

GENERAL STUDIES (Test Code : 422)

Name of Candidate: Registration No.

Schedule: Module:

Place: Time: Date:

Classroom: Distance Learning: Classroom & Distance Learning:

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Q. No.	Maximum Marks	Marks Obtained
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INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, ID Number and Test Code).
उत्तर-पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक नम्बर आदि।)
- There are TWENTY-FIVE questions printed both in HINDI and in ENGLISH.
इसमें पच्चीस प्रश्न हैं तथा हिन्दी और अंग्रेजी दोनों 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 को 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 (क्यू.सी.ए.) पुस्तिका के मुख-पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम को अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेगा।
- 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।

Total Marks Obtained

Remarks:

Signature of Examiner

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GENERAL STUDIES (Test Code : 422)

Overall Macro comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

All The Best

All questions are compulsory and carry equal marks. Answer the questions in NOT MORE than 200 words each. Content of the answer is more important than its length.

1. The Supreme Court of India on the reckless media coverage of the 26/11 attacks noted that - "By covering the attack live, the Indian TV channels were not serving any national interest or social cause. On the contrary, they were acting in their own commercial interests, putting national security in jeopardy." In the light of the above observation, mention the principles and concerns that mass media should keep in mind while reporting sensitive and dangerous issues. 10

भारत के उच्चतम न्यायालय ने 26/11 हमले के गैर-जिम्मेदार मीडिया कवरेज पर उल्लेख करते हुए कहा कि - "हमले का सीधा प्रसारण कर भारतीय टीवी चैनल किसी राष्ट्रीय हित अथवा सामाजिक कार्य में सेवारत नहीं थे, इसके विपरीत वे राष्ट्रीय सुरक्षा को खतरे में डालकर अपने वाणिज्यिक हितों के लिए कार्य कर रहे थे।" उपर्युक्त अवलोकन के प्रकाश में उन सिद्धांतों और चिन्ताओं का उल्लेख कीजिये जिनका ध्यान मीडिया को संवेदनशील और खतरनाक मुद्दों की रिपोर्टिंग के समय रखना चाहिए।

Media is one of the strongest pillar we need to support the fabric of the country. However, this pillar must be dependable and responsible.

Responsible Journalism means that one should be aware of the impacts the actions of media has on the system.

While live coverage media is not co-operating with police and were acting in self self interest.

Remember media should always remember that it has a

social responsibility and should not misuse this power in own commercial interests. In fact the constraints must be understood and Media should co-operate so as to not rich life of people.

There must be ideas of public service, social responsibility should govern the conduct of Media.

Responsible Media can only be a true friend to the citizens of a country.

2. What started off as a movement for land reform today poses the greatest internal security challenge to India. Analyse the role of external state and non-state actors in fuelling naxalism across the country. 10

यह एक भूमि सुधार आन्दोलन के रूप में प्रारंभ हुआ था किन्तु आज यह भारत की सबसे बड़ी आंतरिक सुरक्षा चुनौती बन गया है। देश भर में नक्सलवाद को बढ़ावा देने में बाह्य राज्य ताकतों और गैर-राज्य ताकतों की भूमिका का विश्लेषण कीजिये।

The base on which any movement starts soon erodes and collective interests for which the movement started, fitballs into a narrow self-interest movement of power & prestige.

Naxalism is today India's biggest internal security threat.

The innocent, unemployed people are the easy victims of the controllers of this movement. People with genuine grievances are also poisoned against the state.

In this way the movement which started to to make govt hear is now not interested for a dialogue with govt.

To fuel this movement external state & non state actors also participate as any friction in internal security provides for the the right ~~time~~ opportunity to create panic in the areas and hence it creates breeding ground for anti-state actors to settle scores with

the Indian state.

External sources provide finance, training, men, material & resources, arms, ammunition to support such ~~as~~ groups.

Naxalism is somehow a proxy for external conflict in this sense.

Impact The external state & non-state actors support such movements to ensure that peace remains disturbed and the moral & social fabric of society remains disturbed and the state energy gets divided and hence focus on external borders conflict ~~has~~ come down.

3. Why is agricultural diversification essential for sustainable livelihood? Bring out the importance of allied activities associated with agriculture as a source of diversification.

10

निर्वहनीय आजीविका के लिए कृषि विविधीकरण क्यों आवश्यक है? विविधीकरण के एक स्रोत रूप में कृषि के साथ सम्बद्ध क्रियाओं के महत्व को दर्शाए।

Diversification also helps in
diversion of risk. Diversification
in agricultural activities will
not only divides risk but
will also help in increasing
the sources of income of
people engaged in this sector.
This will ensure ~~that~~
the prosperity of the farming
community and will help
in sustainable livelihood.

Sustainable livelihood
requires that a consistent
income level is maintained
and risks are balanced out &
shocks are prevented.
Diversification into allied
activities like horticulture,

flower culture, dairy farming, pisciculture, bee keeping etc will help in carrying out that diversification.

It will diversify sources of income. Moreover it will develop inter-activities linkages where one activity will be support the other and hence provides cushion in times of distress in other activities.

It will help immensely in promoting the welfare of farming communities.

4. Government of India in its budget for 2014 has announced a hike in the FDI cap in Insurance. What are the likely benefits of FDI in Insurance for the Indian economy? What are the challenges that still remain to increase the insurance penetration in the country? 10

भारत सरकार ने 2014 के अपने बजट में बीमा के क्षेत्र में प्रत्यक्ष विदेशी निवेश (FDI) की सीमा को बढ़ाने की घोषणा की है। भारतीय अर्थव्यवस्था के लिए बीमा में प्रत्यक्ष विदेशी निवेश के क्या संभावित लाभ हैं? देश में बीमा की पैठ बढ़ाने के समक्ष कौन सी चुनौतियां अभी भी विद्यमान हैं?

FDI in insurance is proposed to be hiked from present 26% to 49%. Lifting the insurance FDI limit to 49% will attract capital inflows in this sector.

The foreign companies in insurance sector will set

up business in India. It will enhance ~~the~~ the insurance products market. Along with it, it will help in improving the business climate of the country.

Consumer Consumers will also benefit as it will help in creation of a diversified market of products and will create competition, due to entry of new players.

Along with it, it will also help in bringing necessary capital inflow to plug deficits in Current Account. Moreover new products in insurance sector will link it

with bonds of infrastructural sector and hence will provide insurance funds for long term investment in infrastructure.

But for successful implementation of it, there must be insurance penetration and it will happen as we create a robust market for insurance participants. The regulatory set up must be simplified and conducive. There must not be multiple regulations and clear rules must be specified. The demand for insurance products is another challenge to meet. Most importantly, a level playing field must be created for insurance sector.

5. The recent RBI decision to give licenses to Small and Payments banks is seen as a positive step towards heralding financial inclusion. Explain how these banks will help in financial inclusion. What are the challenges these banks are likely to face? 10

लघु और भुगतान बैंकों (payments banks) को लाइसेंस देने सम्बन्धी भारतीय रिजर्व बैंक के हाल के निर्णय को वित्तीय समावेशन की घोषणा की दिशा में एक सकारात्मक कदम के रूप में देखा जा रहा है। ये बैंक किस प्रकार से वित्तीय समावेशन में मदद करेंगे, व्याख्या कीजिये? इन बैंकों के समक्ष आने वाली संभावित चुनौतियां क्या हैं?

The Small & Payments banks will be the new actors to take the goal of financial inclusion to its reality.

These banks will be able to penetrate into the roots of Indian system and ensure the services to financial services to the last mile.

The operating structure of such banks is such that it is more cost-effective for opening branches in remote areas than the big banks. These banks will be focused on financial inclusion and will be flexible to operate in the rural areas.

The business models adopted by such banks will be based on targeting the unbanked - so their goal is financial inclusion.

Since they will not be providing loans or accepting public deposit - these will not be under tight regulatory of RBI.

Hence they will be target audience oriented and hence will be more successful.

- The challenges these banks likely to face are:
- ① finance or capital to operate.
 - ② low level of client coverage.
 - ③ No mechanism of generating large revenue.
 - ④ Manpower to work in such banks.
 - ⑤ Infrastructure requirements.

6. Explain the backward and forward linkages across the supply chain in the Food Processing Sector. Also discuss their importance in ensuring the success of Supply Chain Management in the Food Processing Industry of India.

10

खाद्य प्रसंस्करण क्षेत्र में आपूर्ति श्रृंखला में अग्रगामी और पश्चगामी लिंकेज/कड़ियों की व्याख्या कीजिये। इसके साथ ही भारत के खाद्य प्रसंस्करण उद्योग में आपूर्ति श्रृंखला प्रबंधन की सफलता को सुनिश्चित करने में उनके महत्व की चर्चा कीजिये।

The food processing sector is the sunshine sector of economy. It has the potential to change the face of Indian Agriculture.

The linkages developed by the food processing sector will help in creating a better, quality concerned Agriculture and

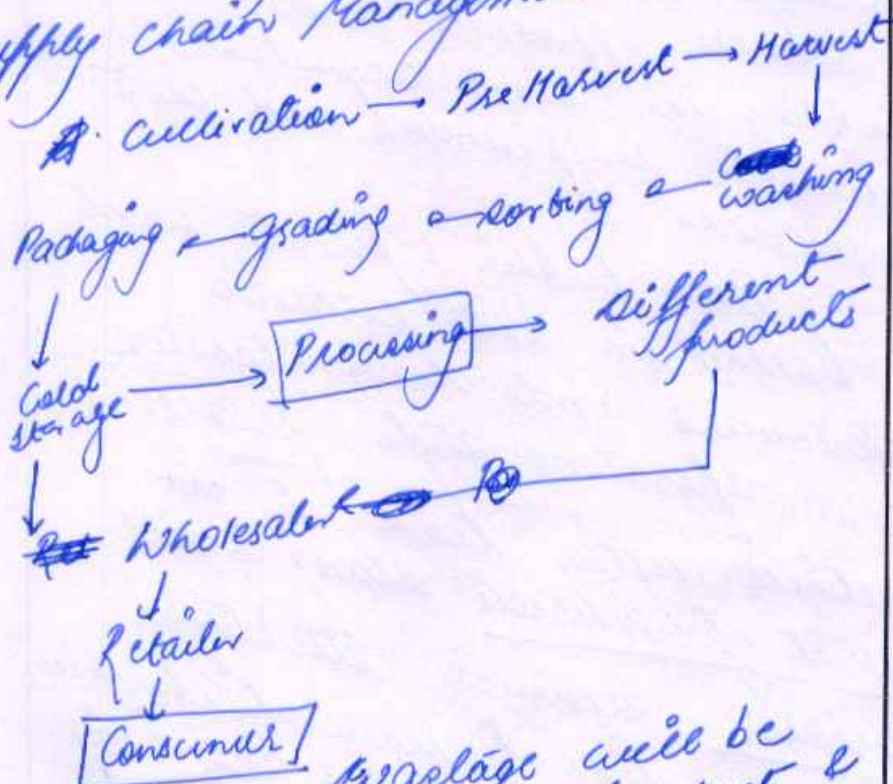
Also will lead to boosters to the retail management, logistics management. It will provide fillip to Infrastructure, transport sector, and also various activities of Pre-harvest and Post harvest will get momentum. The activities like packaging, grading, sorting etc will be boosted up. The transformation sector will get stimulation as various products will be prepared and provided in various cities.

It will help in creation of rural non-farm employment opportunities.

Along with it 60-70% of export products which get washed will not be to do. Hence all

the sector will get
integrated and the
new dynamism will be
created in the
agricultural sector and its
various allied sectors.

This will help in
creation of an efficient
supply chain management wherein



and hence wastage will be
curbed leading to more products &
with efficient prices

7. India has emerged as the world's largest PPP market with more than 900 projects in various stages of development yet challenges galore. Explain. How far would the '3P India' Initiative be able to address these challenges?

10

900 से अधिक परियोजनाएँ जो कि अपने विकास की विभिन्न अवस्थाओं में हैं के साथ, भारत विश्व के सबसे बड़े PPP बाजार के रूप में उभरा है फिर भी चुनौतियाँ बहुतायत हैं। व्याख्या कीजिये | 3P पहल किस हद तक इन चुनौतियों का सामना करने में सक्षम होगी?

India is the growing economy and is in need of various resources & to create town partnerships are needed to support it.

But PPP is fraught with multiple challenges of delay in clearances, approvals and problems in land acquisitions causing inefficiencies and cost over-run.

Both public & private want to partner in but certain deficiencies and dissimilarities in the operating style, practices matters often lead to the conflict of interests along with various systemic structural problems like Bureaucratic hurdles, political & economic instability etc.

Policy? Decisional Paralysis add
to the fol.

To ensure that PPP
is success / we need to
remove such obstacles. ~~by~~
"3P India" Initiative will
help in securing it by
making public, Panchayats,
to pitch in and to develop
the project with the
Procuring Procurement ~~and~~ done
in a harmonious manner
with mutual cooperation.

8. (a) Information Technology has a huge role to play in making agriculture a sustainable activity even for smallholder farmers by providing them with necessary information at every stage of farming at the right time. Discuss. 5
- सूचना प्रौद्योगिकी, किसानों को, यहाँ तक कि छोटे किसानों के लिए भी कृषि के प्रत्येक चरण में सही समय पर आवश्यक जानकारी उपलब्ध करा कर कृषि को एक निर्वहनीय या संतुलित गतिविधि बनाने में महत्वपूर्ण भूमिका निभा सकती है। चर्चा कीजिये।

Information Technology is needed to revolutionize the agriculture and to provide the platforms and the channel through which right, timely information about seeds, fertilizers can be provided. Kisan call centers and information dissemination on

mobiles can only be possible
with sound IT infrastructure.

Along with IT with the
help of internet services
will help in providing
E-Governance in Agricultural

sector. Services on agri techniques

etc can be shown with
the help of IT devices.

Thus it will
provide a sound support
system to the farmer all
around the clock. Apart from
early warning signals & information
about prices & policies of the
government.

8. (b) An expert committee to look into the issue of Rhino poaching has proposed dehorning of Rhinos as a solution to stop poaching of Rhinos. Critically analyse the viability of this measure to stop poaching of Rhinos. 5 गैंडों के अवैध शिकार के मुद्दे पर गौर करने के लिए बनी एक विशेषज्ञ समिति ने गैंडों के अवैध शिकार को रोकने के एक समाधान के रूप में गैंडों को सींग विहीन करने का प्रस्ताव दिया है। गैंडों के अवैध शिकार को रोकने के लिए इस उपाय के व्यावहार्यता कि आलोचनात्मक विवेचना कीजिये।

The problem of Rhino poaching should not be corrected by a inhumane ~~as~~ measure of dehorning Rhinos. It is likely tantamount of saying that we must spoil the beauty as it may be attached.

Protection of Rhino in their original habitat is the only solution. Strict Vigilance, use of ~~IT~~ Information Technology like use of ~~GPS~~ chips or radio waves to track the movement of Rhinos should be done. But ~~de~~ dehorning of Rhino is easy but a very cruel step.

It should not be a solution
at all. Poachers are to be
caught & stopped & not to
penalise Rhinó & devoid it
of its beauty.

9. Managing borders is more than just stopping infiltration of terrorists. What other security challenges, apart from terrorism, does India face in its border areas? 10

सीमा प्रबंधन सिर्फ आतंकवादियों की घुसपैठ रोकने से कहीं अधिक है। आतंकवाद के अलावा सीमा क्षेत्रों में भारत किन अन्य सुरक्षा चुनौतियों का सामना करता है?

The border areas are the most sensitive areas for ensuring the safety of the country.

apart from stopping infiltration of terrorists, - India faces threats of smuggling of arms, drug trade being exported to India from borders.

Infra borders are check points of crossing area of illegal migrants.

Most of the the successor movements have ~~to~~ their bases near borders. Borders are the areas from where the external state & non-state agencies supply the men, material, resources, arms etc.

To check the inflow of counter-fit currency, ~~from~~ border areas are the nodes along with it human trafficking & various types of organised crimes are carried out on borders

In fact the entry of any material hazardous or which is banned/illegal also flows in from outside through border.

Thus border areas are ~~not~~ to be most vigilantly protected as ~~it is~~ they serve as checkpoints of entrance of various criminal activities.

10. Today's terrorist organisations succeed on the basis of a sound underlying business model of organised crimes. Why do terrorist organisations find it beneficial to enter into organised crimes or partner with organised criminals? Illustrate.

10

आज के आतंकवादी संगठन, संगठित अपराध के एक अंतर्निहित व्यापार मॉडल के आधार पर सफल हैं। आतंकी संगठन क्यों संगठित अपराध अथवा संगठित अपराधियों के साथ भागीदारी को लाभप्रद पाते हैं? उदाहरण देकर स्पष्ट कीजिये।

Terrorism has increased both into its coverage and intensity. It is a global menace.

To fund & finance such terrorist operations involving expensive arms, ammunition, skill-training etc., organised crimes are committed. The finance appropriated from organised crimes is used in fueling & supporting terrorist operations.

Terrorist organisations find it beneficial to enter into organised crimes as they have the necessary

wherewithal and network
to ensure the carrying out of
~~the~~ organised crimes

These terrorist outfits
provide the secured area
with the help of which
organised crime can take place.

on the other hand organised
crime help the terrorism to
continue its operation by
getting support from a permanent
source of income.

Thus both the activities
mutually support each other
and help in each other's
growth

11. (a) What are floating solar panels? What are its major advantages compared to conventional solar panels? 5

तैरते हुए सौर पैनल क्या हैं? पारंपरिक सौर पैनलों के तुलना में इनके प्रमुख लाभ क्या हैं?

Conventional Solar Panels - demand a lot of space as they are to firmly placed on ground and also they will be used simply on one side and hence are expensive and also will support the limited area for its energy requirements.

On the other hand -
floating solar panels will
be efficient as the space will
no matter more be a census.

on the other hand -
they could be used
both sides to generate
more energy per unit of
panels. Along with it
it will also help in
tapping sun's rays at
different angles, so longer
generation of energy.

11. (b) What is "Drishti" System? How will it help in enhancing aviation safety? 5
दृष्टि (Drishti) प्रणाली क्या है? विमानन सुरक्षा को बढ़ाने में यह किस प्रकार सहायता करेगी?

Drishti system is developed to ensure the right predictability of weather and enhance the vision in the adverse climatic or weather conditions. This will help in better vision of runway and hence will reduce the aircraft accidents due to far better visibility.

It will also help in better location of aircraft and things on runway and hence better management of runway operation.

12. The Prime Minister of India has given a call for 'Make in India' campaign. What are the challenges faced by India's manufacturing sector if it seeks to become a global manufacturing hub? 10

भारत के प्रधानमंत्री ने 'भारत में बनाओ' अभियान का आह्वान किया है। यदि भारत वैश्विक विनिर्माण की धुरी बनना चाहता है तो भारत के विनिर्माण क्षेत्र के समक्ष प्रमुख चुनौतियाँ क्या हैं?

India is seen as a potential global manufacturing hub and to ensure its success various challenges faced by manufacturing sector needs to be addressed:-

① The Structural bottlenecks-
ie the regulatory regime -
bureaucratic hurdles, approvals,
delay in and political roll back
of decisions

Multiple clearances, policy log-jams etc.

② The Ease of Doing Business needs to be improved by providing a congenial investor climate and positive business sentiment.

③ The Infrastructural Support - the basic welcoming infrastructure requirement is needed as absence of it - like roads, highways, port facilities, electrical etc is another challenge.

④ Clarity & Implementation of Policy
The policy roll back and the part willingness should be seen :-

⑤ Skilled manpower & human resource
The availability of skilled manpower is another challenge.

⑥ The Archais labour laws
The old labour laws of retrenchment, hire & fire rules needs to reformed

⑦ The Clear Taxation Reforms
The taxation system is ~~the~~ a ~~real~~ challenge as it is very cumbersome & complex.

⑧ These needs to be further reforms like simplified & reform like GST, DTC should be made.

⑨ Finance & funds to support
the manufacturing is needed so that ^{new} National Manufacturing Policy - is implemented and targets of manufacturing should be achieved.

13. Mumbai attacks brought into sharp focus India's unpreparedness in coastal security. Identify various security concerns related to our maritime boundaries. What steps have been taken by India to improve its coastal security? 10

मुंबई हमला ने भारत की तटीय सुरक्षा की तैयारी में कमी को स्पष्ट रूप से उजागर किया है। हमारी समुद्री सीमाओं से संबंधित विभिन्न सुरक्षा चिंताओं की पहचान कीजिये। भारत द्वारा अपनी तटीय सुरक्षा को सुधारने के लिए क्या कदम उठाये गए हैं?

Coastal security is the most critical & sensitive area to ensure the overall security of India.

The concerns brought about post Mumbai attacks are infiltration of criminals, use of this route by illegal migrants, protection of fishermen from crossing international boundary.

The vigilance of coastal areas ^{security} from any organised crime like drug ~~or~~ trafficking, human trafficking on this route. International problem of piracy, terrorism and smuggling are potential concerns on our maritime boundaries.

Post Mumbai attacks, various security initiatives are taken as

- 1) Constant patrolling in coastal areas
- 2) National Committee on Coastal & Maritime Security (NCCMS) is ^{setup} headed by cabinet secretary to look into maritime security and strengthening the security architecture.
- 3) A new initiative - National Command Control and ~~Communication~~ Communication Information Network (NCCIN) has been launched to enhance National Domain Awareness project and set as a nodal ~~body~~ point to disseminate information to various Indian Navy Nodes.

Various fishermen vessels are not registered and ID cards issued to fishermen.

A lot of "excursion" ~~inter~~ has been conducted to check enhance productivity.

14. (a) 'India finally made it to the 'Cryo Club' with successful launch of GSLV-D5'. Explain in brief the cryogenic technology and its advantages. 5

SLV-D5' के सफलतापूर्वक प्रमोचन के साथ भारत अंततः cryo-समूह में सम्मिलित हो गया है। संक्षेप में कार्याजैतिक तकनीक और इसके लाभों कि व्याख्या कीजिये।

'Cryo club' - is the ~~etc~~ club grouping of all nations who has successfully launched a rocket through cryo indigenous cryogenic engine.

Cryogenic technology means cooling of the fuel to a very low level so as to

Reduce the weight of fuel and thus to increasing the payload of rocket to launch heavier satellites.

Cryogenic technology helps us to reduce the temperature of a thing to super cool levels.

Cryogenic technology uses liquid oxygen as ~~the~~ oxidiser and hydrogen as fuel.

It will help us in launching heavier satellites with lot of thrust and more distances can be ~~at~~ travelled.

14. (b) What is ZMapp and why was it in news recently?
ZMapp क्या है और हाल ही में यह चर्चा में क्यों था ?

5



15. Why is micronutrient malnutrition fast becoming a significant problem in India? Critically analyse the utility of 'Food Fortification' in fighting this menace. 10

भारत में सूक्ष्मपोषक कुपोषण क्यों तेजी से उभरती हुयी एक महत्वपूर्ण समस्या बनता जा रहा है ? इस खतरे से निबटने में खाद्य सुदृढीकरण की उपयोगिता का आलोचनात्मक विवेचन कीजिये।

Micronutrient malnutrition is becoming a greater challenge as it is not related to just poverty but also it depends upon the choice of consumer's dietary habits. Since it is not just restricted to poor people and thus is under in coverage.

It means that there is not sufficient amount of essential micronutrients like proteins, vitamins, fats, minerals etc. Thus it can lead to various types of diseases in hitherto non-hungry folk.

To curb this menace "food fortification" or "bio-fortification" technique can be immensely helpful as by this technique the foods will be fortified & artificially be injected with vital micro-nutrients so as to increase the nutritive value of the foodstuff.

Though it will help in meeting ~~an~~ the deficiencies but

it will be partial solution until consumers are aware of it and changes their habits of dietary consumption. Moreover, such fortification should be not be costly as poor won't be able to consume it. Nonetheless, it should also not risk the person's health as overconsumption of fortified foods can also be dangerous. ~~Fourthly~~ ~~the~~

Most importantly, the larger issue of access to food should be made the focus. It is the affordability, availability and access along with awareness will ensure the success of the programme.

16. Explain EPC model of investment in the infrastructure sector. Why has the government been favouring the EPC model over PPP in recent years? 10
आधारभूत संरचना के क्षेत्र में निवेश के ईपीसी मॉडल की व्याख्या कीजिये। हाल के वर्षों में सरकार ने क्यों पीपीपी मॉडल की अपेक्षा ईपीसी मॉडल को अधिक बरीयता दी है?

The PPP model today is fraught with many challenges and it is hence leading it way to new model called EPC model i.e. Engineering Procure ~~Process~~ Contracts.

Under this model - the private players will meet be equally partners but private players will do the design and create the product and the govt will procure it from them.

Thus it will ease the procure of government as it will lead to designing and creation to

One rest on one party
and the govt will not
interfere and will procure
it later stage.

The govt contract
is better & more flexible
and is more successful
model than PPP.

17. Discuss the various causes of floods in the Brahmaputra valley region. Contrast these with the causes of recent floods in J&K. How is Flood Plain Zoning used for flood management? 10

ब्रह्मपुत्र घाटी क्षेत्र में बाढ़ के विभिन्न कारणों की चर्चा कीजिये। इन कारणों की तुलना हाल ही में जम्मू एवं कश्मीर में आई बाढ़ के कारणों से कीजिये। बाढ़ के मैदानों की जोनिंग का उपयोग बाढ़ प्रबंधन के लिए कैसे किया जाता है ?

Floods is a very devastating natural disaster. In the Brahmaputra valley regions the various causes of floods can be

- ① Heavy downpour or massive rainfall leading to cloudburst.
- ② break of artificial levee.
- ③ breaking of a check dam or bunding materials

- ④ Afforestation due to Thinning,
- ⑤ ~~Soil loss~~ Human activities causing the obstruction in flow of water.

~~⑥ Impact of jets~~

In the case of J&K, the floods were caused owing to the lot of rainfall and changing climatic conditions owing to global warming and climatic changes. The human activities of creation of too much in a fragile ~~to~~ area and leading of change of course of rivers and interventions with sensitive ecosystem has led to massive devastation.

To avoid such disasters various measures should be taken and one

of them is Flood Plain Zoning.

In this system, the vulnerability of an area near the river banks is assessed and the entire flood plain is mapped according to various risks ~~are~~ being faced by the area.

The zoning is done according to classifications in zones of different degrees of risk and then necessary action is taken and counter-flood measures are initiated to either mitigate floods or to prepare for it with advance security measures.

18. The fact that Ganga is a holy river has, ironically, been a major factor responsible for its increasing pollution. Comment. Critically analyze the success of the steps taken by the Government to make Ganga pollution free?

10

वास्तविकता यह है कि गंगा एक पवित्र नदी है परन्तु विडम्बना यह है कि इसकी पवित्रता ही इसके बढ़ते प्रदूषण हेतु प्रमुख रूप से उत्तरदायी है। सरकार के द्वारा गंगा को प्रदूषण मुक्त बनाने के लिए उठाये गए कदमों का आलोचनात्मक विश्लेषण कीजिये।

Mythology associated with River Ganga and its beliefs has led to its devastation.

The items of various rituals etc are poured in the river and people put lot of offerings to the holy Ganga and people take dips in it in millions on religious occasions bringing massive crowds to visit the River and hence also bring massive pollution to it in terms of waste being accumulated in it. The holiness of Ganga is has become its reason for being under threat.

In the recent years many steps have been taken to improve the condition of Ganga.

- Schemes such as Clean Ganga Campaign has been initiated.

- People have been made aware to not litter the holy river.

- Various technologies have been made to purify the river and treat its pollution.

- The people around the area of Ganga have been sensitised to contribute in making Ganga clean and stop its pollution.

- Schools, colleges have been encouraged to ^{take} clean up Clean Ganga drive.

19. What are the major characteristics of a good irrigation system (for application of water and not source)? Discuss sprinkler and micro-sprinkler based irrigation systems with respect to these characteristics. 10

एक अच्छी सिंचाई प्रणाली के प्रमुख लक्षण क्या हैं (जल के सदुपयोग के संदर्भ में और स्रोत के संदर्भ में नहीं)? इन प्रमुख लक्षणों के संदर्भ में स्प्रिंकलर और लघु स्प्रिंकलर प्रणालियों की चर्चा कीजिये।

Good Irrigation system is as important to agriculture health as is clear air to human health.

A good Irrigation system is based on the principle of maximum utilization and coverage of land with best use of the water.

A good irrigation system helps in restoring the agricultural productivity.

- It makes the efficient use of water.
- It don't stress the underground aquifers.
- It is sustainable & Resource Augmenting.
- Makes maximum use of free resources like Rain Water by harvesting it.
- It makes the water management optimum and eliminates wastage.

The various new techniques of irrigation has developed like sprinkler and Micro^{sprinkler} irrigation and

these techniques are developed on the maximum & optimum use of water and ensuring its efficient application along with it promising maximum productivity of farming output.

In these systems, - techniques are developed such that - water is used in such a way that only the required quantity is sprinkled in the soil & near roots so that ~~too~~ excess water don't go in soil. Only the light amount in precise quantity needed for product is ~~not~~ used to irrigate the land.

20. Land reforms in India have only benefitted certain sections of the farming community. For the landless in the country, land reforms are still a distant dream. Examine.

10

भारत में भूमि सुधारों ने कृषक समुदाय के केवल कुछ वर्गों को ही लाभान्वित किया है। देश के भूमिहीनों के लिए भूमि सुधार अभी भी एक दूर का सपना है। परिक्षण कीजिये।

Land Reforms' task in India is still incomplete. Started just after Independence but still has not been able to achieve its aims.

Various land reforms in the country like Abolition of Zamindari, Tenancy Reforms, land ceiling etc has worked not ensured the land to the needy.

The Zamindars are still wealthy and landless class is growing rather being wiped transformed by now.

The land Reform agenda has limited benefits

and had loopholes leading
to not much achievements.

The landless is still
hungry for land and redistribution
of land hasn't yet completed.
In fact eviction is still
rampant as land titles &
deeds are not available

The Programs like digitisation
of land records & land records
modernization program are
still in a growing stage.

Though the 1800's colonial
act of land acquisition is
repealed but still land
acquisition, rehabilitation &
resettlement is not
working on ground

Creating millions of
homeless & landless each other
instead of reducing them -

21. What are Wetland Ecosystems? What are the functions performed by them in maintaining the ecosystem of an area? What are the reasons responsible for decrease in their size? 10

आर्द्रभूमि पारिस्थितिक तंत्र क्या होते हैं? एक क्षेत्र के पारिस्थितिक तंत्र को बनाये रखने के लिए इनके द्वारा निष्पादित कार्य क्या हैं? इनके आकार/क्षेत्र में कमी के लिए उत्तरदायी कारण क्या हैं?

Wetland Ecosystems are the
ecosystem or an integrated
independent system where
different communities of organisms
live in harmony to each other
~~but~~ But these ecosystems are
wet i.e. they are in water
based areas: like lakes,
Rivers, marshes, Estuaries etc

Functions performed by them in maintaining ecosystem of the area :-

① Providing breeding of various marine species and also attract various species. It diversity the ecosystem.

② It helps in synthesis of food chain and maintain it.

③ It provide the necessary ~~to~~ environment to attract migratory birds and thus creates maintenance of the integration between different species.

The reasons responsible for their decrease are:-

① Pollution of

② Poaching of birds & animals leads to disequilibrium.

③ Changing climatic conditions and global warming along with the human negative interference

22. "DNA Computing along with use of Nanobots is revolutionizing the field of targeted drug delivery". Explain DNA Computing and DNA Nanobots and their utility in targeted drug delivery. 10

"नैनोबोट्स के उपयोग के साथ डीएनए कम्प्यूटिंग लक्षित दवा डिलीवरी के क्षेत्र में क्रांति है।" डीएनए कम्प्यूटिंग एवं डीएनए नैनोबोट्स तथा लक्षित दवा डिलीवरी के लिए इनके उपयोग की व्याख्या कीजिये।

In the present complex diseases, the DNA Computing & Nanobots help in better drug delivery as because of DNA Computing the precise location of cells & tissues is ascertained.

The problem genes or cells are found out & thus help in the precise location of the say cancer cells and its location of genes regulating them.

Nanobots help in taking the required drug to the target tissues & cells and

thus help in saving the
healthy ~~gan~~ cells & tissues
and make drug delivery ~~more~~
easier & effective.

Nanobots are
so small that they
to can be efficiently utilize
in molecule of drug to reach
the precise cells

It will improve the
effectiveness of medicines
reduce side effects and enhance
accuracy.

23. Indigenization of the Indian defence sector is important for addressing the long term security concerns of the nation. In reference to the above, mention the salient features of the Defence Procurement Procedure 2013 as promulgated by the Ministry of Defence. 10

भारतीय रक्षा क्षेत्र का स्वदेशीकरण राष्ट्र की दीर्घकालिक सुरक्षा चिंताओं के समाधान के लिए महत्वपूर्ण है। उपर्युक्त कथन के संदर्भ में रक्षा मंत्रालय द्वारा प्रख्यापित रक्षा खरीद प्रक्रिया 2013 की मुख्य विशेषताओं का उल्लेख कीजिये।

Indigenization of Indian defence sector should be the mainstay to ensure a resilient, & secured, & self-reliant independent security architecture.

To ensure that the defence
Procurement Procedure 2013

actively foster indigenisation.

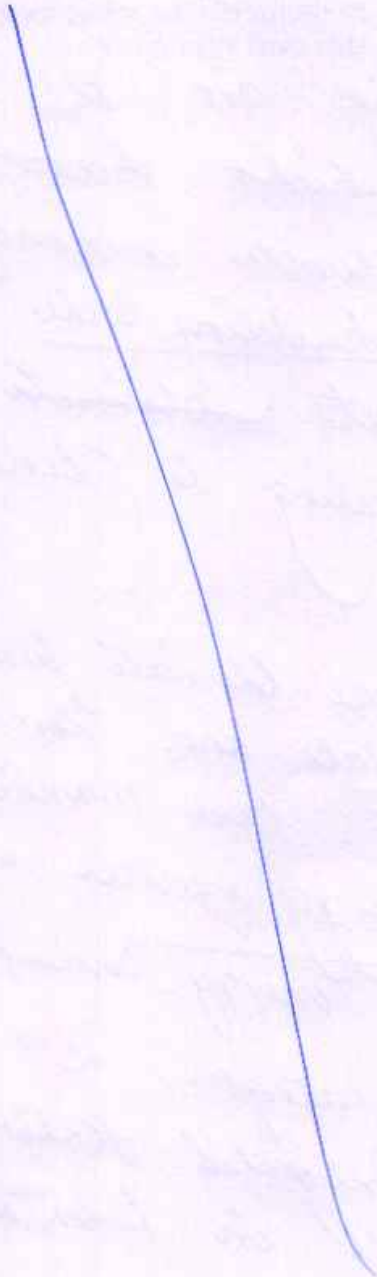
• It focuses on defence
creation of brand equity of
Indian defence.

• "Make" in India" of Indian
space ~~at~~ missiles, defence-
equipments

• Use of mandatory
indigenous domestic
Component.

• "Buy India" - is the idea
of buy Indian as far as possible.

• Indigenous creation of
submarines & Aircraft
carrier like Viraat.



24. What do you understand by Green Buildings? Explain how GRIHA ratings are proving to be more effective than the mandatory mechanisms like Energy Conservation Building Code (ECBC)? 10

आप ग्रीन बिल्डिंग से क्या समझते हैं? GRIHA रेटिंग कैसे अनिवार्यंत्र जैसे उर्जा संरक्षण बिल्डिंग कोड (ECBC) की तुलना में अधिक प्रभावी साबित हो रहे हैं?

Green Buildings are the buildings which have are ~~the process~~ under necessary norms of building code and are not climate change contributing to climate change.

They use climate friendly building materials and are energy efficient. Use maximum renewable energy sources and are low in energy consumption.

GRIHA ratings - i.e.
Green Rating Integrated Habitat
Assessment help in promotion

of such buildings construction
which are given by
starling truss on various
criteria of Green Building
norms.

Since it is ~~in~~ voluntary
& incentive based
like ratings, it is more
efficient than the
ECBC code which
are enforced mandatorily
~~and~~ give no ratings
or star or any incentive
offer enforcement.

25. What do you understand by radar gun? Discuss its components and working principle. Mention the various uses of radar system in everyday life. 10
आप रडार बंदूक से क्या समझते हैं ? इसके घटकों और कार्य-सिद्धांत की चर्चा कीजिये । दैनिक जीवन में रडार प्रणाली के विभिन्न उपयोगों का उल्लेख कीजिये ।

