

NEXT IAS

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(To be filled by candidate)

Name of Candidate :

MANAN BHAT

NEXT IAS Roll No.:

MT23MACEN240

Date of Examination :

10/Aug/2023

Exam Centre : Old Rajinder Nagar

Bhopal

Online

Test Code :

TC037

Program :

FLT

FLT+

MAIN TEST SERIES 2023 (FULL LENGTH TEST-3)

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.

Candidates must read the instructions on this page and the following pages carefully before attempting the paper.

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. :

(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

Next IAS ID: MT26MACEN240, TC037, 12-05-2023 02:27 AM



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 is imposed on a company where it makes huge profit not because of expansion of company's output but because of prevailing international scenario which led company to get much gain.

Ex → Petroleum companies were charged windfall tax because of international high price of petrol - product due to Russia-Ukraine war.

Windfall tax :- promoter of equality

1) Progressive taxation :- as it is charged on rich and hence revenue can be used to serve needy & poor.

2) Socialism:- As per Oxfam:- Top 1% Indians own 29% resour, hence such taxation would fill the wide gap by taxing rich

However, they are not sole solutions & must

1) Government by charging windfall taxes is not using them on social security schemes but for capital expenditure.

2) Poor is not given any tax concession on buying the same thing leading to burden of windfall tax on poor due to more cost price.

windfall tax, during Ukraine - Russia war was a necessary evil to ensure India's socialistic principles of development.

4) During Covid-19 :- Besides several shock, India claimed V-shaped recovery with effective inflation targeting despite shortage of medical articles.

Challenges:-

1) Due to challenges like :- Shortage of agror commodities like Tomatoes, it is difficult to target inflation.

2) Black Money & Parallel Economy :- by bringing more money in circulation hinders the inflation and monetary policy.

3) Agency of banks :- to implement and bring renewed interest rates so as to ensure effective inflation targeting.

Still, monetary policy committee and effective supply side measures together can be fruitful for successful inflation targeting.

Q.3

भारत में सतत 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

With 2023, as International year of Millet, India has promoted its cultivation.

millet as sustainable crop

- 1) Dry land farming:- with < 75 cm of rainfall is suitable making it Drought Resistant.
- 2) White rice:- and easily digestible.
- 3) Lack of inputs like fertilizer:- in areas like Rajasthan and here can be used for its growth.
- 4) Water Sustainable:- As it require less water & hence less burden on groundwater; hence can be encouraged in areas like Punjab, Haryana etc
- 5) Less growing period:- of nearly 3 months providing extra money in less time for farmers.

Millet's- Solution to food security

- 1) Huge potential of growth in dry-land farming leading to high income.
 - 2) PDS:- It was used in PDS to promote its growth.
 - 3) MSP regime:- for Bajra, Millet & Ragi also promote its growth.
 - 4) Help in tackling Rich wheat supply promoting food variety.
 - 5) Helps in tackling malnutrition problems by its sale via PDS.
- Millet's, if procured at MSP then it will surely boost its production in the long run.

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 was brought to provide piped water supply to every rural household.

Significance:-

- 1) Basic need (Art-21) :- of drinking water to every section of society.
- 2) Health aspects :- do contain diseases like Diarrhoea due to substandard quality of drinking water.
- 3) Women empowerment :- In patriarchal Indian society, women as per division of labour waste their long hours to get water.
- 4) Better WASH :- with proper water, sanitation strategies, human capital can be enhanced.

5) Curb climate change impacts :- due to rise in temperature, aquifers are depleting, hence JIM as a tool to compensate it.

Impediments

- 1) Bureaucratic apathy and sectarianism leading to delay in implementation.
- 2) Time consuming :- due to geographical barriers (Ex) → in Uttarakhand leading to delay in implementation.
- 3) Fund erosion :- and delay in getting extra funds.
- 4) State-Union imbalance :- leading to delay in implementation.

Solutions

- 1) Social audit based scheme feedback to be strengthened.
 - 2) Cretagged villages which are served under JIM.
 - 3) MANREHA workers to provide assistance.
- In above ways SDA goal ~~30~~ can be achieved effectively.

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 Systems (BESS) are the devices which are used to store energy and can be used to serve remote areas which lack infrastructure related to energy.

(Ex) Li-ion based BESS in PSLV.

Applications

- 1) Seamless energy :- even in remotest part, encompassing different geographies.
- 2) store energy for future usage :- so as to ensure energy security.
- 3) Used in electric vehicles & hybrid vehicles.
- 4) To be used in modern fleet like electric steamer etc.

5) In ~~Solar~~ space satellites to provide them energy (Ex) Li-Ion BESS in POEM mission

Revolutionary

1) To reach goal of Net Zero emissions by 2070, by eradicating thermal fuels.

2) Attaining 500 GW of non-fossil based energy & follow India's NDC.

3) In sync with International Solar Alliance and can bring seamless energy transfer across the borders.

Need of the hour

1) To reach Rare Earth metals like Lithium, from Central Asia to further push growth of BESS.

2) Harness PLI scheme for its manufacturing.

Hence, In above ways BESS can be further encouraged to attain clean energy sources and attain SDG-13

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 Gaganvaan mission of ISRO. What are the possible benefits of the mission for the society? (Answer in 150 words) 10 Marks

Gaganvaan mission is an Indian space exploration of India with two components :-

- 1) Unmanned mission
- 2) Manned mission to space

Developments

- 1) Most of its components like launch vehicle and shuttle are indigenous.
- 2) Training of astronauts in Russia.
- 3) Efforts in development by ISRO.

Challenges

- 1) Safety :- to ensure safety of astronauts as ~~it~~ it is being India's first manned program.

2) Technical aspects :- to ensure safe landing and proper communication channels.

Benefits :-

1) Space Study :- to enhance understanding with respect to space environment.

2) Mineral Search :- to find possible resources which can be used to benefit society.

3) Energy Sources :- to find possible sources of energy.

4) Astronauts as role models :- hence leading to inhibition of Brain drain.

This mission would be panacea in space sector Indis's mettle in space sector & essentially bring ISRO to global limelight.

Q.7

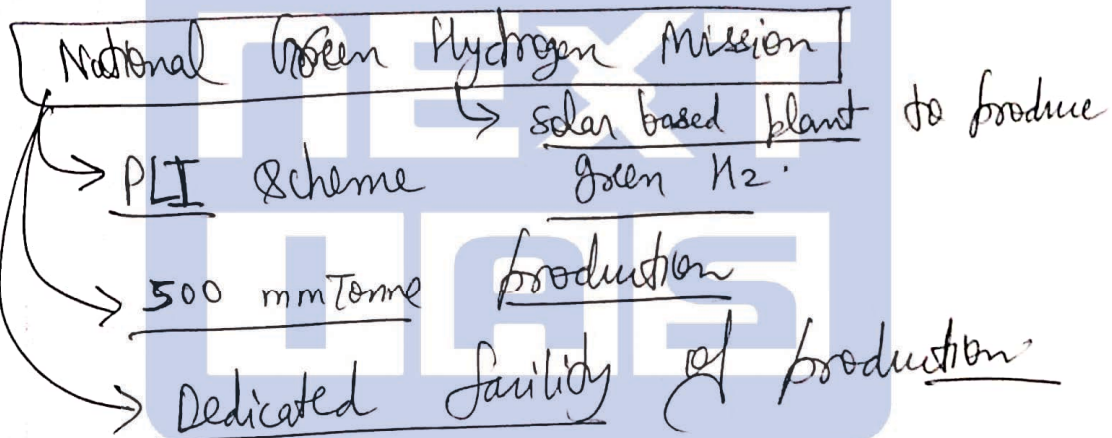
“जलवायु परिवर्तन और प्रदूषण से निपटने की हमारी खोज में हरित हाइड्रोजन एक सरल और जादुई समाधान हो सकता है”। भारत के राष्ट्रीय हरित हाइड्रोजन मिशन के आलोक में कथन का आलोचनात्मक विश्लेषण कीजिए।

(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

India bring National Green Hydrogen Mission in line with the target to achieve net 0 by 2070 and increase share of renewable energy to 50%.



Green H₂ as a remedy of climate change & pollution

1) Clean Energy source :- As reaction of $2H_2 + O_2 \rightarrow 2H_2O \uparrow$, would only emit water vapour.

- 2) Clean industry (Ex) - Green steel using green N_2 as an input.
- 3) Less emission :- as it is formed from the electrolysis by renewable energy source.
- 4) Seamless availability :- due to portable nature and hence inhibiting pollution in a coordinated way.

Certain Apprehensions

- 1) Huge calorific value :- It burns emitting huge energy leading to high temperature.
- 2) Hazardous to carry via tanker :- inflammable nature leading to explosion.

However, with effective safety standards like :- Producer's liability, responsible production of green N_2 can be promoted.

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

Due to sedimentary, rock formation of Himalayan mountain, this region is prone to landslide & Earthquake.

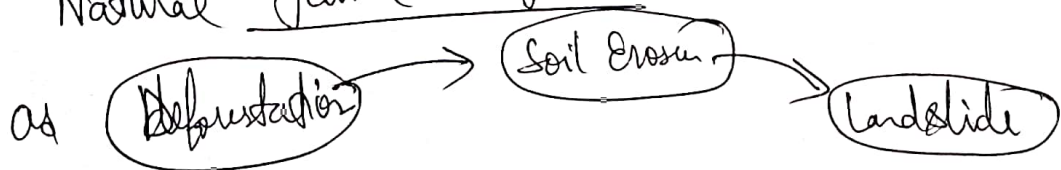
Recent disaster in Joshimath

- ↳ Events of land subsidence due to haphazard town growth.
- ↳ Human pressure due to tourism
- ↳ Dabwan Vishnuyad Project

Lessons to be learnt :-

(1) Environmental Conservation

a) Natural fauna & flora must be maintained



- b) Sustainable Tourism to minimize nature's loss and create balance.
- c) Maintain natural aquifers :- As envisage by Mc (Mishra committee) so as to maintain stability in region.
- d) Proper drainage to be developed (Mc Mishra committee)

② Disaster Management

- a) vulnerable section at the key of relief & rehabilitation work to enhance their living standards (2nd ARC)
- b) Hazard Zone Mapping
- c) Proper Environmental Impact Assessment to ensure sustainability.
- d) Measures like Terrace Farming, Aircraft Probing, Retaining walls, Afforestation, Reinforced buildings in line with Energy Conservation Bldg Code to be developed.
- These lessons are important to remember so as to not repeat the same mistakes any where else in India.

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.

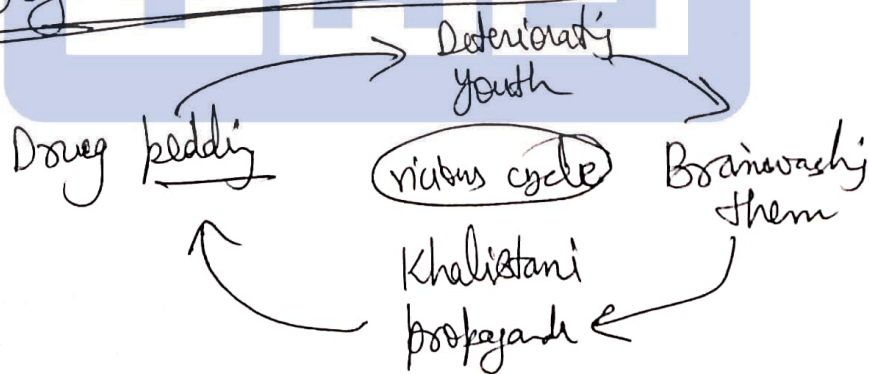
(Answer in 150 words) 10 Marks

Recently, pro Khalistan leader Amrinder with his associates create chaos in Punjab.

Khalistan :- still a problem

a) State actors :- like Pakistan acting as a motivator for such activities

b) Organized crime nexus :-



c) Strong voice from foreign soil :- like Canada and Pakistan which further fuel the ~~Indi~~ secessionist tendencies.

Khalistan: A dead issue

- a) Efforts of Sikh Leaders like Akali Dal to promote pro-Indian sentiments.
- b) Decline post Operation Blue Star and democratic dialogue with separate state.

Certain measures :-

- 1) Better engagement with the youth to curb drug peddling.
- 2) Effective border patrolling & intelligence to tackle state actors inherent like Drone Cameras, GIS based surveillance etc.
- 3) Better coordination like :-
to ensure effective policy system.



with more job opportunities & better agri productivity. Khalistan issue would eventually end with accomodative stance of Indian government.

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

With rising cases of surveillance via drones and using it for drug peddling across India-Pak border poses several internal security threats.

Challenges

- 1) Unmanned:- hence operator can't be held to ensure proper policing and knowing the exact aim.
- 2) Seamless:- and has wider reach and can do surveillance of security movements compromising the internal security.
- 3) Drug trafficking:- across the borders leads to organised crimes.
- 4) Difficult to trace:- because it has no ownership details.

- 5) Potential weapon:- As bomb can be fixed on it to cause potential damage.
- 6) Trace porosity of border:- Compromising the travelling across the border without any legal documents.

Remedies

- 1) Technical - Solutions :- a) LASER technology to destroy it.
- b) Precision based Radar:- to detect the presence.
- 2) Surveillance :- via thermal imaging to check incursion during night.
- 3) Coordination with GIS based mapping technology to track their prospective routes and save their origin.

In above ways, drone can be saved and destroyed to sense
India's security.

- 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



Q.12 भारतीय प्रतिभूति एवं विनियम 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 has recently mixed with the problems like issues of Insider Trading bringing its role in Securing investors rights in limelight.

SEBI is a regulator of:-

- Brokers
- Stock exchanges like BSE, NSE etc.
- Depositories
- Stock exchange employees etc.

Challenges faced:-

- Malpractices :- like Insider trading leading to erosion of investors' faith in SEBI.

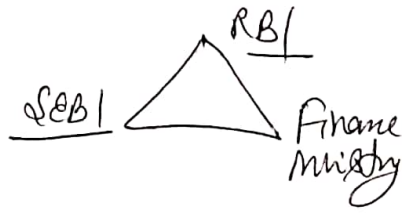
- b) Professionalism :- in employees is missing leading to problems like delay in settlement of payments etc.
- c) Lack of Modernism :- for ex) Amsterdam stock exchange works for 24x7 hours and even foreign companies can list there.
- d) Government's interference :- leading to lack of honest decision making.

Reforms :-

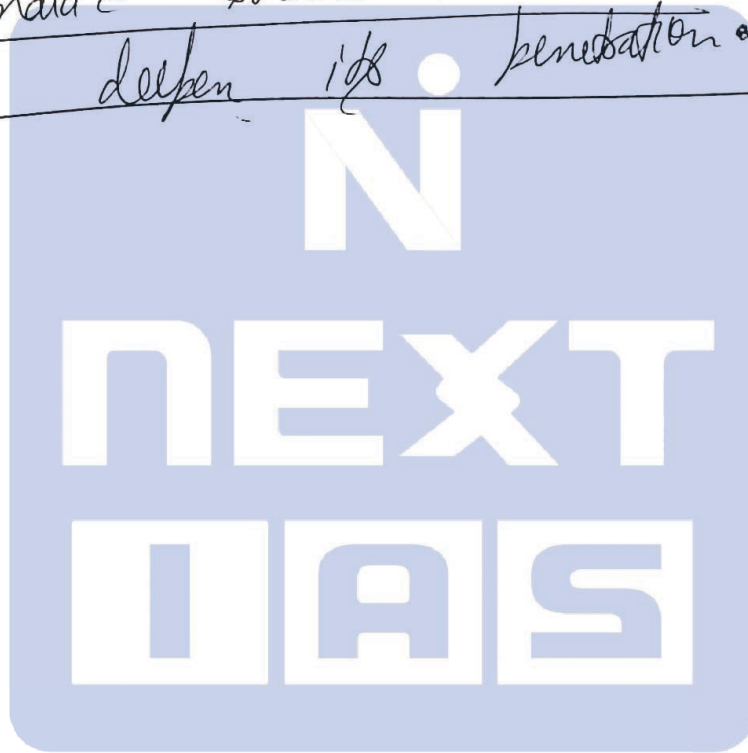
- 1) IBBI like body to select the chairperson of SEBI.
- 2) College based recruitment of staff to increase professionalism.
- 3) Modern technology like Blockchain tech to store users' data.

4) Better convergence like:-

to ensure proper compliance
of rules.



Hence, SEBI need to be further
strengthened to ensure people's faith
in India's stock market &
further deepen its penetration.



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

Agriculture sector in India with nearly $\frac{1}{3}$ rd of share in GDP provides employment to nearly half of the labour force.

Several Constraints

- 1) Problem in Inputs to Agriculture
 - a) Land holdings :- 86% of farmers are small and marginalised, hence unable to harness economics of scale.
 - b) Seed :- Environmental debates surrounding use of GM seed (Ex) → Delay in bringing GM Mustard.
 - c) Mechanization :- is merely 40%, hence less productivity vis-a-vis China (60%) & USA (90%)

- 2) Excess Monsoon :- As nearly 55% of irrigation demands are satisfied by monsoon.
- 3) Volatility of Prices :- leading to low income and hence high indebtedness leading to suicides by farmers (Ex) → Marathwada region.
- 4) Lack of Value Addition :- merely 2% of the Agri produce is processed, hence less focus on food processing industries.
- 5) Agri-Markets
- Compulsory sell in APMC leads to cartelization of buyers leading to price distortion.
 - Delay in payments in APMCs.
 - Less awareness about e-NAM & gSATM.

Role of Technology

- 1) Better advisory & planning :- via GIS based Early Warning Systems, monsoonal changes etc. (Ex) → Krishi Vigyan Kendra

2) Better knowledge regarding new methods like Drop Irrigation, soil health etc. via DD Kisan.

3) Better crop insurance policies via m-Kisan App.

4) Better Input & Capital Augmentation
(Ex) soil health card giving better advice regarding optimum usage of fertilizer.

5) DBT mechanism: to avail benefits of subsidy without any leakage.

6) Market to products: via Online portals like eNAM & oAM.

7) Better Medical & health advisories: (Ex) Development of vaccines by IARI-IVRI for lumpy skin diseases.

Hence, technology can act as panacea to double the farmer income in near future with effective usage of resources.

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

With more than 75% of agriculture dependent on natural sources & monsoon on irrigation leading to several environmental imbalance.

Impact of irrigation

I Environment

- With excessive usage of tubewells, waters from aquifers is getting depleting.
- Ground water level is going down due to overuse.
- With standing water in crops like Rice, many communicating disease get easily spread.
- Irrigation on field with excessive usage of fertilizer led to deposition of phosphate and nitrogenous waste in water bodies leading to Eutrophication.

II Natural Resources

- a) Loss of top soil (Alluvium) from land due to excessive irrigation.
- b) Erosion of soil and formation of gully and rills.
- c) Loss of ground water (Ex) → Haryana & Punjab are net water consumer because of Rice intensification.

Measures

1) Technical aspects

a) Fertigation :- As envisaged by MITI Aayog will lead to effective usage of water & fertilizer.

b) Mixed farming :- (Ex) → Indonesia model, where water in paddy field is also used for fish farming.

⇒ 2) Innovative methods

a) Drip irrigation :- To give timely water for crop growth.

b) Sprinkler irrigation :- (Ex) In Rajasthan, it is used to save water.

3) Steps by Government

a) To promote organic & natural farming.

b) To take the harmful subsidies like Electricity Subsidy to discourage use of stubwells.

4) Best models to be followed

a) Aquaponics :- so as to minimize water intake.

5) Diversifying cropping pattern

a) Focus on millet production, as they require < 75 cm of rainfall and ~~there~~ are in demand due to wide awareness and health benefits.

In this regard, government's program like PM-Krishi Sinchayi Yojna is a good step to ensure "Per drop more crop" and promote judicious use of water.

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

With the dawn of freedom, India strengthened its capability in sectors like Atomic energy & space research to ensure scientific development and build energy & defence capabilities.

Contributions of Dr. HJ Bhabha

→ HJ Bhabha was western educated Indian scientist and was the pioneer in atomic energy research.

post independent time, India was solely dependent on thermal energy. During

Bhabha with his leadership and scientific skills provide the

establishment of Bhabha Atomic Research Center at Trombay.

He was pioneer in using fission technology to provide India with nuclear energy.

Contributions of Dr. Vikram Sarabhai

- ↳ His leadership led to establishment of present day ISRO.
- ↳ He was head of missile development program and provide leadership to Dr. APJ Abdul Kalam.
- ↳ He is endowed with the first satellite development by India i.e. Aryabhata to provide communication network.

Both of these personalities, helps in India realize the goal of development of scientific temper (A-T-S-I-A) and niche technology to secure independent foreign policy in present time.

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

Generative 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 an advanced technical coding based tool which can generate data like Images, lyrics, explanation etc. by using existing Big Data

(Ex) → Chat GPT is a generative AI which can even do programming.

Potential and Outreach:

- 1) Education & Academic purpose
 - a) To solve complex mathematical problems.
 - b) Used to find solution and explanation of academic discipline
- 2) Industrial Usage
 - a) Capable to generate computer programming
 - b) Used to create Industrial designs.
- 3) Health
 - a) To find possible medicinal remedies.

4) Herennence

a) To manage big data like Public statistics and give better insights about various parameters like labour force participation rate, unemployment rate etc.

5) Audio, visual, Graphics & Gaming

a) To generate artistic works like music composition, gaming characters etc.

Societal impacts1) Individual & youth

a) Make them lazy, as they can easily make assignments using it.

b) To dupe anyone by making deepfakes like child pornography etc.

2) Women

a) Often such AI, are socially biased, hence further strengthening the culture of ethnic differences and promoting misogynism by morphing women's pictures.

3) Economic harms

- a) Easily act as the imposter, by manipulating voice & asking for monetary gains
 (Ex) → In Dubai, deepfake voice tech led to money espionage.

4) Defence purpose

- a) To manipulate & dupe military personnel to garner defence secrets jeopardizing national security.

Solution

- 1) QBOLT Model of Kerala: to be implemented
 i.e.:- Dedicated task of cyber-professionals to control cyber crimes.



Regenerative AI is capable of replacing human labour, hence its usage at Industrial Scale must be brought with due consultation.

Q.17 नवंबर 2022 में मित्र 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

"Mangrove Alliance for Climate" was launched to ensure proper policy making for promoting its cultivation.

Purpose of "Mangrove Alliance for Climate"

- 1) Mangrove as climate change inhibitor:
 - a) To ensure healthy coastal areas.
 - b) Acting as bio-shields.
- 2) Promotion of its growth along the coasts to ensure healthy ecosystem.
- 3) Mangrove as net carbon absorber
- 4) Inter-country coordination to harness & protect biodiversity in the mangroves.

Importance of Mangroves

- 1) Coastal bio shield:-
and hence act as a protector to
lessen the impact of Tsunami &
Sea surge.
- 2) Filtering the water:-
act as natural filter.
- 3) Mineral recycling:- and balance various
cycles like nitrogen & phosphorus cycle.
- 4) Net Carbon absorber:- and hence a
tool to contain climate change.
- 5) Ecological niche:- (Ex) → Sunderbans is
home to Great Bengal Tiger.
- 6) Tourist spot:- (Ex) → Andaman & Nicobar
Islands.
- 7) Man-animal relationship:- As many
tribes consider it as sacred
leading to its conservation.

In this regards :-

Mangrove Alliance for Climate:- would be panacea to save mangrove from harmful impacts and further strengthen the policy - making to save it from deterioration



Q.18 आपदा प्रतिरोधी दुनियादी 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

Coalition for Disaster Resilient Infrastructure (CDRI) was formed during Asian Ministerial Conference on disaster risk reduction.

CDRI :- Appreciable - Step

- 1) Inter-country Coordination :- to enhance disaster risk reduction (Ex) → Whole Indian Ocean is prone to tropical cyclone.
- 2) In line with foreign policy :- India's approach of Security & And Growth for All in Region SAGAR would further strengthened by it.
- 3) Resilient Infra building :- In line with SDG 9 to build sustainable, resilient infrastructure.
- 4) Focus of Research & Development :- with collaboration of National Institute of Disaster Management.

However, there is a need for new strategy :-

- 1) Changing nature of disasters like :- locust attack, zoonotic diseases etc
- 2) Globalisation of disasters :- (ex) → Rise of pandemics etc.
- 3) Climate change :- bringing new challenges like food security, rise of flash floods etc.
- 4) Overcome challenges :- PRI & ULB are usually ignored while planning disaster management.
- 5) Inter country problems :- (ex) → China not sharing hydrological data of Brahmaputra leading to more flooding on Indian side.

What new policy should include?

1) Better management

- a) 2nd ARC → Vulnerable section must be given special care
- Involvement of PRI is must
 - Ministry based division of disasters.
 - Disaster management as discipline in Pub Ad courses.

2) Better fundly :-

Dr. M. Veerappa Moily Committee :-

- a) 10% of fund for a ministry must be reserved for infrastructure buildy.
- b) More funds to NDRF & SDRF.

3) Evidence based policy making :-

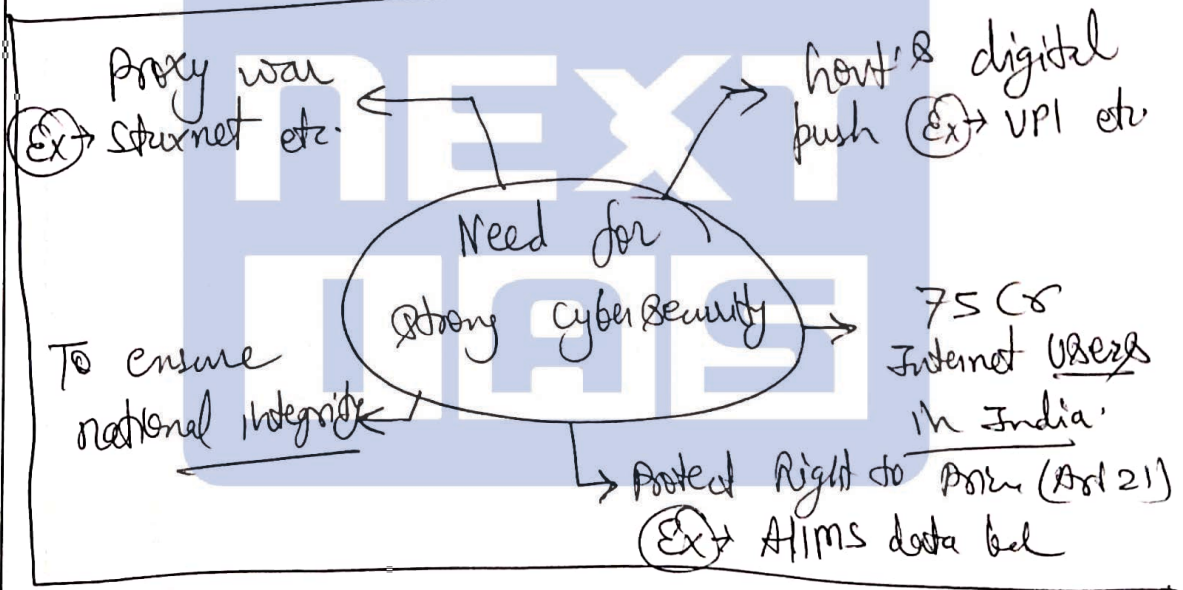
- a) Using hazard zone mapping for proper resource management.

In above ways, governance of disaster management can be further strengthened.

Q.19 महत्वपूर्ण 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

Recently a ransomware attack get access to patients' data of AIIMS Delhi. Hence there arises a need to secure our critical infrastructure.



Factors promoting such trend :-

1) Defense capabilities :- to secure hegemony
(Ex) Stuxnet by Israel was used to contain Iran's Nuclear aspirations.

2) Role of State Actors :- (Ex) → Failure of
Mumbai Electricity Grid.

3) Rising Inequalities :- leading to following of
wrong paths to gain economic benefits.

(Ex) → Cyber espionage.

4) Technical knowhow :- due to advanced
computing knowledge (Ex) → Top class hackers
of Russia.

5) Economic benefits :- As cited by UK, that
Russia hacked Oxford University's server
to stole COVID vaccine's formula.

Impact on various Sector

1) Economic Sector :- lead to huge monetary
loss of resources.

2) Society :- Erosion of privacy (Ex) →
Health records getting compromised lead
to breach of Art-21.

3) Defense Sector :- increased vulnerabilities and
jeopardize national security

4) Power Sector :- Electricity Outage & hence slowdown in economy (Ext)
Attack of Kundankulam facility.

Measures steps

1) Dedicated 24x7 task force :- NCIIPC
to check cyber security threats.

2) National Policy of Cyber Security 2017

- Dedicated task force of 5 lakh professionals
- Indigenisation of key infrastructure like microprocessor chips.
- Usage of India based platform to keep data.
- Developing PPP based infra. to counter such attacks.

3) National Cyber Coordination Center :- traces the incoming foreign traffic to ensure safe cyber space.

4) FIN-CERT / CERT-IN :- to tackle financial & general threats respectively.

with international efforts like Vienna Convention such threats can be tackled to secure country's security.

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?

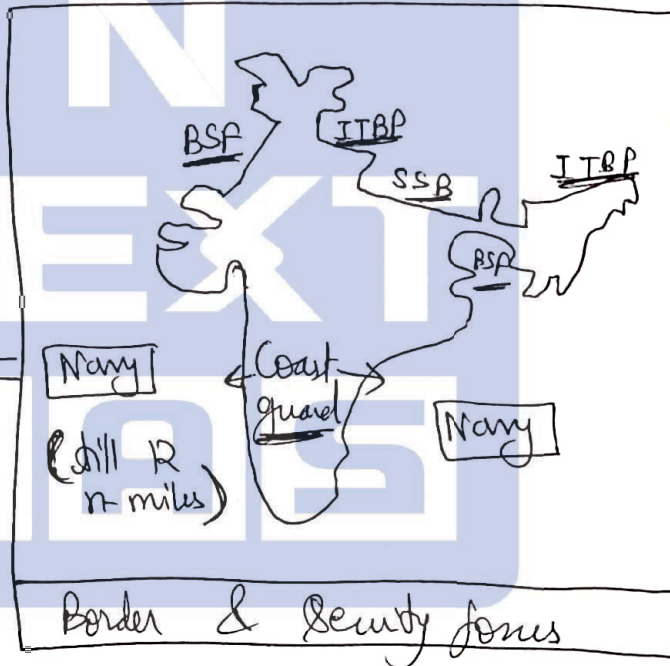
(Answer in 250 words) 15 Marks

India has border of 7500 km with vast coastline, hence dedicated border security forces guard the Indian coast & Terrestrial borders.

Ways to ensure Cooperation & Coordination

1) Intelligence Share

a) Uniform platform to share important inputs for better convergence.



⊗ → In Indian ocean and disputed Sri Lankan Coast, Navy & Coast Guard can opt for such cooperation to ensure better surveillance.

2) Effective Resource Management

In line with Army's theatre Command, such integration can be brought in CAPP also to ensure better resource management.

3) Mock drills

In order to serve same purpose like Disaster Management, integrated mock-drills would ensure proper cooperation and enhances effectiveness of such operations.

4) Attachment trainings

Like CRPF's guerrilla warfare training can also be provided to BSF to ensure proper oversight while patrolling regions like Sunderbans.

5) Sharing best practices

In the high level meeting of IHP/DAF, better practices can be shared so as to ensure better coordination.

In this regard:-

Lt. Gen Shekhar Committee - has recommended
for One border - One Security force
which would be helpful in getting
effective experience for a particular
border and need of the hour is:-

a) CAPF must not be directed for
other purposes like Riot management,
jeopardizing national security.

b) Proper leave time & vacations for proper
balance of personal & professional
life.

Hence, with modern technology like
Drones based surveillance, state of the
art weapons, ISS based mapping,
night vision cameras etc. border security
has further strengthened.