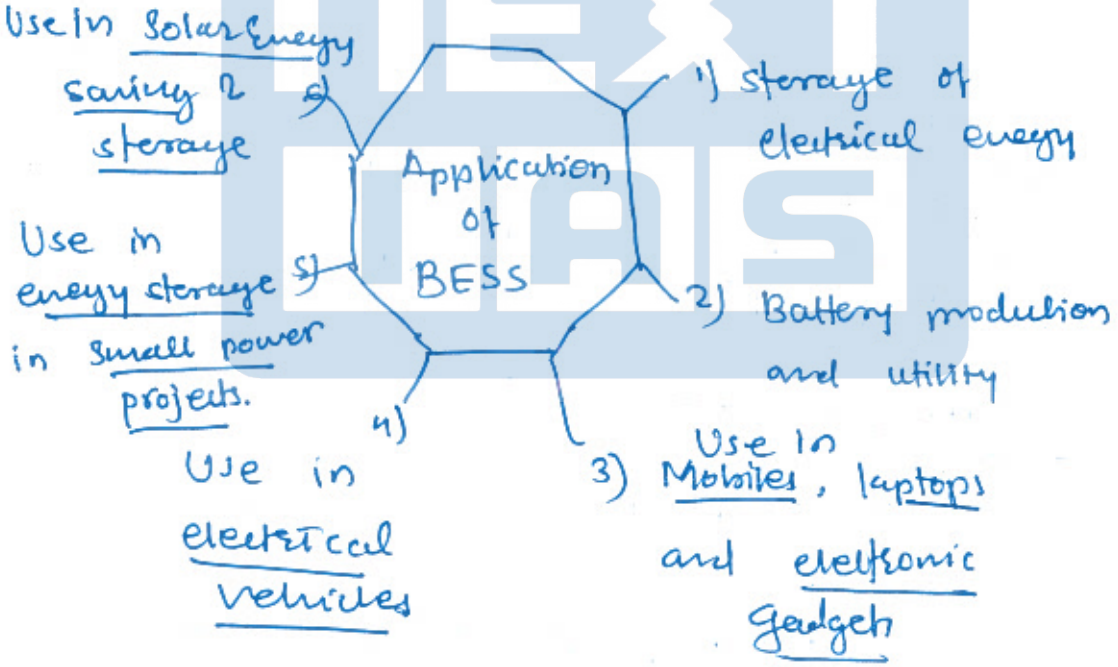
Hence, without promoting 'Jal hai to kal hai' among masses 'Har ghar Jal' is difficult to realise.

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Q.5 बैटरी ऊर्जा भंडारण प्रणाली (बीईएसएस) से आप क्या समझते हैं? इसके अनुप्रयोगों पर चर्चा कीजिए और यह भारत के ऊर्जा कार्यक्रम में किस प्रकार क्रांतिकारी बदलाव ला सकता है। (150 शब्दों में उत्तर दीजिए) 10 अंक

What do you understand by Battery Energy Storage Systems (BESS)? Discuss its applications and how it can revolutionize the energy program of India. (Answer in 150 words) 10 Marks

'Battery Energy storage system' (BESS) refers to process of storing the electrical energy in batteries to make them available as and when needed



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Potential to Revolutionise Energy program

1) Can help in transport of Energy to remote locations

2) Low Pollution — 1) More green energy sources can be used
2) Rechargeable - low in electronic waste generation

3) Problem of Load Shedding can be addressed to ensure 24X7 energy supply

4) Can Reduce Dependence on Coal and other traditional sources.

5) Reduced fluctuation in energy production
(eg) Monsoon — low supply of Coal

6) Help in achieving INDC goals of India

Hence BESS has potential to revolutionise energy program. However challenges — 1) Need more Research & Development
2) High Initial cost.

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Q.6 इसरो के गगनयान मिशन में हुए विकास और उपस्थित चुनौतियों पर संक्षिप्त चर्चा कीजिए। समाज के लिए मिशन के संभावित लाभ क्या हैं?
(150 शब्दों में उत्तर दीजिए) 10 अंक

Discuss in brief developments and challenges in the Gaganyaan mission of ISRO. What are the possible benefits of the mission for the society?
(Answer in 150 words) 10 Marks

Gaganyaan Mission of ISRO is planning to send humans in the space for study and Research.

Developments } — 1) The program of training and shifting with Russian Space Agency is going on.

Challenges
- Need more investment to realise

Benefits — Studies of Space
- Help in academics
- understanding space.

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Q.7 "जलवायु परिवर्तन और प्रदूषण से निपटने की हमारी खोज में हरित हाइड्रोजन एक सरल और जादुई समाधान हो सकता है"। भारत के राष्ट्रीय हरित हाइड्रोजन मिशन के आलोक में कथन का आलोचनात्मक विश्लेषण कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

"Green hydrogen can be the silver bullet in our quest to tackle climate change and pollution". Critically analyze the statement in light of India's National Green Hydrogen mission.

(Answer in 150 words) 10 Marks

National Green Hydrogen refers to generation of Hydrogen to use as a fuel from the sources which do have negligible carbon footprint.

Types of Hydrogen
- Black, Brown – from fossil fuel
- Pink Hydrogen – from Nuclear energy sources
- Green – from renewable sources.

National Green Hydrogen mission envision to produce SMART or green hydrogen. to reduce dependence on traditional sources of energy.

Candidates must not write on this margin

Green Hydrogen in Tackling Climate Change and pollution

1) Green Hydrogen as a fuel have better efficiency than other hydrogen.

2) It does not produce any polluting or hazardous by product in energy generation

3) The byproducts does not contribute to climate change

4) Hydrogen is clean fuel, in production of Green Hydrogen — the process produces negligible or polluting gases.

Here, Augmented with National Green Hydrogen Mission: Green hydrogen can be source of sustainable energy but



Challenges

1) High financial cost
2) low development
3) low scalability
4) need to achieve 3As — Access Affordability & Availability

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Q.8 हाल ही में जोशीमठ, उत्तराखंड में आई आपदा के आलोक में, हिमालय क्षेत्र में आपदा प्रबंधन और पर्यावरण संरक्षण के लिए मुख्य सबक क्या हैं? (150 शब्दों में उत्तर दीजिए) 10 अंक

What are the key lessons for disaster management and environmental conservation in the Himalayan region, in light of the recent disaster in Joshimath, Uttarakhand? (Answer in 150 words) 10 Marks

Recently there was occurance of landslide in Joshimath leading to re-iterate need of Better Disaster Management

Concerns and Causes

1) Over Development — in region with roads, building etc

2) Carrying Capacity — infrastructure development and population is beyond carrying capacity

3) Deforestation — in region leading to increased vulnerability

4) Un-sustainable Tourism — un regulated tourism → more pressure on ecosystem

Candidates must not write on this margin

5) Negligene of Perious studies) - like study done by Mishra Comittee (1975)

6) Fragile Ecology of Himalayan region with ~~tectasa~~ tectonic cattivities.

Lessons learned
- 1) Need to Regulate population pressure
- 2) Sustainable Developmet of infrastructe.
- 3) Sustainable Use of Reoures like forest.
- 4) Need of Hazard-Risk-Vulnerability analysis of Region

Way Ahead
- 1) Need Localised disaster Managemet plan
- 2) Actions for Enviroment Conservation
- 3) Recommendation of Mishra Comittee
- 4) Seure Himalayas plan of Indian government.

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Q.9 "पंजाब में हालिया कट्टरपंथी रुझानों से पता चलता है कि खालिस्तान का मुद्दा अभी भी उबल रहा है।" हालिया घटनाक्रम के संबंध में कथन पर चर्चा कीजिए और इससे निपटने के उपाय सुझाएँ।

(150 शब्दों में उत्तर दीजिए) 10 अंक

"The recent radical trends in Punjab show that the Khalistan issue is still simmering." Discuss the statement with respect to recent developments and suggest measures to handle it.

(Answer in 150 words) 10 Marks

Regionalism is tendency to associate identity with a region so strong that it is exclusive of others regional identities.

eg Son of Soil

- Regionalism beyond National values and spirit is known as ~~casa~~ Separatism / Separatist Regionalism

eg Nagalim demand Khalistan

Khalistan still simmering – recent Development

1) Slogeneering in favor of Khalistan and against India
2) Attack on Indian people outside India
   eg USA, Canada
3) Bounty of Indian National flag
4) Recent speeches of separatist leader calling for Khalistan.

Candidates must not write on this margin

5) Protect against Indian Embassies and Commissions in other countries

Measures to handle

1) Development — in the region - with health, education and basic needs

2) Border Safety — on India-Pak. border to tame infiltration of illegal migrants & terrorist

3) Narco-Terrorism - prevention in Punjab region

4) Community Consultation - with social, religious leaders

5) Strong legal action - on violation of law & order & fuelling separatist tendencies to prevent Butterfly effect

Here Development & Discourse are the way ahead for Ek Bharat Shreshta Bharat

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Q.10 ड्रोन संचालन में आसानी और साथ ही इसके संचालक की अनामिता, भारत की सीमा सुरक्षा की चुनौतियों में वृद्धि करती है। विस्तारपूर्वक वर्णन कीजिए और सीमावर्ती क्षेत्रों में ड्रोन समस्या से निपटने के लिए सुझाव दीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

The anonymity and ease of drone operation contribute to the challenges of India's border security. Elaborate and give suggestions to tackle the drone problem in border areas.

(Answer in 150 words) 10 Marks

Recently Indian govern border forces foiled the drone sent by Pakistan to Indian territory.

Anonimity & Ease of Operation : Challenge

1) Difficult to trace the operators

2) Digitally Controlled Remotely operated

3) Beyond legal Jurisdiction

4) Nothing can be established with drone as evidence.

5) Operating drone does not need high skills.

Candidates must not write on this margin

Suggestion — 1) Smart fencing on Border

2) Strong Surveillance with technology.

3) Bilateral Co-operation among nation to ensure safety of each other border

4) Diplomatic Pressure: Evidence can be used to create pressure at global platform like UN

5) Mechanism like S-400 & Iron Dome which can intercept and attack on command.

6) Ground workers, awareness in villages near border areas

Hence effective border management with 24X7 monitoring is the way ahead

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Q.11 विद्युत संशोधन विधेयक, 2022 उपभोक्ताओं, डिस्कॉम के साथ–साथ पर्यावरण के लिए कई लाभ प्रस्तुत करता है। सविस्तार वर्णन कीजिए। साथ ही इसकी कमियों को भी सूचीबद्ध कीजिए और उन्हें दूर करने के लिए कुछ उपायों का भी सुझाव दीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Electricity Amendment Bill, 2022 brings several advantages for consumers, DISCOMs as well as the environment. Elaborate. Also, list out its shortcomings and suggest some measures to overcome them. (Answer in 250 words) 15 Marks

Advantages —
1) Filing of complaint been easy
2) Grievene redressal
3) Penalty on non compliance etc

Shortcomings

1) Implementation needs special dedicated Agencies
2) Effectiveness of the law depends on ground agency
3) Already pending complaints.

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Candidates must not write on this margin



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Q.12 भारतीय प्रतिभूति एवं विनिमय बोर्ड (सेबी) शेयर बाजार के नियमन और निवेशकों के हितों की सुरक्षा में महत्त्वपूर्ण भूमिका निभाता है। दिये गए कथन के आलोक में, सेबी के समक्ष आने वाली चुनौतियों पर प्रकाश डालिए और इस संबंध में सुधारों का सुझाव दीजिये। (250 शब्दों में उत्तर दीजिए) 15 अंक

Securities and Exchange Board of India (SEBI) plays an important role in the regulation of the share market and safeguarding the interests of investors. In the light of given statement, highlight the challenges faced by the SEBI and suggest reforms in this regard. (Answer in 250 words) 15 Marks

SEBI is one of the significant financial regulatory bodies of India.

SEBI primarily looks into issues related with share market and associated issues.

Role of SEBI

1) Monitoring & Surveillance of share market

2) Prompt action on any illegal activity

3) Keeping watch on suspicious trend to find problem

4) Text Handling issues like "Insider trading" etc.

Candidates must not write on this margin

Challenges faced by SEBI

1) Lack of clear provisions in law and regulations

2) Political interference in functioning of organisation

3) Corruption within institution eg Chanda Kochar - Videocon case

4) Difficult to trace offenders taking shelter in safe heavens

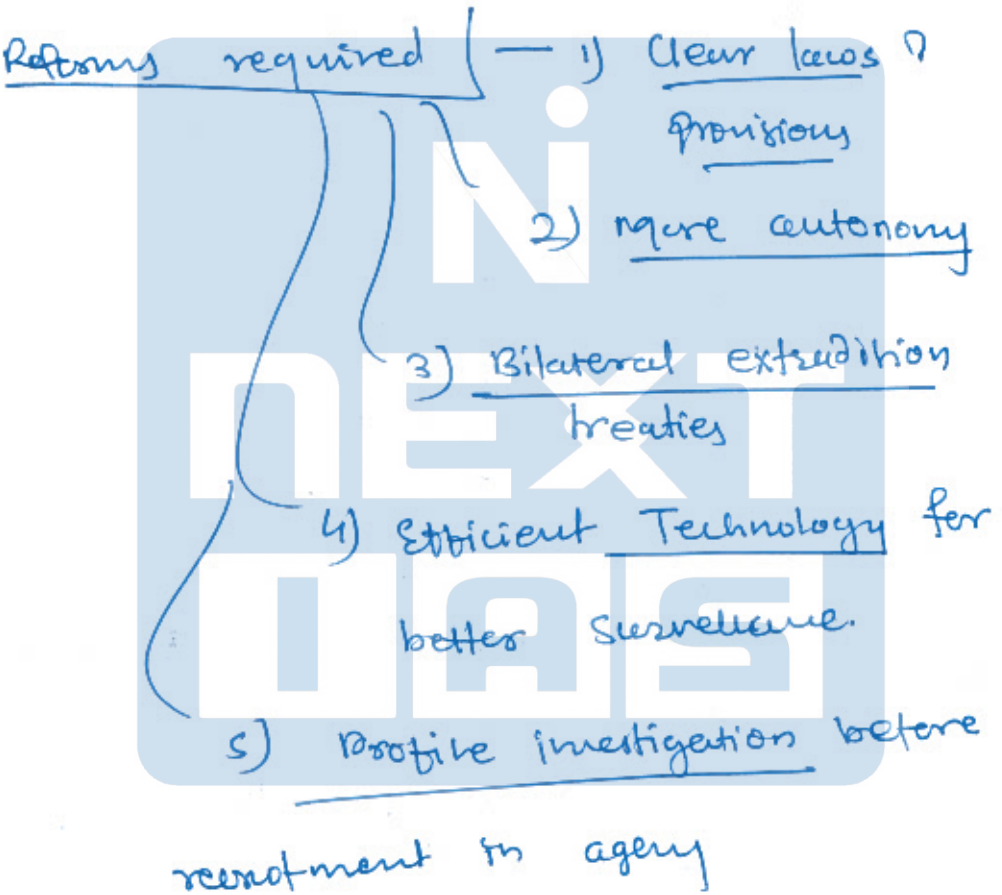
5) Round-Tripping, Shell Companies, Hawala and other ways of Money laundering - difficult to trace.

Candidates must not write on this margin

5) Multiple Agencies with mandates.

eg ED, SEBI, IB, etc.

7) Lack of Autonomy to the Institution



Candidates must not write on this margin

Q.13 भारतीय अर्थव्यवस्था में एक प्रमुख योगदानकर्ता होने के बावजूद, कृषि क्षेत्र कई बाधाओं से ग्रस्त है जो इसकी वृद्धि और विकास में बाधा डालते हैं। इन बाधाओं पर काबू पाने में प्रौद्योगिकी की भूमिका पर चर्चा कीजिए।

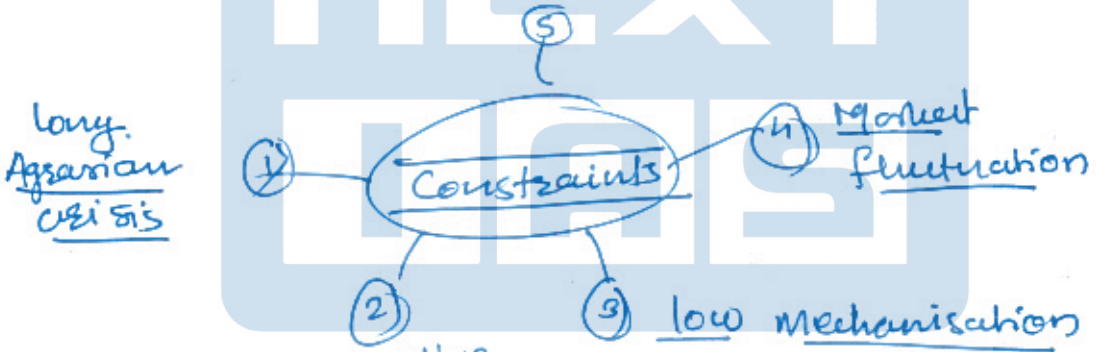
(250 शब्दों में उत्तर दीजिए) 15 अंक

Despite being a major contributor to the Indian economy, the agriculture sector is plagued by several constraints that impede its growth and development. Discuss the role of technology in overcoming these constraints.

(Answer in 250 words) 15 Marks

Indian Agriculture contributes around (17%) to Indian GDP. and provides employment to (44%) (directly) of Indian population.

Low Investment



less remunerative
Rs. 10218 (2020) (PIB)
Rs. 6248 (2015)

Role of Technology to overcome

1) Mechanisation
   1) Can improve efficiency
   2) Saving of time reducing "TIME POVERTY"

Candidates must not write on this margin

3) Reduce food wastage

(Ex) Thresher Machine.
Sowing Machine

4) Ease of doing Agriculture

(Ex) Reduce Human Hardwork with use of Tractors.

II Biotechnology

1) Improved seed quality
(Ex) GM BT Cotton seeds

2) Bio-Pesticides, Bio-Herbicides
Bio-Nutrients
(Ex) Nano Urea.
Neem Coated Urea.

3) Improved Resilience of crop for climate

III Drone Technology

1) Aerial Supervision through Drones

2) Targeted delivery of Pesticides, Herbicides etc.

3) Broad, Monitoring and feedback through Drone.

Candidates must not write on this margin

(IV) Food Processing Technology

1) ~~Eun~~ Food fortification

(En) Rice fortification

2) Shelf life – Improvement

3) Better Competitive moduls for Market

Better Remuneration

4) Backword + fowcard linkage and ~~fractr~~ Industrical engagment

Here through technology, multiple hurdles and constraints can be addressed to achieve Doubling farmer income goal in future

Candidates must not write on this margin

Q.14 पर्यावरण एवं प्राकृतिक संसाधनों पर सिंचाई के प्रभाव का मूल्यांकन कीजिए, और कृषि में सिंचाई पद्धतियों की संधारणीयता और समता सुनिश्चित करने के लिए उपाय सुझाएँ। (250 शब्दों में उत्तर दीजिए) 15 अंक

Evaluate the impact of irrigation on the environment and natural resources, and suggest measures to ensure the sustainability and equity of irrigation practices in agriculture.

(Answer in 250 words) 15 Marks

Irrigation is crucial input for agriculture in country like India with variation in Rainfall and dependence on Agriculture

Irrigation
- 1) Drip irrigation
- 2) Sprinkler irrigation
- 3) Canal irrigation

Impacts of irrigation on Environment & Natural Resources

(I) POSITIVE

1) Improved efficiency of Agriculture

2) Boost to other ecosystem around & support

Candidates must not write on this margin

on Canals, Dams. - for flora, fauna

3) Colony effect due to distribution of water.

Negative impacts

1) Excessive water extraction from groundwater

2) Salinity - due to extractive practices.

3) Mixing of Pesticides & Herbicides with surface flowing water.

4) Ecosystem disturbances and Negative feedback - (fall in water levels in well, ponds etc

5) Construction of Dams, Canals and subsequent Deforestation

Candidates must not write on this margin

Measures for Equity & Sustainability

1) Inter linking of Rivers
   - 1) Better distribution of water resources
   - 2) from excess water to water scare region
   - 3) Address uneven development of Agriculture

2) Use of Technology
   - 1) Targeted use/delivery of water.
   - 2) Drip irrigation & Sprinkler irrigation → reduced losses
   - 3) Checking Supply-Demand of water for plants using Data Analysis
     - (Ex) Soil Health Card.

3) Water Harvesting & Water Conversion from Saline to usable
   - (Ex) Hivare Bazar case study Maharashtra
   - case study Israel

Hence immediate and long term measures are required to achieve equity & sustainability

Candidates must not write on this margin

Q.15 परमाणु ऊर्जा और अंतरिक्ष प्रौद्योगिकी के क्षेत्र में क्रमशः डॉ. होमी जहाँगीर भाभा और डॉ. विक्रम अंबालाल साराभाई के योगदान से भारत को रणनीतिक रूप से किस प्रकार लाभ हुआ? (250 शब्दों में उत्तर दीजिए) 15 अंक

How India benefitted strategically from the contributions of Dr. Homi Jehangir Bhabha and Dr. Vikram Ambalal Sarabhai in the fields of atomic energy and space technology respectively?
(Answer in 250 words) 15 Marks

Dr. H. Bhabha and Dr. Vikram Sarabhai were the pioneers of atomic energy & Space technology respectively

1) Dr. H. Bhabha

1) father of Atomic energy development in India

2) Contributed for peaceful use of Nuclear energy

3) Contributed for Nuclear weapon development. → ~~weapons~~

4) Contributed in foundation of Atomic Research Center – Trombay, Mumbai

Candidates must not write on this margin

2) Dr. Vikram Sarabhai

1) Father of Indian Space Mission

2) Contributed for formation of Separate Space & Technology department → further it became ISRO.

3) Continued for Rocket technology and Missive development &

4) Nourished future generations of scientist like Dr. APJ Abdul Kalam.

5) Establishment of Indian Institute of Management, Ahmadabad.

Hence Both continued for building Nation.

Candidates must not write on this margin



Candidates must not write on this margin

Q.16 जेनरेटिव एआई निकट भविष्य में नवाचार की सीमाओं को आगे बढ़ाने का सामर्थ्य रखता है, फिर भी इसका सामाजिक प्रभाव पर्याप्त चुनौतियाँ खड़ी करता है। सविस्तार उत्तर दीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Genreative AI holds the potential to push the boundaries of innovation in the near future, yet its societal impact raises substantial challenges. Elaborate. (Answer in 250 words) 15 Marks

Generative AI is field of Artificial Intelligence in which Artificial Intelligence can produce its own outputs based on the data Collected by it.

eg Chat GPT → creating stories.
↳ writing e-mail. etc.

Potential of Innovation

1) Better Analysis & output with vast Data input/ Collection.

2) improved efficiency due to fast operations

3) Ability to do Complex operations, permutation & Combination which are difficult for humans.

Candidates must not write on this margin

Societal impacts

1) Hampers Human Creativity
   - 1) By outsourcing of everything
   - 2) limiting enthusiasm and innovation & creativity

2) Unemployment
   - 1) If Majority tasks if performed by AI, will reduce jobs.

3) Mental Health
   - Can boost 'Always Connected' culture and long screentimings

4) Overdependence on AI for everything and day to day activities.

5) Moocle Hazard - People avoiding doing their task sincerely.

   (Eg) Homeworks done using AI by students.

Candidates must not write on this margin

c) Cyber Security :

With low cyber security, Data breach, Data leak etc is possible

7) At nascent stage : we do not know the future implications of excessive AI development

8) Outsourcing of all activities of Human or particularly creative activity

9) Frauds & Malpractices using AI.

(Eg) Deepfakes.

Hence, there is need to take cautious step before relying more on AI.

Candidates must not write on this margin

Q.17 नवंबर 2022 में मिस्र में COP27 संयुक्त राष्ट्र जलवायु परिवर्तन सम्मेलन में लॉन्च किये गए "जलवायु के लिए मैंग्रोव गठबंधन" के उद्देश्य को स्पष्ट कीजिए। उष्णकटिबंधीय देशों की तटीय पारिस्थितिकी को बनाए रखने में मैंग्रोव के महत्त्व पर विस्तार से प्रकाश डालिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Explain the purpose of the "Mangrove Alliance for Climate" launched at the COP27 UN Climate Change Conference in Egypt in November 2022. Elaborate on the importance of mangroves in maintaining the coastal ecology of tropical nations. (Answer in 250 words) 15 Marks

Mangroves are important part of Coastal Ecosystem which have multiple enviromental benifits. ~~for~~ ~~the~~ They are at boundary of land & water ecosystem.

Purpose of Mangrove Alliance for Climate

1) Safety and Ecological security of Mangroves

2) Collective & Collaborative efforts for sustainibility of Mangroves

3) Prevention & preservation of Mangroves for ~~better~~ climate change and implications.

Candidates must not write on this margin

Importance of Mangroves

1) Maintain multiple **ecological services** at the coast.

2) **Natural Barrier** - against high tides, Tsunami

(eg) 2004 Tsunami impact was reduced where mangroves existed.

3) **Ecotone** between land & sea gives ecological space for flora and fauna for growth & survival

4) **Salinity** ~~and tides~~ of Oceanic waters does not affect land ecosystem to greater extent due to presence of mangroves

Candidates must not write on this margin

5)

Candidates must not write on this margin

Q.18 आपदा प्रतिरोधी बुनियादी ढाँचे के लिए गठबंधन का गठन भारत में आपदा प्रबंधन दृष्टिकोण को और अधिक मजबूती प्रदान करता है। टिप्पणी कीजिए। भारत में आपदाओं से निपटने के लिए एक नई रणनीति की आवश्यकता के औचित्य सिद्ध कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

The Formation of the Coalition for Disaster Resilient Infrastructure brings more robustness to the Disaster Management approach in India. Comment and justify the need for a new strategy to tackle Disasters in India. (Answer in 250 words) 15 Marks

Disaster is an event where a hazard leads to damage to social, economic & environmental elements to the extent that requires external aid and support to cope up with it.

Significance of CDRI

1) Global efforts for Resilience
2) India's growth in diplomatic & global status
3) In line with UN International strategy for Disaster Risk Reduction
4) Boost Sendai framework of Disaster Management in Region
5) Re-inforce the mentions of Disaster Management Act 2005 & Plan (2009) in country

Candidates must not write on this margin

Need of New strategy to tackle Disasters in India beacuse of challenges like

(I) Polity
- 1) No mention of Disaster mangement in schedule VII
- 2) Need updation of Disaster Managment Act 2005
- 3) No Quantified Defination of Disaster
  - (eg) Federal Emergency Management Agency USA Definition of Disaster — (if 10 dead or 100 injured in one event — then Disaster)
- 4) No provision to declare Disaster — a state disaster or National Disaster
  - (eg) COVID pandemic

(II) Economic
- 1) loss of Infrastructure — tangible and intangible
- 2) loss of Developmental gains
- 3) Change in Resource Utilisation Development to Recover, Reconstruction

Candidates must not write on this margin

III Recent Experiences

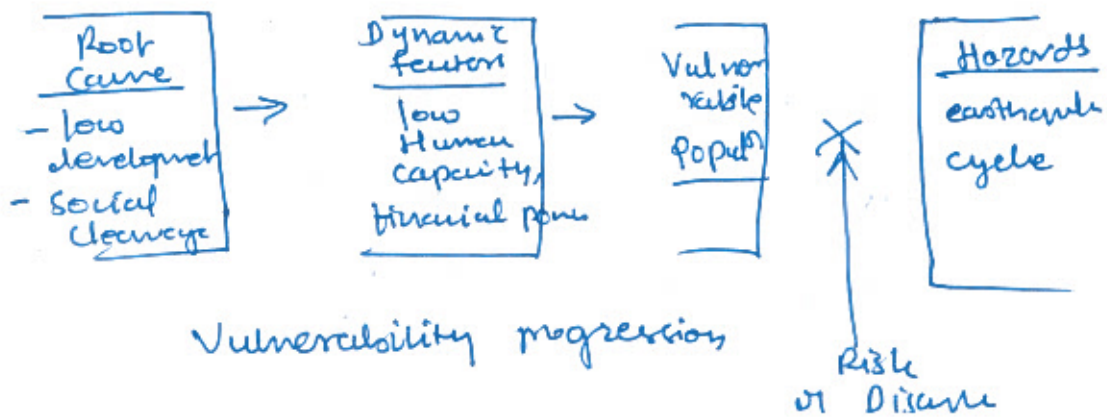
1) COVID pandemic required
   1) Multiple Agency cordinati.
   2) Clear legal provisions
   3) Collective Efforts of States & Center

2) Odisha Train Tragedy required.
   1) Sub plans for infrastructure resilience
   2) Better Integration of Geo-Technology-economy (Resources)

IV Social
1) Highest Population - 1.4 Bn (UN Data)
2) Demographic dividend stage
3) Target of 5 trillion economy & developed country by 2047

Hence there is need of robust & New strategy to tackle disasters in country.

Way forward - PRESSURE & RELEASE MODEL of Disaster Management



Candidates must not write on this margin

Q.19 महत्त्वपूर्ण बुनियादी ढाँचे (क्रिटिकल इंफ्रास्ट्रक्चर) और प्रमुख निगमों को लक्षित करने वाले रैंसमवेयर हमलों में हुई हालिया वृद्धि ने मजबूत साइबर सुरक्षा उपायों और नीतियों की तत्काल आवश्यकता पर प्रकाश डाला है। इस प्रवृत्ति में योगदान देने वाले प्रमुख कारकों पर चर्चा करते हुए, विभिन्न क्षेत्रों पर इन हमलों के प्रभाव का विश्लेषण कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

The recent rise in ransomware attacks targeting critical infrastructure and major corporations has highlighted the urgent need for stronger cybersecurity measures and policies. Discussing the key factors contributing to this trend, analyze the impact of these attacks on various sectors.

(Answer in 250 words) 15 Marks

Global Risk Report by World Economic Forum identify cyber attacks as top 10 Risks for India.

Factors leading to Cyber Attacks

1. New era of Hybrid warefare
2. Development of Sophisticated technology.
3. Digitally controlled & Remotely Operated
4. Difficult to monitor, surviellene, and catch the criminals
5. No fear of law/Police of land state can attack from beyond/outside territory

Candidates must not write on this margin

6) Easy Gains through - Fishing
Ransomware etc

Impact of Cyber Attacks

1) National Security
   1) Internal security – with attacks on critical infrastructure
   (eg) Kudankulam Attack Recently
2) Economic Sector
   1) loss of Government Revenue. (due to loss to Corporation)
   2) Can lead to Butterfly effect
   3) Hampers Ease of Doing Business in country
   4) loss of Revenue & gains of private firms
   5) ~~Bad~~ Burden on Government fiscal capacity to manage such attacks

Candidates must not write on this margin

(3) Other Impacts — Defense Sector

1) ~~loss~~ threat to Sensitive Data of Defense

2) Threat to external security of country

Other Impacts

1) Threat to Right to privacy of Individuals (Art 21)

2) Threat to sensitive & critical, confidential formulas, data,
(eg) Adhar Card data leak

3) Breach of Intellectual property Rights.

Hence there is need of Robust Cyber Security measures & policies to address such attacks.

Way forward
- S – strong Surveillance
- M – strong Managment of Data.
- A – Awareness
- R – Regulations
- T – Technical competency – (CERT-IN)

Candidates must not write on this margin

Q.20 सीमा सुरक्षा के संदर्भ में, तटीय और स्थलीय सीमाओं के प्रभावी और कुशल प्रबंधन को सुनिश्चित करने के लिए विभिन्न सुरक्षा एजेंसियों के बीच सहयोग और समन्वय को कैसे बेहतर बनाया जा सकता है?

(250 शब्दों में उत्तर दीजिए) 15 अंक

In the context of border security, how can cooperation and coordination between different security agencies be improved to ensure effective and efficient management of coastal and terrestrial borders?

(Answer in 250 words) 15 Marks

India with 2700 (Appmx.) km Coastal border and land Borders with neighbours like Pakistan & China needs Robust Border Management

Ways to improve Co-operation & Co-ordination

1) Standard Operating procedures for Union Agencies (SOPs)

2) Multi-Agency operations and drills. eg BSF & ITBT.

3) Pre-made Plan of Action and Policies

4) RVC-Analysis
Risk-Vulnerability & Capability Analysis

Candidates must not write on this margin

5) Training, Skilling & Reskilling among various Agencies

6) Unified Command system - during operations

eg State Police, CISF, BSF working together - Who will be the final commanding authority should be specified.

7) Patrolling & surveillance by Multiple Agencies

eg Coast Guards & BSF around Gujarat Coast.

8) Seminar and Workshops of various forces together.

9) Use of Technology: for information sharing, simulation practices & effective communications

Candidates must not write on this margin

b) Better infrastructure with multipurpose Utility

eg Amphibian vehicles – to use on land & water both.

ii) Apart from this for better Border safety and Management Recommendations of Kakodkar & Shekatkar committee can be utilised.

eg – Development to villages at the border

Have a long term vision & steadfast action is necessary to ensure effective border management

This will reduce

1) Narco-Terrorism
2) Terrorism
3) Illegal migration
4) Pirates attack in coast.

5) Improved National Security.

Candidates must not write on this margin

Space for Rough Work

NEXT IAS