



VISION IAS

www.visionias.in



GENERAL STUDIES (TEST CODE : 876)

Name of Candidate	VARJEET WALIA	Registration Number	16885
Medium Eng./Hindi	ENG	Date	13/10/17
Center	ORN		

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	12.5	
2	12.5	
3	12.5	
4	12.5	
5	12.5	
6	12.5	
7	12.5	
8	12.5	
9	12.5	
10	12.5	
11	12.5	
12	12.5	
13	12.5	
14	12.5	
15	12.5	
16	12.5	
17	12.5	
18	12.5	
19	12.5	
20	12.5	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are TWENTY questions printed in ENGLISH & HINDI
इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory.
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

75, 3rd Floor, Old Rajinder Nagar Market, Near Axis Bank, New Delhi – 110060

103, 1st Floor, B/1-2, Ansal Building, Behind UCO Bank, Dr. Mukherjee Nagar, Delhi – 110009

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Answer all the questions in NOT MORE THAN 200 WORDS each. Content of the answers is more important than its length. All questions carry equal marks.

12.5X20=250

1. While India has taken a number of steps in order to substantially improve its ranking in the World Bank's 'Ease of Doing Business' Index, it needs to take further action in this regard. Elaborate. Also analyse the utility of these rankings vis-a-vis India's objective of facilitating a sound entrepreneurial environment.

जहाँ, भारत ने विश्व बैंक के 'इज ऑफ़ डूइंग बिज़नेस' (व्यापार करने की सुगमता) सूचकांक में अपनी रैंकिंग में सार्थक सुधार करने हेतु कई कदम उठाए हैं, वहीं भारत को इस संबंध में आगे और अधिक कार्यवाही करने की आवश्यकता है। सविस्तार वर्णन कीजिए। साथ ही सुदृढ़ उद्यमिता वातावरण प्रदान करने के भारत के उद्देश्य के परिप्रेक्ष्य में ऐसी रैंकिंग की उपयोगिता का भी विश्लेषण कीजिए।

World Bank's Ease of Doing Business Index is an indicator of 'Business Friendliness' of governance and market institutions. India's rank in 2016 was about 119 which was non encouraging.

Steps taken →

- 1) Labour Reforms → Pandit Deendayal Upadhyay Shramik Jayati Karyakram

- Shram Suvidha Portal
- Apprenticeship Protsaahan scheme
- Universal Account Number for labourers.
- Random inspection scheme.

2) E-biz Portal - single window clearances - e-governance for transparency, accountability

3) Taxation structure → GST, SAKSHAM PORTAL, RAAP model for IT

4) Bankruptcy Law

5) Arbitration mechanism in HCs.

6) Competitive Federalism to promote reforms in states. Eg NITI Aayog ranking of states' Ease of Doing Business promoted reforms in land laws in T.N.

Thus Govt. is doing multipronged efforts.

This will help us in make
in India scheme.

Yet Further Actions are required →

- 1) Eliminate corruption
- 2) RedTapeism and Policy paralysis should end.
- 3) Resolve NPA of Public banks to mobilize funding for businesses -
- 4) Create infrastructure - digital divide, Dedicated Freight Corridor etc.

Such ranking can be helpful in facilitating a sound entrepreneurial environment.

- boost investor confidence
- These rankings stimulate govt. to create enabling environment
- Foreign funding improves

Thus Startup India, SETU, Stand Up India will also benefit.

2. In wake of the agrarian crisis that the country is witnessing, discuss the need for adopting an income-centric approach in preference to a production-centric one as the basis of agricultural policy. In this context, also highlight the steps that should be taken to achieve the goal of doubling the income of farmers by 2021-22 and the challenges that exist.

देश द्वारा सामना किए जा रहे कृषि संकट के आलोक में, कृषि नीति के आधार के रूप में उत्पादन-केंद्रित दृष्टिकोण के स्थान पर आय-केंद्रित दृष्टिकोण अपनाने की आवश्यकता पर चर्चा कीजिए। इस संदर्भ में, 2021-22 तक किसानों की आय दोगुना करने का लक्ष्य प्राप्त करने के लिए जो कदम उठाए जाने चाहिए, उनके साथ-साथ विद्यमान चुनौतियों पर भी प्रकाश डालिए।

Indian agricultural sector
faces several forms of crisis

- Land fragmentation
- Crop failures leading to farmer suicide
- Decreasing productivity due to land degradation
- Threat of climate change.

Thus it is worthy to shift our approach to income centric model rather than production centric.

As reported by Swaminathan Committee, it will need lead to →

- Assured income and livelihood
- Decreased farmer indebtedness
- better mobilisation of resources

such approach would demand extending MSP mechanism to all crops and ~~put~~ fixing the price at 50% over and above all costs incurred by farmers.

In wake of PM's aim of doubling farmer income by 2022, Ashok Dalwai Committee has submitted its report →

Challenges →

Apart from those mentioned in starting.

- Appropriation of huge margins by middle men.

— infrastructural — technological

steps need to be taken →

- 1) Reforms in APMC Acts
 - 1) for better price discovery.
 - 2) create competition, efficiency.
- 2) Impetus to cooperatives
 - helps prevent land fragmentation
 - better negotiating power in market
- 3) Supply chain →
 - farmers need to resort to distress selling in absence of cold storage
 - warehouse receipts should be accepted as collateral for loan.
- 4) Direct sales promotion to eliminate middlemen → Eg W.Bengal govt directly bought potatoes from farmers.
- 5) Lab to Land → Leverage technology.
 - 100% soil testing, etc

3. It is argued that India's fiscal centre of gravity has rapidly shifted from the Centre to the States. Analyse the statement in context of the debate on fiscal discipline. Also, enumerate the key recommendations of the N.K. Singh panel on Fiscal Responsibility and Budget Management Act.

यह तर्क दिया जाता है कि भारत का राजकोषीय गुरुत्वाकर्षण का केंद्र तेजी से केन्द्र से राज्यों की ओर स्थानांतरित हुआ है। राजकोषीय अनुशासन पर वाद-विवाद के संदर्भ में इस कथन का विश्लेषण कीजिए। साथ ही, राजकोषीय उत्तरदायित्व एवं बजट प्रबंधन अधिनियम पर एन. के. सिंह पैनल की प्रमुख अनुशंसाओं को सूचीबद्ध कीजिए।

Recent developments have been →

- Increase in center's devolution of funds to states from 32% to 42%
- Scrapping of planning commission to adopt bottom up approach.

Such moves have resulted in more financial autonomy to states. But at same time

India's fiscal center of gravity is shifted to states because of greater role of fiscal discipline of states now →

Some issues creating disruptions
in states' fiscal health →

- 1) Loan Waivers . Eg UP, TN
- 2) Impact of GST
- 3) discontinuation of some centrally
sponsored schemes.
- 4) Highway Alcohol ban
would decrease revenue from
alcohol tax.

Hence fiscal health of states
is potentially grave leading
to wider fiscal deficits. This
will thus impact India's fiscal
credentials more now. Hence
the shift in gravity of fiscal
center.

As per Union budget declaration of review of FRBM act, N.K. Singh panel has submitted recommendations →

- 1) Fiscal targets can be delayed upto 2022.
- 2) Fiscal targets should not be fixed but rather flexible depending upon fiscal imperatives.
Eg - Relaxation in fiscal deficit target if economy is in slowdown.
- 3) Better mechanisms to report fiscal indicators of states.
- 4) Combined fiscal targets of states should also be set.

4. Strategic sale of state-run firms is a prudent step to deal with the challenges being faced by the public sector enterprises in India. Comment. Also enumerate other measures that can be taken in light of NITI Aayog's suggestions in this regard.

भारत में सार्वजनिक क्षेत्र के उद्यमों द्वारा सामना की जा रही चुनौतियों से निपटने के लिए राज्य-संचालित उद्यमों की रणनीतिक बिक्री एक विवेकपूर्ण कदम है। टिप्पणी कीजिए। साथ ही इस संबंध में नीति आयोग के सुझावों के प्रकाश में उठाए जा सकने वाले अन्य उपायों को भी सूचीबद्ध कीजिए।

Strategic sale of state run firms means when the government lowers its stakes to below 50%.

Many state run firms are facing challenges →

- 1) mounting losses → Economic Survey 2015-16 pointed out how government bails out institutions like Air India. But this puts strains on fiscal health and lowers market health.

- 2) Inefficiency and sub-par output-
Performance of agencies like
Coal India Ltd. which is
unable to meet India's coal
demands despite 260 billion
tonnes of coal reserves.
- 3) Lack of Autonomy - P J Nayak
committee highlighted how it
impacts performance of Public sector
Banks.

Thus strategic sale of state-run
firms can help in all these
challenges

- Autonomy in functioning appointment,
promotions, business decisions
- Bring efficiency, boost output
through better governance.

Yet it should not be undertaken uniformly for all state run agencies. It must be a case by case decision after involving all stakeholders. Eg - Indian Railways' privatisation issue.

NITI Aayog recently gave suggestions in this regard →

- 1) Adoption of transparent mechanism for sales like e-auction.
- 2) Give more autonomy to public sector enterprises. Eg decisions upto certain expenditure should not need prior sanction of govt.
- 3) Promote lateral entries from private sector.
- 4) Create independent bodies which can hold stake of govt. in such agencies - Ensures administrative autonomy.

5. Shell companies in India are neither legally defined nor properly understood. Analyse in the light of recent developments, prevalent understanding and steps required to effectively deal with shell companies.

भारत में शेल कंपनियां न तो कानूनी रूप से परिभाषित हैं और न ही उनके विषय में उचित समझ है। हाल के घटनाक्रमों, व्याप्त (प्रचलित) समझ और शेल कंपनियों से प्रभावी ढंग से निपटने हेतु आवश्यक कदमों के आलोक में विश्लेषण कीजिए।

Shell companies are broadly understood as fictitious companies which exist only on paper' and are misused for money laundering, tax evasion etc.

These are not legally defined nor there are clear guidelines on their identification.

Recently govt. declared that many shell companies

had been discovered after demonetisation exercise.

Also SEBI sent notices to many companies recognising them as shell companies, freezing them out of share market and increasing their scrutiny.

This invited heavy backlash from such companies which denied SEBI's accusation and even resorted to court appeals citing lack of evidence in SEBI's decision making.

This highlights the legislative and administrative vacuum while dealing with shell companies.

We must clearly define shell companies through legislation

- currently SEBI understands it as those companies whose financial composition is not in tune with their physical operations
- or companies which remain dormant in share market but suddenly gain valuation without any sound basis.

Further steps required →

- share markets should follow stringent KYC norms before trading any stock.
- Capacity building of regulators to regularly monitor presence of shell companies.

6. If a larger population in India is to be involved in the economy in a big way, Small and Medium Enterprises (SMEs) are key. Elaborate. Also discuss the challenges faced by the SME sector in India and give an account of the measures taken by the government to deal with these.

यदि भारत में एक बड़ी आबादी को अर्थव्यवस्था में बड़े पैमाने पर सम्मिलित करना है, तो लघु और मध्यम उद्यम (SMEs) महत्वपूर्ण हैं। सविस्तार वर्णन कीजिए। इसके साथ ही, भारत में SME क्षेत्रक द्वारा सामना की जाने वाली चुनौतियों पर भी चर्चा कीजिए और इनसे निपटने के लिए सरकार द्वारा उठाए गए कदमों का विवरण भी प्रदान कीजिए।

small and medium enterprises' importance → It is source of →

- 45% of Indian manufacturing
- 40% of Indian exports.
- majority employs weaker sections of the society.

Hence SME's development can help Indian economy in big way. It's employment elasticity is also very high as per report of Planning Commission. So it can be source of more jobs and livelihoods if it grows.

Challenges faced by SME →

- 1) Difficulty in upscaling →
labour laws, taxation laws are cumbersome - lead to high compliance costs.
- 2) Sourcing credit - especially in wake of inability to give collateral. - Also high interest rates.
- 3) Market access - infrastructure is lacking, also lack of exposure.
- 4) Availability of skilled labour.
- 5) Inability to compete with manufacturing giants like China.
- 6) Lack of mentoring.
- 7) Technological inaccess.

Steps by Govt →

- 1) separate Ministry for MSME.
- 2) For credit → SIDBI, MUDRA institutionalised.
- 3) Ease of doing business reforms.
- 4) Indian IPR policy gives special relaxations to MSME sector.
- 5) Skill India Mission, Kaushal Vikas Mission, SANKALP, Stand UP India schemes to promote skills and entrepreneurship.
- 6) MSME ONLINE.COM portal for e-commerce access.
- 7) Provisions for domestic sourcing in Make In India for defense.

Hence the Govt has taken significant measures to help MSME sector.

7. What are the reasons for the growing informalization of industrial labour in India? Discuss the issues associated with the phenomenon and reforms required to deal with them.

भारत में औद्योगिक श्रम के बढ़ते अनौपचारिकरण के क्या कारण हैं? इस परिघटना से जुड़े मुद्दों और उनसे निपटने हेतु आवश्यक सुधारों पर चर्चा कीजिए।

Informalisation or casualization
of labour means absence
of job security, social security
and non-coverage of labour
laws for the labour force.

As per reports upto 92%
of our workforce is in informal
sector.

Reasons →

- 1) Less employment generation in
formal sector. By 2004-09
witnessed employment elasticity
of 0.01% despite about 7% GDP growth

2) Stringent Labour laws

- Increased compliance costs.
- Industrial Act prohibits firing of employees if labour strength is more than 100.
- so companies resort to hiring contractual labour to stay outside purview of labor laws.

3) Lack of skills and self employment opportunities for formal livelihood.

Casualization of workforces creates many issues →

- 1) Absence of social security, Job security.
- 2) Not protected by labour laws.
- 3) Conditions of workplace, conditions of service affected.

1) Economic survey 2015-16 pointed out that in this case companies do not invest in contractual labour. Hence no value growth of labour force.

Reforms needed →

- 1) Improve Ease of Doing Business to help create more employment.
- 2) Impetus to Make In India to create jobs in manufacturing sector.
- 3) Promote employment elastic sectors like Food processing, Tourism, textiles etc.
- 4) Promote formation of Unions.
- 5) Equal remuneration to contractual employees as given to permanent employees — recent SC decree.
- 6) Promote self employment. Eg SETU

8. A number of far-reaching developments have taken place in the local and global energy space which have to be reflected in our own energy policy framework. Discuss.

स्थानीय और वैश्विक ऊर्जा क्षेत्र में कई दूरगामी घटनाएं घटित हुई हैं, जिन्हें हमारी अपनी ऊर्जा नीति के ढांचे में प्रतिबिंबित होना है। चर्चा कीजिए।

NITI Aayog recently released
draft National Energy Policy for
2030.

It recognises various far
reaching developments which
took place recently →

- 1) Financial cost reduction in
solar energy generation.

This helps in our aim to
generate 100 GW of solar
energy by 2022.

Thus our energy policy
envisages decentralised solar

power generation on ~~the~~ home
roof tops. This demands fiscal
incentives and long term
investment in solar panel
manufacturing. International Solar
Alliance is also step in right direction

2) Electric Vehicles → The policy
released by NITI Aayog predicts
savings to tune of \$100 billion
if we transition to E-Vehicles.
Globally electric vehicles have
become cost effective and
gaining popularity in wake of
Tesla cars, Nissan leaf car etc.

We have adopted FAME [Faster
Adoption and Manufacturing of EVs]

3) Bio diesel, Bio gas as sources of energy for village economy. It has got impetus with development in technology of harnessing Jatropha seeds and cost effective Biogas plant released by Bhabha Atomic Research Center & TERI

4) Declining crude oil prices
It should be supplemented with adequate taxes so that higher consumption is not promoted.

It will cause environment pollution and CAD widening.

5) MELP → for local extraction of energy resources

Thus energy security will be getting new dimension and new energy basket is profile.

9. The Indian IT-BPM (Information Technology-Business Process Management) industry is a global powerhouse today and its impact on India and the world has been unprecedented. Comment. Also, mention the challenges being faced by India's IT-BPM sector.

भारतीय IT-BPM (Information Technology-Business Process Management या सूचना प्रौद्योगिकी-व्यापार प्रक्रिया प्रबंधन) उद्योग आज एक वैश्विक शक्ति का केंद्र है और भारत एवं विश्व पर इसका प्रभाव अभूतपूर्व रहा है। टिप्पणी कीजिए। साथ ही, भारत के IT-BPM क्षेत्रक द्वारा सामना की जा रही चुनौतियों का भी उल्लेख कीजिए।

IT-BPM industry provides
IT solutions and Business
B. Process Outsourcing opportunities
to firms across the world.

Companies like INFOSYS, TCS,
WIPRO have made a
global mark. They are multi-
billion dollar companies now.

Impact on India →

- 1) Huge Foreign Cash Inflow has
helped our Current Account

- Deficit. ~~and~~
- 2) Created employment opportunities in ^{highly} skilled sector.
 - 3) Rise of India's stature in global market.
 - 4) Contribution of services sector is 65% of GDP. This is highly propelled by IT-BPM.
 - 5) Helped Indian start up ecosystem.
Eg rise of Flipkart, Ola etc.

Impact on ~~gl~~ world →

- 1) Given cost effective solutions to foreign companies like Bank of America, American Airlines.
- 2) Helped process of globalization
- 3) Skilled ~~to~~ labour produced by ITBPM of India gave highly

talented employees to global firms like facebook, google etc.

challenges faced →

- 1) Market Access - to markets of china of employees.
- 2) Cross border movement - Eg. H1B visa issue with USA.
- 3) Global slowdown created demand supply mismatch.
- 4) Cyber security, data security, privacy security threats.
- 5) sub standard higher education.

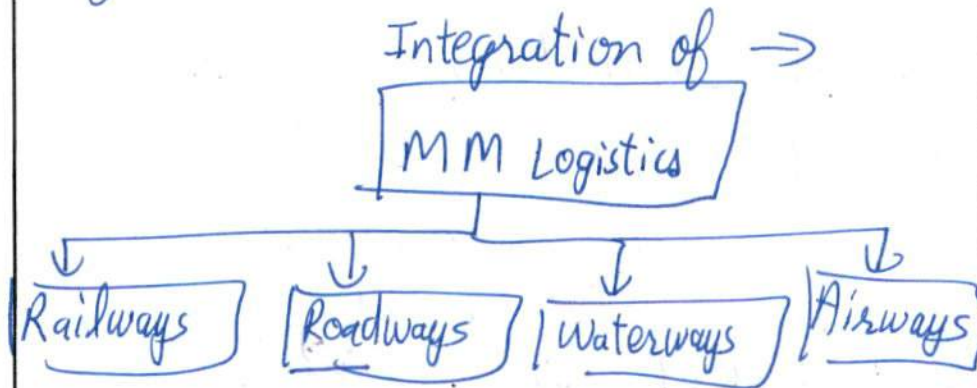
Way Forward →

- 1) Bilateral engagement to get access to markets like china
- 2) Create demand within Indian economy for their services. Eg By boosting manufacturing sector.
- 3) More emphasis on quality in higher education

10. An effective multi-modal logistics and transport sector will make the Indian economy more competitive. Analyse.

एक प्रभावी मल्टी-मॉडल लॉजिस्टिक्स (बहु-रूपात्मक संभरण) और परिवहन क्षेत्रक भारतीय अर्थव्यवस्था को और अधिक प्रतिस्पर्धी बनाएगा। विश्लेषण कीजिए।

Union Budget 2017 mentioned the need for effective mult. modal logistics and transport sector for better performance of our Economy.



How it helps →

- 1) Last mile connectivity - Eg ports will be aided by railway lines' connection.

- 2) Complementing the advantages of different modes. Eg - Roadways offers flexibility, Railways offers quantity, airways offers time advantage. Hence different requirements can be met with optimized combination of different modes of transport.
- 3) Lowers costs of operations due to optimised combination of different modes.
- 4) Different terrains of India can be served better according to geographical needs.

Steps taken →

- 1) setting up of multi-modal logistics park as per Union Budget 2017.
- 2) Dedicated Freight corridors
 - Western will connect to JN Port
 - Eastern will be upto Dankuni
 - will help serve ports of W. Bengal
- 3) Inland dry ports being developed for inter modal transshipment as per MoU with UNESCAP
- 4) Roll On Roll OFF service by Railways in Konkan railway and Bihar where loaded trucks are carried by trains.

such efforts are necessary to improve our competitiveness especially as we are trying to attract global manufacturing

11. Climate change threatens sustainable development, impairs socio-economic development and reinforces cycles of poverty across the globe. In this context, discuss the utility of climate risk insurance as an instrument within a comprehensive climate risk management system.

जलवायु परिवर्तन पूरे विश्व में संधारणीय विकास को जोखिम में डालता है, सामाजिक-आर्थिक विकास को क्षीण करता है और गरीबी के चक्र को मजबूत बनाता है। इस संदर्भ में, व्यापक जलवायु जोखिम प्रबंधन प्रणाली के अंतर्गत एक साधन के रूप में जलवायु जोखिम बीमा की उपयोगिता पर चर्चा कीजिए।

~~UN Conference on Sustainable~~

Rio +20 conference recognised the threats of climate change over sustainable development, poverty reinforcement etc.

IPCC's 4th and 5th Assessment reports have indicated that it is difficult to accurately anticipate the future impacts of climate change with respect to which countries

will suffer most or which sectors
will suffer most.

This grave threat and uncertainty
of its impact poses need for
Climate risk Insurance.

→ It shall be funded by a
global contribution to mitigate
climate change impact.

- Environmental refugees could be helped.
- Agricultural outputs will be threatened. Since it will predominantly impact India, CRI will help cover Indian agricultural sector.

Overall we need a comprehensive
~~Risk~~ climate Risk Management
system →

- Rehabilitation of people impacted by climate change like inundation of coastal areas.
- Developing adaptation mechanisms with respect to food security, energy security etc.
- Preparing climate change resilient infrastructure.

12. Why are women particularly vulnerable to the impact of natural disasters? Also analyse, with adequate examples, how women can play a more effective role in disaster risk management cycle.

प्राकृतिक आपदाओं के प्रभावों के प्रति महिलाएं विशेष रूप से सुभेद्य क्यों होती हैं? साथ ही, समुचित उदाहरणों के साथ विश्लेषण कीजिए कि किस प्रकार महिलाएं आपदा जोखिम प्रबंधन चक्र में अधिक प्रभावी भूमिका निभा सकती हैं।

Sendai Framework on
Disaster Risk Management
has recognised that
women are particularly
vulnerable to impact of
natural disasters.

Reasons →

- 1) Usually women are less
empowered due to patriarchal
societies. In post disaster
situation they are unable to
generate resources, livelihood
for their survival. They thus slip

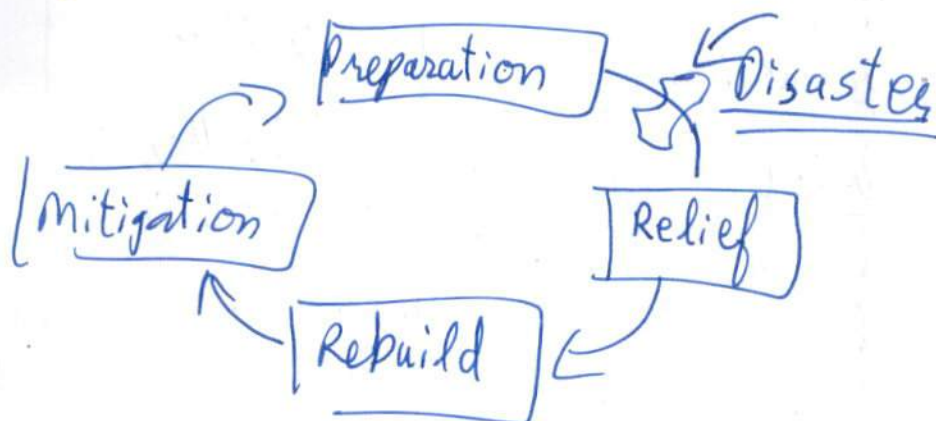
into poverty.

2) Domestication of women means they are less trained to respond during disasters.

Eg - Lack of participation in community mock drills.

3) Added responsibilities of taking care of children during and post disaster.

A typical disaster risk management cycle is →



Role of Women →

1) Mitigation → Participation in disaster management plans, building infrastructure

Eg - Women are more sensitized to needs of children hence they will advocate designing cyclone shelters which are accessible to children also.

2) Preparation → Participation in community mock drills. Eg stocking homes with emergency supplies in case of threat of floods

3) Relief → Immediate rescue of victims. Women would excel in psychological care to victims.

4) Rebuild → Effective contribution in rebuilding better. Eg After Phailin cyclone, women helped in reinvigorating livestock sector.

13. In view of the seriousness of heat waves and its consequences, greater attention is required for dealing with it as a natural disaster. Analyse in the context of recent developments and the actions taken by relevant government bodies.

हीट वेव (ग्रीष्म लहर) और उसके परिणामों की गंभीरता के आलोक में, एक प्राकृतिक आपदा के रूप में इससे निपटने हेतु अधिक ध्यान दिए जाने की आवश्यकता है। हाल के घटनाक्रमों और संबद्ध सरकारी निकायों द्वारा उठाए गए कदमों के संदर्भ में विश्लेषण कीजिए।

Heat waves have been defined by IMD recently as →

- When air blows 5°C above ~~normal~~ ^{average} regional temperature in plains
- When air blew 2.5°C above average temp in hilly areas.

The effects of heat waves are drastic ~~and~~ →

- 1) Cause of heat strokes, dehydration.

- 2) Predominantly impacts children
- 3) Numerous deaths are reported every year in North plains during summers.

Hence it must be dealt like a natural disaster.

Recently governments have been recognising its severity and taken measures like →

- 1) Proper definition by IMD
- 2) Real time reporting of incidence of heat waves.
- 3) Immediately giving holidays to schools during heat waves.

- 4) Creating shelters in public spaces and infrastructure for respite during heat wave.
- 5) Urban planning to incorporate prevention of creation of Urban Heat Islands.
- 6) Bangalore is experimenting with vertical gardens to address the issue.

Hence heat waves are indeed dangerous. Effective protection would demand community participation wherein people also help each other with shelter, water etc based on compassion.

14. While genome editing offers immense potential benefits in the area of healthcare, there are a lot of apprehensions regarding its use. Discuss.

जहां, जीनोम एडिटिंग स्वास्थ्य सेवा के क्षेत्र में बहुत अधिक लाभ की संभावना प्रस्तुत करता है, वहीं इसके उपयोग के संबंध में काफी आशंकाएं भी मौजूद हैं। चर्चा कीजिए।

Genome editing is a technique by which human DNA sequence (genome) can be altered, using tools like CRISPR etc.

Benefits in healthcare →

- 1) Potential cure to genetic diseases like down's syndrome
- 2) Help in boosting immunity in cases of HIV infection.
- 3) Somatic cells could be programmed to develop organs,

body parts for replacement.

4) Precise delivery of medication
is possible.

5) Vaccination against many
diseases possible.

Yet it has created a
lot of apprehensions →

1) Threat of Mutations in
genetic structure -

2) Medical Ethics where possibility
of cloning, designer babies etc
opens up.

3) Safety of techniques has
yet not been established.

side effects could manifest
after series of future
generations.

- 4) Possibility of biological
mass destructive weapons
based on genome altering.

Hence genome editing is a
double edged sword.

It is said that

"A tool is only as good
as the person using it."

Hence wise use of the
technology is the need of
the hour.

15. Discuss various ways in which supercomputers have benefitted mankind over the years. Also enumerate the objectives of the National Supercomputing Mission and the mechanism for its implementation.

उन विभिन्न तरीकों पर चर्चा कीजिए जिसके माध्यम से विगत वर्षों में सुपर कंप्यूटरों ने मानव जाति को लाभान्वित किया है। इसके साथ ही राष्ट्रीय सुपरकंप्यूटिंग मिशन के उद्देश्यों और इसके कार्यान्वयन के तंत्र को भी सूचीबद्ध कीजिए।

Supercomputers are distinguished from normal computers in wake of their tremendous computing power. India has some ~~sen~~ supercomputers like PARAS.

Their benefits till date →

- 1) Weather Forecasting - scores of data generated by remote sensing satellites is analysed by them - helps in disaster management, cropping pattern, etc.

- 2) Research & development → They are used in analysing data of Large Hadron Collider, mathematical models etc
- 3) Intelligence gathering - Cyber space can be monitored for detecting cyber security issues.
- 4) self driving cars - have been developed by Google (through Waymo) using super computers
- 5) Big data Analytics → Where terabytes of data is analysed for detection of patterns. Used for optimising resources, marketing etc

Indeed supercomputers have been used in much more ways.

Due to their crucial contribution, India has National Supercomputing Mission →

- Assist leading research institutes of India through access to supercomputers
- Develop world class supercomputers currently India has one in global top 5 most powerful.
- Local technological development and bringing cost effectiveness
- Collaboration with IIT Kharagpur to be its nodal implementing agency.

16. Widely seen as a disruption for the traditional banking and financial institutions, cryptocurrencies have gained significant traction lately, at the same time creating a regulatory nightmare for regulators across the globe. Discuss.

पारंपरिक बैंकिंग और वित्तीय संस्थानों के लिए व्यापक रूप से व्यवधान के रूप में देखी जाने वाली, साथ ही विश्व भर में नियामकों के लिए एक नियामकीय दुःस्वप्न का निर्माण करने वाली, क्रिप्टोकॉरेंसी ने हाल ही में महत्वपूर्ण पकड़ स्थापित की है। चर्चा कीजिए।

cryptocurrencies are virtual currencies which are gaining wide popularity. Eg - BITCOIN.

Features and advantages →

- 1) They are based on public ledger system driven by blockchain technology. This ensures that online trail is build about all transactions. This gives system security and reliability.

- 2) peer - to - peer currencies
- Hence middlemen costs are eliminated - Financial efficiency.
- 3) Provides anonymity
- 4) Last mile financial access
as cost of infrastructure is less than traditional banking.
- 5) Internationally tradable - No costs of exchange or hard currency conversion.

Hence they have gained immense popularity. Eg recently a university in Japan has started accepting BITCOINS for fee payment.

Yet there are many severe issues →

- 1) No backing by central banks
- 2) Scope for misuse. Eg Recently Ransomware attack demanded payments through cryptocurrencies.
- 3) Anonymity can pose chances of terror financing.
- 4) Cases of BITCOIN theft have been reported.
- 5) Not accepted universally.

Hence RBI recently gave guidelines

- It does not back any cryptocurrencies
- suggests non use of any as it is not centrally backed.

However the benefits of cryptocurrencies are immense. Thus RBI is working on DigiCoin - a cryptocurrency itself to offer best of both worlds.

17. An internationally-binding agreement to strengthen the Outer Space Treaty of 1967 is both desirable and increasingly a necessity. Analyse in view of the traditional and emerging challenges in this arena.

1967 की बाह्य अंतरिक्ष संधि को मजबूत बनाने हेतु एक अंतरराष्ट्रीय बाध्यकारी समझौता वांछनीय और साथ ही एक आवश्यकता दोनों है। इस क्षेत्र में पारंपरिक और उभरती हुई चुनौतियों के आलोक में विश्लेषण कीजिए।

Outer Space Treaty 1967
was signed in backdrop
of cold war era and
increasing space race.

Its provisions →

- 1) Freedom of exploration
to all countries.
- 2) No claims of sovereignty
on outer space and celestial
bodies.
- 3) No arming of outer space or
satellites with weapons of
mass destruction.

1) Peaceful exploration.

However with changing times many challenges have emerged →

1) Treaty binds governments but ~~it~~ is not clear on private entities' responsibility.

Eg SPACEX, a private firm is planning to colonize Mars.

2) Issue of rising space debris.

3) Only weapons of mass destruction are ~~also~~ prohibited. Other weapons should also be prohibited.

n) In 2008 China downed its own satellite by firing weapon from ground. It was demonstration of technology not regulated by Treaty. It raised threat of safety of outer space assets of other nations.

Hence there is a need to strengthen the Treaty.

- Clearly demarcate roles and responsibilities of private firms.
- Involvement of any type of weapon should be banned.

18. Even after nearly 60 years in existence, AFSPA remains at the centre of debates with respect to countering violent insurgencies, role of the states and local communities. Discuss.

अस्तित्व में आने के लगभग 60 वर्षों के बाद भी, हिंसक उग्रवाद का मुकाबला करने और राज्यों व स्थानीय समुदायों की भूमिका को लेकर AFSPA वाद-विवाद के केंद्र में बना हुआ है। चर्चा कीजिए।

AFSPA provides for extraordinary power to army forces - To search, seize any property.
- To shoot any one
- Impunity from laws.

AFSPA has been in existence since 60 years and has been opposed by

Jeevan Reddy Commission and Second ARC.

Issues →

- 1) Human rights violations. Allegations of excesses by army, rape etc.

- 2) Prolonged army presence weakens local governance and alienates the masses.
- 3) Provisions for judicial recourse is virtually absent. Eg Army tribunal has not convicted any army man for violations under the Act.
- 4) Rising unrest in locals of Kashmir, Nagaland, Manipur etc against AFSPA. Eg Irom Sharmila kept decades long fast to protest against it.

Yet the army demands that AFSPA is necessary by —

- 1) Army is not trained to deal within ambit of civil laws.

- 2) Countering insurgency, terrorism needs fear-free operations.
- 3) Army cites its strong organisational values that it does not misuse AFSPA.

Recent Developments →

- 1) SC in a case directed that any Human rights violation under AFSPA will not be outside judicial scrutiny.
- 2) Tripura removed AFSPA last year.
- 3) Center has empowered states to take a decision on its continuation, though center can override it.

WAY FORWARD - As per Tripura example and Tejvan Reddy Commission report - We must build capacity of local police, CAPF and meanwhile prepare plan to repeal AFSPA gradually.

19. Analyse the challenges and opportunities inherent in the push for indigenisation of defence production in India. Also, identify the measures through which indigenous manufacturing of defence equipments is being encouraged by the Government.

भारत में रक्षा उत्पादन के स्वदेशीकरण की दिशा में निहित चुनौतियों और अवसरों का विश्लेषण कीजिए। साथ ही, उन उपायों की भी पहचान कीजिए जिनके माध्यम से रक्षा उपकरणों का स्वदेशी निर्माण सरकार द्वारा प्रोत्साहित किया जा रहा है।

Indigenisation of defence production is not only about economic prudence but also a strategic imperative."

Advantages →

- 1) self reliance in wake of war
- 2) Advancement of technology.
- 3) saves foreign reserves.
- 4) Efficiency in cost. Eg it was proposed that indigenous production of Baghale would have been 10 times less cost.

5) Data security about our defence capacity. Eg Recently Scorpene class submarine data was leaked which was supplied by French company,

~~Main~~ Challenges →

- 1) Requirement of pr investment.
- 2) Developing local supply chain.
- 3) Procurement assurance for companies before they can decide investment.
- 4) Ensuring that private sector doesn't hold country to ransom during war time

by reducing supply.

Measures by Govt →

- 1) Defense Procurement Policy which mandates domestic resource requirement too.
- 2) Foreign Direct Investment raised to 100%
- 3) Strategic Partnership agreement for partnership between domestic manufacturers and Foreign Original Equipment Manufacturers.
- 4) Defence Technology Agreement between USA, India for joint manufacturing in India.

20. India's ability to pursue a clear-cut strategic vision depends on its ability to improve institutional cooperation and coordination between the armed forces and civilian bureaucracy. Discuss.

भारत द्वारा एक सुस्पष्ट रणनीतिक दृष्टि का अनुसरण करने की क्षमता वस्तुतः सशस्त्र बलों और सिविल नौकरशाही के बीच संस्थागत सहयोग और समन्वय में सुधार करने की क्षमता पर निर्भर करती है। चर्चा कीजिए।

