



An Institute for Civil Services

IAS TOPPER'S

TEST COPY

AANAND PRAKASH MEENA

RANK - 269

GS MAINS



www.iasscore.in

GENERAL STUDIES - PAPER III

Time Allowed: 3 hrs.

Max. Marks: 250

Q.	Marks	Instructions to Candidate
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

- There are 20 questions.
- All questions are compulsory
- The number of marks carried by a question is indicated against it.
- Answer the Question No. 1 to 10 not more than 150 words, whereas Question No. 11 to 20 should be answered in not more than 250 words.
- Answers must be written within the space provided.

Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

Name Anand Prakash

Roll No. _____

Mobile No. _____

Date _____

Signature April 2010

1. Invigilator Signature _____

2. Invigilator Signature _____

REMARKS

SECTION - A

- Q1. Recently, the Union Government announced new hydrocarbon exploration and pricing policy. Examine the merits and demerits of this policy. (10 Marks)

Now India is dependent on imports with regards to fuels. In order to diversify and reduce its imports, HELP has been proposed by government.

Major Provisions for of HELP (Hydrocarbon exploration and Licensing Policy):

- Revenue sharing model instead of Profit sharing model
- More time to explore hydrocarbon blocks [5 yrs from previously held 5 yrs in NEPL(N)]
- Private agency can explore hydrocarbon blocks without any limitations by government. It has to opt for auction once a block

Remarks

discovered.

- o Use of space technology to prepare Indian hydrocarbon maps. This will aid in exploration.

There are various concerns with regard to NELP, such as:

- Environmental degradation can be compounded as private agencies has been provided exploration power.
- It can also deplete groundwater in the nearby locations.

Natural resources should be exploited in a sustainable manner. Interest of local biodiversity should be kept in mind while exploring a block.

Remarks

- Q2. A range of issues relating to procurement, storage and distribution of food grains is not only deeply flawed in its reading of the situation on food security, but also short on facts. Discuss in the light of Shanta Kumar Committee recommendations. (10 Marks)

→ India produced 275 million tonnes of foodgrains in 2017-18 year.

- However, it is to be noted that due to lack of cold storage facilities and proper storage Godowns, 10-20% of foodgrains is wasted.
- This undermines food security along with economic benefits which can accrue if proper storage is done.

Shanta Kumar Committee has pointed towards problems related to procurement, storage, distribution of food grains:

- Most of the farmers are not able to sell to FCI directly due various limitations related to Quality of grains etc.

Remarks

- It has also recommended to provide for PDS services to the migrants from one state to other.
- various issues plaguing PDS has been comprehensively analysed.
the PDS system should be reformed on the lines of Shanti Kumar Committee, it will not only ensure food security but can also help in agricultural growth.

Remarks

- Q3. Critically examine the emergence of AI-powered cyber weapons as the weapons of next cold war. (10 Marks)

Cyber sphere will be the theatre of next conflict in International sphere.

- This can be gauged by various attacks on government websites - eg: It was reported that Chinese hackers were involved in hacking Ministry of Defence website.
- Cyber threat can also lead to political instability. eg: USA's allegation on Russia in meddling it's elections have threatened their relations.
- Cyber space can also lead to financial war in ways of phising, ATM duplication etc.

These can lead to cold war as

Remarks

the relationship between USA and Russia signals towards them.

International actors has to evolve understanding through dialogue and communication.

• Global Cyber Conference can play a role as a platform in this regard.

There is a need to use AI in a constructive manner as it can have huge benefits to mankind. e.g.: They can help in health, education as well as in disaster management.

• AI induced cold war can lead to full blown crisis.

Remarks

Q4. Briefly introduce various intelligence agencies in India and their major functions.

(10 Marks)

Intelligence gathering is an important aspect of statecraft. They help in maintaining peaceful environment and neutralising anti-social threats.

various intelligence agencies are:

- Research & Analysis wing (RAW) →
RAW acts in international sphere to counter threats from hostile enemies. They also provide information to defence forces with regards to retaliatory missions.

e.g.: RAW helped Army in 1971 Bangladesh Liberation war

- Intelligence Bureau (IB) → primary

Remarks

responsible for Internal security.
Gathers sensitive information with
regards to Left wing Extremism and
Islamic radicalism. ex: ISIS recruit
in Kerala were located by IB.
IB coordinates with police departments.

- Also various state agencies like
SIT works in coordination
with various other bodies to
maintain territorial integrity of
the nation.

Remarks

Q5. Discuss major amendments in the Prevention of Money-laundering Act, 2002, through Finance Act, 2018, to make it more effective. (10 Marks)

- PMLA, 2002 aims at tackling corruption and ensuring effective action against money laundering.
- Money laundering can be used to finance various activities related to smuggling, financing terrorism, channelising Black money to the formal economy.
 - new provisions added to PMLA through Finance Act, 2002 are :
 - ⇒ confiscation of offer accused property even in the international territory.
 - ⇒ Emphasis on Extradition treaty and Mutual Legal Assistance Treaty to bring culprit to books.

Remarks

- Also this Act has been supported by Economic offender Bill in which strict punishment are proposed for the Economic offender.
- Money laundering destabilises country's financial strength as it makes state deprive of taxes.
- Various other channels like Round Tripping, shell companies, should also be dealt strictly with keeping the guidelines of Financial Action Task Force in mind.

Remarks

- Q6. The concept of urban development of infrastructure in India cannot be separated from rural infrastructure development. Explain in the light of AMRUT, Smart Cities, and RURBAN concept of rural development. (10 Marks)

More than 70% of country's population lives in rural areas according to census 2011.

- This calls for Smart Villages along with Smart Cities.
- Developing cities cannot tackle larger challenges like rural-urban migration, feminisation of agriculture etc.
- Development of villages will automatically lead to development of cities. e.g.: It will tackle migration which results in slums and pressure on resources in cities.
- Keeping in minds all these

Remarks

benefits, various schemes such as AMRUT, Smart Cities, HRIDAY focus on integrated development of rural and urban areas.

- Focus is on connectivity to villages.
- Swachh Bharat Abhiyan also helps in aesthetic development of rural as well as urban areas.

Integrated approach can help in bridging the gap between India and Bharat. It will also address regional imbalance.

Remarks

- Q7. While highlighting the significance of celebrating Earth Day, discuss the major components in the theme of Earth Day 2018. (10 Marks)

Earth day highlights towards the challenges faced by the Earth like global warming, Environmental degradation, biodiversity loss etc.

Major component in the theme of Earth day 2018 are:

- Proper attention in conservation of environment (air, land, water)
- Awareness drive to make people realise consequences of their actions.
- Reducing Environmental adverse consumption: Thus in this way saving life on Earth.

All these components can

Remarks

help generating the support to save earth and realise the goal of Paris Climate Treaty

Earth Day is also significant as it also plays a vital role in highlighting the results and actions of various environmental friendly organisation.

Remarks

- Q8. As part of its commitment under the Montreal Protocol, India has launched the second phase of its programme that aims to eliminate the use of hydro-chloro-fluoro-carbons (HCFCs). Examine the challenges involved in eliminating HCFCs from India and suggest some remedies. (10 Marks)

Vienna convention aimed at
eliminating Ozone Depleting substance
 Montreal protocol to vienna
 convention proposed elimination
 of HCFC's.

This can lead to healthy growth of ozone layer which helps in containing UV rays.

This protects human beings from various diseases like skin cancer.

Challenges involved in eliminating HCFC's:

(i) India is largely dependent on HCFCs in household devices such

Remarks

as refrigerators, AC's, Eliminating them can prove to be a major task.

Apart from this new technologies to replace HCFC's face financial constraints. India being a developing country can have strain on its economic activities.

To solve these problems:

- > Funds from Green Climate Fund should be allocated to India.
- > Technology should also be shared with India as an alternative to HCFC's.

- Q9. What do you understand by germline editing? Discuss the ethical, social and regulatory issues that human germline editing raises. Also, highlight how it is being regulated in India and countries across the world. (10 Marks)

Germline editing is used to cure genetic diseases. One of the example is CRISPR.

- various ethical, social, regulatory issues are :
- It can tilt heavily in favour of economic powerful class and depive poor. This will aggravate discrimination.
- Germline technology can also be used to alter various traits in a cell, thus cloning of human, with pre determined characteristic goes against nature.
- It is also not ethical as

Remarks

natural characteristics of a particular person should not be disturbed.

Given all these problems, It is regulated in India:

- ICMR guidelines provides strict penalties of it's unwanted use.
- however, in U.K & U.S.A, they have been allowed for the research purpose but the specimen has to be destroyed within 15 days.

Germline technology should be used in a proper way for the benefit of humanity

Remarks -

Q10. Highlight the prevalence of drug abuse in India? Discuss the various measures taken by government to curb the drug addiction in country. (10 Marks)

India is marred by drug abuse on a large scale. e.g. almost 1 person from each family in Punjab is a drug addict.

- The main reasons of this are presence of Golden Crescent and Golden triangle on the borders of India which facilitates drug trafficking.
- Lapse of security on borders due to collusion with responsible forces also aids this menace -
- To tackle this problem, various measures taken by government are:
 - ⇒ Drug trafficking Act which gives harsh punishment to those who engage in Drug addiction.

Remarks

- Various Drug Rehabilitation Centre has been established for the treatment.
- Director General of Drug Controller issues various regulatory guidelines so that negative substances are not misused through medicines.
- Apart from this, strict penalties like life imprisonment recently announced by Punjab government act as a deterrence.

Focus should be to educate public about the ill consequences of Drug as it makes economic charged youth futile and halts nation's growth.

Remarks

SECTION - B

- Q11. There is an urgent need for India to get infrastructure financing, however, the current investment model of PPPs is poorly designed and needs restructuring. Discuss the issues plaguing the success of PPPs with respect to stalled projects, risk management, governance & institutional capacity. (15 Marks)

Indian banks are facing twin balance sheet problem. Non performing assets has risen to 12 lakh crores.

- One of the most common reason is financing of projects by PSB's in manufacturing sectors such as roads, etc.
- Public Private Partnership can be helpful in dealing with such scenarios.
 - They can help in timely implementation of projects with adequate financing.
 - However, various issues plaguing the PPP model are :
 - Corruption in government as

Remarks

well as greed in private players. This leads in compromising the quality of projects, which further erodes confidence in such projects.

- Policy Paralysis in administrative system escalates the proposed cost of a project. This results in loss to private player.
- Lack of Secondary Market to raise finance through bonds etc.

In order to tackle these issues:

- Hybrid Annuity model in which cost is provided in stages on the basis of work done can be adopted.

Remarks

- Public Financial Management System can catalyse the payment to the worthy contractors, thus reducing corruption.
- Transparent bidding in the tender process can make the project free from administrative pressure.
- Ensure participation of local community to have qualitative materials in a project.

National Investment Infrastructure Fund can further help in PPP model delivering timely public service.

Remarks

- Q12. There is an overdrive by the government and India Inc. to link 12-digit Aadhaar with verification process of various schemes and realize Digital India dream faster. However, increased incidents of cyber frauds and data-theft highlight lack of preparedness. Analyze. Also, suggest solutions to handle these issues. (15 Marks)

According to Global Cyber Index conducted by International Telecommunication Union, India has sufficient safeguards to protect its Cyber Sphere.

- Given the age of technology, government has embarked upon Aadhar enabled services to ensure transparency and reduce corruption. e.g. It can exclude fake beneficiaries.
- Increased use of technology in Public service delivery is to ensure efficiency but cyber threats is a concern
- Saposh Malware was used to as DDOS [Denial of Distribution of Services]

Remarks

which can paralyse the administration and spread chaos.

→ There has been instances of Cyber frauds which resulted in financial losses. Eg: Duplication of ATM's

Also, data is used to monitor consumer behaviour and effectively developing strategy to influence them.

This violates fundamental right to privacy.

In order to handle these issues, some steps such as:

→ Blockchain technology in the financial transaction can help secure public money.

→ Data Protection Bill as proposed

Remarks

by Justice Srikrishnan Committee
should be implemented.

• Regulatory bodies like CERT-IN
should be empowered with more
power to ensure favourable
cyber atmosphere.

This can help India
be a part of Artificial Intelligence
driven fourth Industrial Revolution
safely.

Remarks

- Q13. The World Bank has observed that India is emerging as a frontrunner in the fight against climate change. It has noted that India is gradually replacing coal energy with solar power as a source of energy. Elaborate. (15 Marks)

According to UNFCC, India is on course to realise its Intended Nationally Determined Contributions which it pledged in Paris climate Treaty.

- Apart from these, Coal energy is reduced by solar energy:
 - India has targeted 100 GW of solar energy by 2022
 - schemes like KUSUM helps in solar water pumps in agriculture. It reduces electricity demand which is produced from coal
 - Solar Asia International solar Alliance also aims at research in solar technology.

Remarks

- However, various imperatives hinder complete elimination of coal!
- In its National Coal strategy, India has focussed on additional Coal requirement. New mining will eliminate 20000 sq m of forest.
- High quality of coals will also be procured from foreign countries.
- Still, Thermal Power Plant constitutes generation of electricity more than 50% of total capacity.
- In its National steel ^{Policy} ~~Strategy~~, India has aimed at increasing steel capacity worth 300 mn tonnes annually. It will increase coal consumption.
- It is in the interest of India

Remarks

its citizens as well as whole world to reduce dependence on coal.

- It can save forests, thus helping in REDD+ strategy (Reducing Emission through deforestation)
- Solar energy can be an alternative given India's tropical location and abundance of solar energy.

Remarks

Q14. Ending poverty and stabilizing climate change will be two unprecedented global achievements and two major steps toward sustainable development. Critically discuss the impact of climate change on poverty. In regard to this, suggest some measures.

(15 Marks)

A recent study by IMF has concluded that impact of climate change is more intensive on poor countries than rich countries.

SDG 1 aims to eliminate poverty while SDG 12 advocates actions against Climate change (CC).

Inustainable^(CSD) development include equality and inclusivity. Poverty removal and suppressing negative consequences of CC can help in realising SD-

→ It can empower local community to equip them with more resources for further social development. They can get benefits in health & education.

However, climate change can induce

Remarks

vicious form of poverty :

- CC can impact food security which will result in famine. This will result in nutritional poverty.
- Adverse Extreme weather Events makes poor vulnerable to disasters. This also disrupts their economic activities. e.g.: ₹20000 Cr loss in Kerala flood.
- It can also result in various diseases related to pollution e.g.: Asthma, lung diseases. This will compound poverty.

Vigilant measures are needed to tackle climate change :

- Focus should be on Renewable energy like solar, wind, Biofuels to counter pollution by fuels.

Remarks

- setting up of Green Climate Fund with strict finance by developed countries. This would help in rehabilitation of poor people in South.
- International consensus should be unanimous in tackling CC.
eg: USA coming out of Paris treaty is not a good sign.

Remarks

Q15. An emissions-reduction approach to fight global warming is not enough. Alternative solutions involving climate engineering might have to be deployed sooner than we think. Critically examine the statement. Also, discuss climate engineering.

(15 Marks)

Paris Climate Treaty which aims at countering global warming is largely emission driven strategy.

It commits nations for INDC's work for emission reduction.

- In the same way, India has pledged to reduce its emission intensity by 30-33% of GDP (2005)

- But this can not be a long term solution, IPCC has pointed out that goals if at all reached will not result into substantive gains.

- Climate engineering can prove to be an effective tool to save earth from global warming

Remarks

- It includes Carbon Sequestration,
Converting Carbon into Hydrocarbons
to use them as fuels, etc.
- These will not only tackle the
global warming but can help
in realising sustainable goals related
to food security, removing poverty etc.

At the same time, climate engineering
has its cons:

- It can lead to carbon fertilisation,
which can unleash carbon
stored in soils.
- It can disturb environmental
balance between natural cycle
of gases formation.
- It can further compound the

Remarks

global warming as carbon dioxide is not reduced but stored which might get freed in future.

Climate engineering should be complimented by change in consumption behaviour and adopting green technologies like solar, wind to reduce dependence on fuels.

Remarks

Q16. What are Coastal Regulation Zones? Government has recently proposed changes in CRZ regulations through draft Coastal Regulation Zone (CRZ) Notification, 2018. Highlight the salient features of the same. What are the concerns toward new changes? (15 Marks)

Coastal Regulation Zones are demarcated along the coast to encourage economic activities, thus achieving development.

- Salient features of CRZ :
 - Promotion to Blue economy by establishing aquaculture infrastructure.
 - Promotion to Deep sea fishing to augment agricultural income.
 - It also provides actions to be taken in case of environmental degradation through oil spills.

However there are various concerns:

- Over exploitation of marine

Remarks

resources can be harmful in long term

- Indigenous requirement are not given proper attention. This can disempower local community.
- These regulation can also lead to gen harassment of genuine fishermen by officials.

All the concerns towards should be tackles through :

- More engagement of local community in the regulation of coastal sovereignty
- Effective grievance redressal mechanism to overcome any unwanted situation.
- Environmental Impact Assessment

Remarks

before pursuing any new project

Remarks

Q17. Highlight the challenges being faced by biotechnology sector in India. Also, discuss how the National Biotechnology Development Strategy (2015-2020) which aims to establish India as a world-class bio-manufacturing hub. (15 Marks)

- Bio-technology can be helpful in tackling health, social, defensive, economic problems.
eg: Drug delivery in patients,
- In India, the challenges faced by biotechnology sector are:
- Lack of research in the university atmosphere.
- Lack of attention to the solution pertaining to social problems and now focus on patents.
- Brain Drain of intellectuals to foreign countries also hampers evolution of Bt.
- Lack of political will to provide

Remarks

sufficient financial resources, as well as lack of enthusiasm of private sector due to poor IRR regulation.

In order to tackle these challenges, National Biotechnology Development Strategy aims at:

- Holistic development of infrastructure related to research labs, which can propel BT.
- Encouraging private players to combine their investment in BT research.
- Genuine registrations of Patents

Biotechnology is the future as it can deliver effectively in very less space. For encouraging

- Remarks

for further BT in India, following things can be done:

- (i) Use Atal Innovation mission to generate interest in the young children's mind.
- (ii) Also encourage BT innovations
- (iii) Give freedom to institutes like IISER, CSIR to further evolve their BT research.

Remarks

- Q18. Leveraging Japanese expertise in robotic manufacturing and channeling local software talent would allow India to come to terms with a fast-changing global economic scenario, where automation will rule the roost. Analyze. (15 Marks)

Japan has embarked upon Society 5.0, in which the technology and Artificial Intelligence (AI) is used for the welfare of society.

- Due to talks of fourth Industrial Revolution, where AI will be the vital aspect, leveraging Japanese superiority in Robotics can be helpful to India.
- Technology will have expanded frontiers related to defence, Cyber, Space, economy (Blockchain technology) etc.
- At the same time India has high pool of talented software engineers as can be witnessed in its strong BPO sector.

Remarks

- India need to leverage both the sides, if we need to be proactive in our response.
- Data will prove a link between technology and software talent to leverage India's market. [RBI direction for data localisation & Srikrishna Committee's Draft Data Protection Bill are in right direction]
- Automation can lead to job losses. India is labour intensive nation, we need to equip our labour force with skills so that job losses can be compensated by opportunities presented by AI.
- Japan has technological know-how in utilising R&AI, India can utilise it's market to get access to technology. It will be mutually

Remarks

benefiting.

At the same time, Indigenous bodies like CERT-IN, NiH Ayog's AI strategy should be pursued to take all the benefits of automation.

Remarks

Q19. What do you understand by precision farming? It is said that future revolution in agriculture is going to come from precision farming and micro-irrigation can be the stepping stone towards achieving the goal of making Indian farming sustainable, profitable and productive. Discuss. (15 Marks)

- M S Swaminathan has recommended for Evergreen Revolution which is environmentally sustainable.
- Precision-farming utilises minimum resources in an efficient manner to yield maximum production. e.g. Micro irrigation, Drip irrigation etc.
- Precision farming can play a vital role in Evergreen revolution as it is compatible with rising demands of ~~so~~ sustaining environment.
- Micro-irrigation helps save water, and irresponsible use of fertilisers can be neglected.
- This would not only address the depleting ground water table but

Remarks -

make farming more remunerative.

- Climate Resilient Agriculture (CRA) can also be put into domain of precision farming as it will utilise local conditions friendly to a particular crop. e.g: Millets to be grown in dry areas.
- by using Precision farming, the cost to benefit ratio of farmers will be improved, thus making it remunerative. e.g: Zero Based Natural Farming helps in profit to farmer.
- Organic farming can also provide pecuniary gains to farmers if marketing of health related benefits is done properly.
- However, there are various obstacles

Remarks

in Precision farming:

- Average Indian landholding is 2 Hectare which would not be sustainable.
- Precision farming requires investment which might be discouraging to farmers.
- Apart from this, food inflation can take place due to rising production cost.

To tackle these, government has taken following steps:

- Bilateral Pact with Israel to introduce technology in India related to agriculture.
- Pradhan Mantri Paramparagat Krishi Yojna supports organic farming.
- Subsidy on instruments of micro irrigation. also KUSUM yojna is providing solar pumps.

Remarks

Q20. Food subsidy has increased six-fold over the past 10 years. In light of this, discuss the challenges in the effective implementation of Targeted Public Distribution System (TPDS) and alternatives to reform the existing machinery. (15 Marks)

Food subsidy constitute largest pie of the government subsidy with almost 2 lakh crore, including subsidy to farmers, PDS, MSP etc.

Food subsidy is necessary in ensuring food security and nutritional security.

various platforms have been utilised to provide food subsidy, TPDS stands tallest among them

TPDS has ensured availability of foodgrain to BPL families at affordable cost. [e.g: free foodgrains to Antyodaya Yojna people]

However various challenges which plague TPDS are:

Remarks

⇒ Corruption in the supply cycle starting from procurement to distribution.

⇒ Lack of storage facility with FCI which result into distribution of poor quality grains.

⇒ Digital hindrances in rural areas which hampers Aadhar enabled authentication system. This sometime led to neglection of beneficiaries.

⇒ Prevalence of ghost beneficiaries and ensuring black marketing of food grains and Kerosene.

In order to secure more transparent and accountable T PDS, following steps should be taken.

⇒ Digital India can provide Internet Connectivity which would help in effective Aadhar based authentication.

⇒ Allocation of PDS shops to community.

Remarks

as done in Chhattisgarh can keep vested interest at bay.

- Oversight mechanism to track the movement of foodgrains in various stages.

These steps can help in securing food security. At the same time challenges in international forum like WTO, should be tackled vigorously with Permanent Peace Clause to ensure food subsidy.

Remarks