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GENERAL STUDIES (TEST CODE : 981)

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Center	CHANDIGARH (ONLINE)	Date	6 OCT. 2017

INDEX TABLE			INSTRUCTIONS
Q. No.	Maximum Marks	Marks Obtained	
1	12.5		1. 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)। 2. There are TWENTY questions printed in ENGLISH & HINDI इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं। 3. All questions are compulsory. सभी प्रश्न अनिवार्य हैं। 4. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं। 5. 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। 6. Word limit in questions, if specified, should be adhered to. प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए। 7. 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।
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20	12.5		
Total Marks Obtained:			
Remarks:			

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

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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

1. Although it is the right time for elevating the mission of 'Make in India' to 'Inovate in India', significant challenges exist in doing so. Elaborate. How can these challenges be overcome?

यद्यपि यह 'मेक इन इंडिया' मिशन को 'इन्नोवेट इन इंडिया' में उन्नत करने का सही समय है, किन्तु ऐसा करने में महत्वपूर्ण चुनौतियाँ विद्यमान हैं। विस्तारपूर्वक बताइए। इन चुनौतियों को कैसे दूर किया जा सकता है?

Make in India campaign was launched with the aim to make India a production/manufacturing hub but time has arrived to transform it into innovation hub through 'innovate in India' given the importance of innovation in driving manufacturing.

But there are various challenges plaguing this elevation as follows:

- (1) Lack of quality research infrastructure available in the country in the form of labs, R&D centres etc.
- (2) Lack of quality research being undertaken in higher educational institutions.
- (3) Government apathy and negligence in providing enabling environment for research.
- (4) Government spending is less than 1% on R&D while in developed countries it is more than 3%.
- (5) Lack of skills among youth, lack of initiative by entrepreneurs in promoting innovation.
- (6) Lack of mechanisms to promote interest in research among youth; strict IPH regime etc.

STEP TO OVERCOME:

- (1) Attracting more foreign investment in innovation through improving ease of doing business
- (2) Creating an enabling environment through greater investment in research especially in higher educational institutions.
- (3) Effective implementation of schemes like start up India with sub-missions on innovation.
- (4) Creating awareness among public as well as entrepreneurs
- (5) Through global collaborations and MOUs amongst universities to encourage interest in inventions and creations.
- (6) Better implementation of National IPR policy and adequate dispute resolution mechanisms.

Thus holistic approach of transforming institutional, infrastructural and individual aspects is required for such an elevation.

2. What is meant by public debt? Highlight the objectives of public debt management. Explain why it is considered prudent to disaggregate debt management from monetary policy and take it out of the realm of central bank.

सार्वजनिक ऋण से क्या तात्पर्य है? सार्वजनिक ऋण प्रबंधन के उद्देश्यों पर प्रकाश डालिए। व्याख्या कीजिए कि ऋण प्रबंधन को मौद्रिक नीति से पृथक करना एवं केन्द्रीय बैंक की परिधि से बाहर ले जाना विवेकपूर्ण क्यों माना जाता है।

Public debt refers to the borrowings (both internally / domestically as well as from international markets / banks) by the ^{union} government, ~~corporates~~, ^{government} firms and institutions.

Out of this debt, the funds borrowed by government from international ^{institutions} ~~market~~ are called sovereign debt.

OBJECTIVES OF PUBLIC DEBT MANAGEMENT:

- (1) To keep the debt from domestic markets and financial institutions within a limit so that it doesn't create a crisis situation.
- (2) To manage the debt of government both internal and external within such limits that it can be returned with no significant impact on the economy.
- (3) To raise money from financial institutions and banks at best possible interest rates to reduce liability.
- (4) To develop mechanisms to repay back all loans with less liability for government.

Recently an idea was mooted in the budget speech about creating a special Public debt management Agency (PDMA) by segregating the functions of public debt management from monetary policy of RBI.

REASONS:

- (1) It presents a conflict of interest situation since central bank raises money for government, thus would favour lower interest rates, but while implementing deal money policy during inflationary pressures, it may raise the interest rates.
- (2) Thus monetary policy stance is more oriented towards inflation targeting which is opposite to public debt management.
- (3) An independent agency would be better equipped to manage debt rationally based on sound prudent economic principles.

Thus though such segregation is mooted still a comprehensive analysis is required to ensure that such a measure doesn't backfire in the long run.

3. 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.

भारत को अवसंरचना वित्तपोषण प्राप्त करने की तत्काल आवश्यकता है, लेकिन सार्वजनिक निजी भागीदारी (PPPs) का वर्तमान निवेश मॉडल असंतोषजनक रूप से डिजाईन (अभिकल्पित) किया गया है और इसे पुनर्संरचित करने की आवश्यकता है। अवरुद्ध परियोजनाओं, जोखिम प्रबंधन, गवर्नेंस (शासन) एवं संस्थागत क्षमता के संबंध में PPPs की सफलता में बाधक बने मुद्दों पर चर्चा कीजिए।

India is in the need of more than \$ 1.5 trillion for the next 10 years to create the infrastructure required. The PPP models provided a novel way of getting this finance by leveraging private sector but it is plagued with numerous issues.

ISSUES PLAGUING SUCCESS OF PPP

- (1) The PPP models / agreements are more like contracts with stiff penalties for concessionaires with for things beyond their control.
- (2) There is minimal risk sharing by the government leveraging all responsibility and risks on the private concessionaire.
- (3) There are often issues in land acquisition, getting regulatory clearances (especially environmental clearance) resulting in cost and time overruns and ultimately stalled projects.
- (4) The tolls are fixed and revised by government

at its free will without any prior consultation with the concessionaire.

- (5) Also there are no adequate dispute redressal mechanisms except going to supreme court making business difficult for concessionaire as well as untimely redressal of grievances.
- (6) The concessionaire may be ~~competent~~ competent to address both issues/sides - engineering and management.

WAY FORWARD

- (1) Adequate grievance and dispute redressal mechanism
- (2) Toll fixation and revision in consultation with private developer
- (2) Risk and responsibility sharing by government.
- (4) Quicker land acquisition and regulatory clearances.

The new PPP model of EPC (Engineering, procurement and construction), whereby the government provides resources and land acquisition with construction done by private developer, may emerge as solution to many of above problems.

4. The worsening road safety situation in India is further complicated by an increasing population and proliferation of vehicles on the road. Discuss. Also, highlight the steps that are being taken by the government to address the issue of road safety and reduce the associated fatalities.

भारत में सड़क सुरक्षा की बिगड़ती स्थिति, बढ़ती जनसंख्या और सड़क पर वाहनों की संख्या में बढ़ोतरी के कारण और अधिक जटिल हो जाती है। चर्चा कीजिए। सरकार द्वारा सड़क सुरक्षा के मुद्दों से निपटने एवं इनसे संबद्ध मृत्यु की घटनाओं को कम करने हेतु उठाए जा रहे कदमों पर भी प्रकाश डालिए।

On an average, there are 1.5 lakh road accidents in India per year resulting in thousands of fatalities. The road safety situation has worsened with increase in number of persons as well as vehicles.

- (1) The increased population has increased pressure on roads as most of them need to commute daily.
- (2) Increased population has also resulted in proliferation of vehicles on the road resulting into high probability of accidents.
- (3) The lack of dependence on public transport have caused more private vehicles plying on roads causing congestion, jams and thereby accidents.
- (4) Inability of ^{traffic} police staff and other infrastructure to enforce traffic rules over such huge number of vehicles have caused open violation of traffic rules, thus increasing fatalities.
- (5) The lack of safety provisions like air bags in vehicles.
- (6) Laxadaisical attitude of commuters in indulging in drunk driving, talking on phones while driving etc.

- (6) Increased urban migration have caused population pressure on urban roads leading to more fatalities

GOVERNMENT STEPS:

- (1) It has launched Transit-oriented development policy to enable every citizen in urban areas to live within walking or cycling distance from mass transport systems like metro, BRT etc.
- (2) Promotion to mass transit public transport like metros, bus rapid transit corridors, monorails.
- (3) Stronger penalties for violation of traffic norms through amendments in motor vehicles Act.
- (4) green urban mobility scheme for promoting non-motorised transport like cycling, walking tracks etc.

thus comprehensive urban planning along with transportation reformation is required to tackle this menace in every form.

5. Explain the concept of 'green economy'. Highlight the costs and benefits in making a transition towards green economy for developing countries like India. Also discuss the associated challenges.

'हरित अर्थव्यवस्था' की अवधारणा की व्याख्या कीजिए। भारत जैसे विकासशील देशों के लिए 'हरित अर्थव्यवस्था' की ओर संक्रमण करने की लागतों एवं लाभों पर प्रकाश डालिए। साथ ही, इससे संबद्ध चुनौतियों की भी चर्चा कीजिए।

Green economy refers to the concept that economic development should be environmentally sustainable and both the domains should be concordant and not mutually exclusive.

BENEFITS / COST-BENEFIT ANALYSIS

- (1) *Such a transition is required in developing countries to tap the resources in a sustainable manner and without harming environment.*
- (2) *It will enable them to address the concerns of climate change and carbon emissions better.*
- (3) *It can ensure that adequate livelihood / job opportunities are created ensuring more growth.*
- (4) *The growth would be more inclusive including all sections like tribals, rural people, slum dwellers etc.*
- (5) *It would boost local industries like handicrafts, cottage, forest produce based, agro-based industries etc.*
- (6) *The cost associated may be appearing high initially due to new mechanisms required but the long term benefits will overpower it.*

CHALLENGES:

- (1) It may be criticised to compromise growth prospects while overfocusing on environment.
- (2) It may create problems in land acquisition, environmental clearances etc. thereby stalling projects, and reducing the ease of doing business.
- (3) It may create impediments in industrial development, foreign investment etc.
- (4) The government projects like interlinking of rivers, massive roads, railways and bridges projects as it may invite wrath of NGOs, environmental groups.

Thus though a novel concept having potential to create inclusive growth, it needs to be balanced with industrial development needs of the country.

6. Despite the government claiming excess electricity production, the power situation for households continues to remain bleak in many parts of the country. Explain the reasons behind this. How can the UDAY scheme help in improving the current situation?

सरकार द्वारा अतिरिक्त विद्युत उत्पादन का दावा किए जाने के बाद भी देश के कई भागों में घरों के लिए विद्युत की स्थिति निराशाजनक बनी हुई है। इसके निहित कारणों की व्याख्या कीजिए। वर्तमान स्थिति में सुधार लाने में उदय (UDAY) योजना कैसे सहायता कर सकती है?

There is still a huge gap in electricity demand and supply though the government claims excess electricity production. There are many villages that continue to exist in darkness with no access to electricity.

REASONS:

- (1) *The grim condition of power distribution companies (DISCOMS) having poor financial health.*
- (2) *The huge transmission and distribution losses resulting in power wastage.*
- (3) *Power theft including theft of wires is another reasons of low electricity supply to many regions.*
- (4) *Irregular supply of coal to thermal power plants resulting in inadequate / underutilisation of their generation capacities.*
- (5) *Disputes between states due to sharing of electricity from hydroelectric projects causes more shortage.*
- (6) *Many hydroelectric, nuclear and thermal power projects are stalled.*

The Ujjwal DISCOM Assurance Yojana (UDAY) can help in recovering the ailing financial health of DISCOMS. It enables the state government to take over the stressed assets of these companies in a phased manner. This will enable them to invest their time, energy and funds in more capacity augmentation and rejuvenation of distribution network and not merely focus on loan repayment.

Thus this UDAY scheme along with other initiatives like SEVA, GARV-II app etc. can be instrumental in realising the vision of "24x7 power for all by 2019".

7. Enhancing the competitiveness of the Textile sector can create employment as well as promote inclusive growth. Elaborate with reference to government initiatives for promotion of the textile sector.

वस्त्र क्षेत्र की प्रतिस्पर्धात्मकता में वृद्धि रोजगार सृजन के साथ-साथ समावेशी विकास को भी बढ़ावा दे सकता है। वस्त्र-क्षेत्र को बढ़ावा देने के लिए सरकार की पहलों के संदर्भ में विस्तारपूर्वक बताइए।

Textile sector provides direct as well as indirect employment to millions of people and it is an important sector on which agriculture is dependent also. Thus enhancing competitiveness in this sector to boost efficiency will result in inclusive growth.

- (1) It has potential to boost agricultural production of fibre crops thereby providing employment and adequate price for farmers.
- (2) It provides job opportunities to skilled and unskilled manpower.
- (2) It is boost for our exports industry and make India self reliant in textiles.
- (4) It has potential to boost rural economy.
- (5) Technical textiles are new arena where India can lead globally, thereby providing inclusive growth.

GOVERNMENT INITIATIVES

- (1) It has launched Powerloom scheme to revitalise the powerlooms in the country by providing them required assistance.

- (2) Amended- Technology upgradation Fund scheme (A-TUFS) to provide necessary new technology and equipments to increase efficiency.
- (3) Government has allowed 100% FDI in textile sector giving impetus to competition in this sector
- (4) Government has launched sub-missions on promoting technical textiles like agro textiles, geo textiles etc.
- (5) interest linked subsidy scheme for handlooms to ensure their adequate growth.

Thus textile sector has both forward and backward linkages and ability to drive many sectors towards development resulting in inclusive growth.

8. Digitalisation of transactions is a panacea to address the problems of corruption and tax evasion as well as achieve financial inclusion. Critically evaluate. Also enumerate the impediments for India to transit to a digitalised cashless economy.

लेन-देन का डिजिटलीकरण, भ्रष्टाचार और कर अपवंचन (tax evasion) की समस्याओं का समाधान करने एवं साथ ही वित्तीय समावेशन को प्राप्त करने में एक राम-बाण औपधि के समान है। आलोचनात्मक मूल्यांकन कीजिए। भारत के लिए डिजिटलीकृत नकद विहीन अर्थव्यवस्था में संक्रमण के मार्ग में आने वाली बाधाओं के संबंध में विस्तार से बताइए।

Presently India has a high cash to GDP ratio of around 9% (after demonetisation) - earlier 12.49% which is higher than developed economies. Such huge cash creates problems of money laundering, black money, corruption, tax evasion etc. Cashless economy is the ultimate panacea to them.

ADVANTAGES / MERITS OF ABOVE ARGUMENT:

- (1) It brings transparency in transactions thereby making difficult to evade taxes and result in increased tax revenue.
- (2) It allows better targeting of beneficiaries through DBT without any leakages, thereby increasing effectiveness of socio-welfare schemes, promoting financial inclusion.
- (3) It reduces corruption by reducing avenues of black money generation and transfer.
- (4) It boosts economic growth, enables ease of doing business thereby providing overall boost to economy.

AGAINST ABOVE ARGUMENT:

- (1) It may not totally eliminate fraudulent tax practices as digital framework is still not strong in India.

- (2) It may only change the mode of corrupt practices
- (3) It is ^{still} easy to open proxy accounts in the country thereby deriving the benefits of DBT and not providing financial inclusion.
- (4) The cyber security may pose another hindrance in relying totally on digital transactions as it may risk country's economy.

CHALLENGES

- (1) Poor digital and financial literacy in country
- (2) Poor cyber security framework making such transactions riskier
- (3) Behavioural problem among people regarding over-reliance on cash and considering digital transactions to be complex and unsafe.
- (4) Lack of internet penetration in the country which is merely 20% with less than 12% of them having broadband connectivity.
- (5) No strict law providing insurance against any loss of money in digital transactions.

Thus enabling legislations and mass awareness campaigns are required to make it a reality in the country. Missions like PMGDISHA, Digital India etc. are required to drive India towards cashless economy.

9. Explain why the government has adopted the HELP in place of the NELP that was existing for almost a decade. Also discuss how HELP has the potential to transform India's E&P activities with special emphasis on non-conventional sources of energy.

व्याख्या कीजिए कि सरकार ने लगभग एक दशक से विद्यमान NELP के स्थान पर HELP को क्यों अपनाया है? साथ ही, ऊर्जा के गैर-परम्परागत स्रोतों पर विशेष जोर देते हुए चर्चा कीजिए कि HELP में भारत की E&P (अन्वेषण एवं उत्पादन) गतिविधियों को रूपांतरित करने की क्षमता किस प्रकार विद्यमान है।

Government has adopted the Hydrocarbon exploration licensing policy (HELP) in place of NELP due to some inherent problems in the old policy and to realign India's energy priorities with new global developments like Paris deal INDCs, more focus on renewable energy etc.

REASONS:

- (1) NELP provided for strict regulations while bidding for exploration blocks and separate bidding for each hydrocarbon to be explored.
- (2) The policy was based on production sharing contract which was having its own shortcomings like more risk and revenue.
- (3) It was not based on priority for non-conventional energy sources.
- (4) It laid focus on licensing and not on monitoring after the block has been allocated.

HELP has potential to transform E&P activities due to following provisions:

- (1) UNIFIED LICENSING for all resources (gas, oil etc.) present within the single block.
- (2) OPEN-ACREAGE LICENSING allowing the bidder to select the block as per his own choice without waiting for the formal round of bidding to start.
- (3) REVENUE SHARING CONTRACT to be the basis of Exploration block allocation so that revenues can be shared with government right from beginning.
- (4) FOCUS ON NON CONVENTIONAL SOURCES like shale gas to make India less dependent on oil so that it can emerge as a gas based economy.

Thus HELP has the potential to reinvigorate E&P activities, reducing discretion in allocation of block and more reliance on gas based resources.

10. Briefly highlight the parameters used by the government to determine the extent of poverty in India. Examine the relationship of economic growth and poverty alleviation in the post-reforms era.

सरकार द्वारा भारत में निर्धनता की सीमा का निर्धारण करने हेतु उपयोग किए जाने वाले मानदंडों (पैरामीटर) पर संक्षेप में प्रकाश डालिए। आर्थिक सुधारों के बाद के युग में आर्थिक संवृद्धि और निर्धनता उन्मूलन के बीच संबंध का परीक्षण कीजिए।

SDG-1 aims to "end poverty in all its forms everywhere by 2030." But for realisation of this goal there is need to measure poverty for which various parameters are used by the Indian government.

PARAMETERS USED :

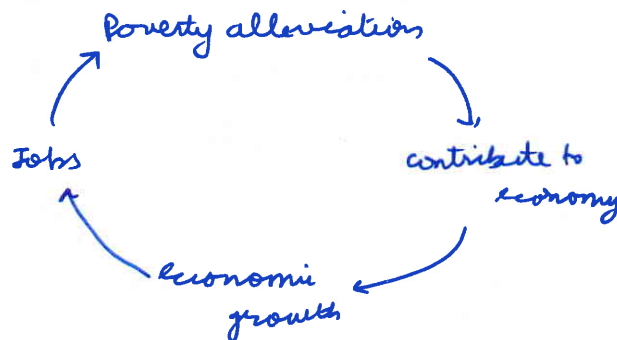
- (1) Earlier poverty lines were totally based on calorie intake in rural and urban areas.
- (2) Progressively, on recommendations of many committees the poverty line was shifted from calorie intake to income based, both for rural and urban areas separately.
- (3) The poverty line estimation also estimation of consumption expenditure by various households by NISO.
- (4) Also the new criteria to identify the people who are poor is also based on socio-economic caste census.

RELATIONSHIP BETWEEN ECONOMIC GROWTH AND POVERTY ALLEVIATION :

- (1) Post reforms though the growth was very high in

- (2) Today poverty alleviation is essential to boost economic growth and it requires focus on wage employment and self employment programmes, which were neglected during 8-9th five year plans
- (3) Poverty alleviation should be based on skill development enabling people to earn their livelihood and not dependent on government.

Then both the concepts are married to one another and one can't be achieved without other, forming a closed loop.



11. Buffer stocking of food grains is seen as a vehicle to deliver strategic food and agricultural domestic support policies, however, there is a growing consensus that the programme has been not just costly but also imprudently wasteful. Critically evaluate.

खाद्यान्नों के सुरक्षित भंडारण (बफर स्टॉकिंग) को खाद्य एवं कृषि संबंधी रणनीतिक घरेलू समर्थन नीतियाँ प्रदान करने के साधन के रूप में देखा गया है, लेकिन इस संबंध में यह मतैक्य बनता जा रहा है कि यह कार्यक्रम न केवल महँगा बल्कि अविवेकपूर्ण रूप से अपव्ययी भी रहा है। आलोचनात्मक मूल्यांकन कीजिए।

India maintains huge buffer stock through FCI procuring grains from farmers directly at the MSP. These are maintained for a variety of strategic and domestic reasons.

ADVANTAGES:

- (1) *It ensures adequate supply of food grains for any natural calamity or crisis situation like floods etc.*
- (2) *It is required to provide a platform to the farmers to sell their produce at MSP directly to FCI*
- (3) *It provides the grains for public distribution system (PDS) and national food security policy of the government, whereby they are sold to state agencies at central issue price.*
- (4) *It is useful to hedge against inflationary pressures in food grains by releasing grains from this stock.*

DISADVANTAGES

- (1) *There is huge wastage of grains due to lack of storage and warehouses under FCI*
- (2) *There is huge cost involved from purchasing (MSP),*

transporting as well as storing these grains.

(3) The buffer stock has failed to curb inflationary pressure due to large numbers of middlemen present.

(4) FCI centres are not present in eastern states, thereby limiting the benefits of direct selling to few states where agriculture is already developed.

Hence it is time to implement the recommendations of Shanta Kumar committee over FCI reforms and restructuring and rationalising the process of maintaining food stocks so that it is not merely a wasteful expenditure rather accomplish its intended objectives.

12. Discuss the significance of food processing industry in the economic development of the country and the challenges which need to be tackled for sustained growth of the industry. Also elaborate on the the salient features of National Mission on Food Processing.

देश के आर्थिक विकास में खाद्य प्रसंस्करण उद्योग के महत्व के साथ-साथ उन चुनौतियों की भी चर्चा कीजिए जिनसे निपटना इस उद्योग के संधारणीय विकास हेतु आवश्यक है। राष्ट्रीय खाद्य प्रसंस्करण मिशन की प्रमुख विशेषताओं की विस्तारपूर्वक व्याख्या कीजिए।

Food processing industry is an important sector for economy's development and it can provide impetus to many other sectors through forward and backward linkages.

SIGNIFICANCE:

- (1) It is essentially based on agricultural products and thus provides crucial market for farmers' produce ensuring them income security
- (2) It provides employment to millions of people, especially farmers and labourers available in the region providing them extra source of income during lean season.
- (3) It provides prevents food wastage by providing adequate storage and processing of perishable items
- (4) Provides nutritional security to many.

CHALLENGES

- (1) Inadequate backward & forward linkage with farm and market due to lack of enabling environment
- (2) Lack of quality raw material
- (3) Lack of cold chain infrastructure in the country

- (4) Negligent attitude of government in providing finance to the industry alongwith technological upgradation.
- (5) Mostly it is concentrated in small medium enterprises sector.
- (6) Lack of skilled entrepreneurs to take up opportunities poses by this sector.
- (7) Lack of continuous electricity supply, problems in land acquisition near farms, transportation issues etc.

NATIONAL MISSION ON FOOD PROCESSING

- (1) It aims at developing this sector through enhancement in infrastructure like cold chain storage, electricity supply, logistics etc.
- (2) It aims to improve farm yield and return to farmers by ensuring timely sale to food processing industries.
- (3) It aims at making the sector export oriented and increased exports of processed food.
- (4) It aims at creating marketing avenues for processed food in the country.

Thus government has launched SAMPADA scheme to act as umbrella scheme for all government initiatives in this sector thereby coordinating and synergising all efforts and resources.

13. In spite of having the world's largest livestock population in India, the potential of animal rearing remains underutilized. In this context, discuss the challenges faced by the meat and poultry sector and suggest measures for accelerated and sustained growth for this sector.

भारत में विश्व की सर्वाधिक पशुधन संख्या होने के बावजूद भी पशुपालन क्षमता का पूर्ण दोहन नहीं किया जा सका है। इस संदर्भ में मांस तथा कुक्कुट क्षेत्रक द्वारा सामना की जाने वाली चुनौतियों की चर्चा कीजिए एवं इस क्षेत्रक की त्वरित एवं संधारणीय वृद्धि के लिए उपाय सुझाइए।

India is the hub of largest livestock population, largest consumer and producer of milk, second largest exporter of fisheries etc. But despite these facts there are numerous challenges faced by livestock rearing in India.

CHALLENGES FACED BY MEAT AND POULTRY SECTOR :

- (1) There are complex laws hindering the transportation of livestock (hens, etc.).
- (2) There is issue of overuse of antibiotics in poultry sector to enhance growth resulting in proliferation of ^{antimicrobial} resistance as well as ^{antimicrobial} resistance, thus getting negative fame in the export sector.
- (3) There are loopholes in quality as standard procedures are not followed while maintaining health of animals.
- (4) Lack of credit for developing sheds, providing feed etc. to animals creates hindrance in entrepreneurship in this sector.
- (5) Lack of skilled training to those involved in this sector.
- (6) Lack of direct marketing avenues resulting in losses.

MEASURES:

- (1) There is need to frame a comprehensive policy for meat and poultry sector
- (2) There should be adequate financing by bringing this sector under priority sector lending norms.
- (2) There is need to check the misuse of antibiotics in poultry sector as it results in negative externalities
- (4) Also adequate skill training regarding types of shots fed to animals etc. to ensure sustainable growth of this sector
- (5) Interaction to global agencies to learn from international best practices.

Thus this sector requires priority focus as it has the potential to lead other allied sectors and provide an alternative non-farm source of income to farmers.

14. Indian agriculture has become cereal-centric and as a result, regionally biased and input-intensive. Discuss. What steps have been taken by the government to rectify this issue?

भारतीय कृषि अनाज-केंद्रित हो गई है तथा इसके परिणामस्वरूप यह क्षेत्रीय रूप से पक्षपातपूर्ण और आगत-गहन (इनपुट इंटेंसिव) हुई है। चर्चा कीजिए। इस समस्या से निपटने के लिए सरकार द्वारा क्या कदम उठाए गए हैं?

Indian agricultural production has majority share of cereals like wheat, rice etc. while minimum share of pulses, oilseeds, horticulture crops etc. This skewed production scenario has resulted in regional inequalities.

- (1) The green revolution in northwest part of India especially Punjab, Haryana and western UP has made agriculture more dependent on inputs like fertilizers, pesticides etc.
- (2) Secondly these regions have grown crops not suited to agro climatic conditions resulting in pressure on land and water resources.
eg: Rice cultivation in Punjab has drastically affected water table.
- (3) moreover the dryland farming has been abandoned in other parts, moving towards cereals resulting in poor yield, thereby crop failures and crisis.
- (4) more cereals are grown as a result the eastern regions has suffered, as prices of crops grown traditionally in these areas have gone down.
- (5) It has resulted in import of pulses, oilseeds etc. increasing our import bill.

STEPS TAKEN BY GOVERNMENT:

- (1) Government has launched missions on dryland farming to promote agro-climatic zone based cultivation.
- (2) National missions on oilseeds and oil palm (NMOP) has been launched to promote their cultivation and reduce their import.
- (3) Government has decided to announce MSP for pulses to promote its cultivation.
- (4) Rastri PM Paskamparogat Krishi Yojana to promote organic farming and being less dependent on chemical inputs.
- (5) Government has decided to launch second green revolution for eastern states.

Thus promotion to other non-cereal crops will help country balance the regional inequalities and also ensure nutritional security to people based on self reliance in such crops.

15. Even though India has a huge potential for aquaculture and fisheries industry, there are certain challenges that need to be addressed to bring about a 'Blue Revolution' in the country. Discuss.

यद्यपि भारत में ऐक्वाकल्चर और मत्स्य पालन उद्योग के संबंध में अपरिमित क्षमता विद्यमान है, किन्तु देश में 'नीली क्रांति' (ब्लू रिवोल्यूशन) लाने के लिए कुछ चुनौतियों से निपटने की आवश्यकता है। चर्चा कीजिए।

India has a long coastline of about 7516.6 km and numerous rivers providing huge potential for aquaculture and fisheries. But still there are numerous issues plaguing this sector.

CHALLENGES

- (1) There is ~~need to~~ a ban on fishing activities beyond territorial waters in many areas along the coast, especially in EEZs.
- (2) The lack of credit to fishers to buy mechanised boats, nets and other equipments.
- (3) States lacking jurisdiction over coastal waters despite fisheries being a state subject.
- (4) Lack of adequate forecasting mechanisms to warn the fishers of bad weather, tsunami, cyclones etc.
- (5) There are issues of lack of awareness regarding ornamental fisheries having huge potential to be developed in aquaculture activities.
- (6) The issue of trespassing into international waters and caught/arrested by other countries resulting in loss of livelihood.
- (7) Also there is increased competition from countries like China.

STEPS REQUIRED:

- (1) Using modern technology to upgrade skill and techniques of fishermen commensurate with global practices to increase yield.
- (2) cheap credit be made available to lower class fishers enabling to earn adequate livelihood.
- (3) skill training of fishers to enable them catch good fishes which are in demand.
- (4) Providing direct linkage to market and food processing to fishers to improve the value of their produce.
- (5) Promoting aquaculture via exporting ornamental fishes, setting up more aquariums etc.

Thus there is need to adopt B. Meenakumari committee recommendations on deep sea fishing to allow fishing in EEZs also except a buffer zone between 22-50km from territorial waters. This will ensure sustainable development of fisheries sector.

16. What is hydroponics? Discuss its relevance in light of limited land availability while ensuring food security.

हाइड्रोपोनिक्स (hydroponics) क्या है? सीमित भूमि उपलब्धता की दृष्टि से खाद्य सुरक्षा को सुनिश्चित करने हेतु इसकी प्रासंगिकता पर चर्चा कीजिए।

Hydroponics refers to growing of plants in water medium having all required nutrients without any need for soil or solid ground. It is emerging as a new means of monoculture.

RELEVANCE:

- (1) It has the ability to reduce pressure on land and address concerns over limited land availability for growing crops due to high population.
- (2) Also it can ensure growing of adequate crops of different variety, thereby ensuring food security.
- (3) It can ensure growth of crops especially food crops without harming soil fertility, thereby no land degradation.
- (4) It can make use of huge water bodies available and it can create more yield than similar amount of seeds in soil.
- (5) It can provide additional source of revenue to farmers thereby providing them income security and making agriculture sector lucrative for younger generations.
- (6) It can be used to grow GM crops without necessarily impacting environment.

CHALLENGES

- (1) There is huge scope of research left before this method can be commercialised
- (2) Also there is need to study its feasibility with respect to environment as it may increase degradation of water bodies
- (3) There is need to reduce its price to a level affordable by common farmers.
- (4) This method can result in adulteration of food chain if genetic manipulation manipulation is allowed free hand.

Thus though a novel and unique sector to ensure food security and nutritional security there is need to carry out detailed research to analyse its sustainability.

17. Not only does the yield (measured in tonnes/ha.) of a crop but a number of other factors determine the choice of crops that a farmer cultivates. Elaborate with special focus on cropping pattern in India.

एक किसान द्वारा उपजाई जाने वाली फसलों के चयन को न केवल फसल की उपज (टन/हेक्टेयर में मापी गयी) अपितु कई अन्य कारक भी निर्धारित करते हैं। भारत में प्रचलित फसल प्रतिरूपों (पैटर्न) पर विशेष ध्यान केन्द्रित करते हुए विस्तारपूर्वक व्याख्या कीजिए।

The cropping patterns in a region or country depends upon variety of factors ranging from climate, soil etc. along with yield of crops. This is highlighted from diverse cropping patterns in different regions of India.

FACTORS :

- (1) First is the agro-climatic conditions of that region which means the temperature and rainfall (monsoon in India) conditions which decide the crop to be grown
eg: Rubber cultivation is limited to southern states due to availability of hot and humid climate.
- (2) secondly irrigation facilities also determine the crop type in the region
eg: Rice is a water intensive crop, thus mostly grown in eastern coastal region; while pulses are grown in dryland areas as they need less moisture.
- (3) Also yield of crop is a crucial factor in determining which crop to be grown
eg: Due to green revolution, rice is also being grown in Punjab due to its high yield despite it not suiting the agro climatic zone there.
- (4) Availability of manual labour
eg: Paddy cultivation requires ^{cheap} labour during

transplantations which is easily available in states like Bengal, Bihar, Odisha etc.

- (5) Soil type also influences the cropping patterns
eg: cotton is widely grown in black soil region of the Deccan.
- (6) Favourable government policies like MSP, cheap credit etc also influence cropping patterns
eg: Farmers mostly grow cereals due to high MSP of these crops.
- (7) Availability of market also affects cropping pattern
eg: Jute is grown in West Bengal region due to huge Jute mill cluster in the region providing adequate return to farmers.

Hence a plethora of factors are responsible for distribution of crops across the landscape of India.

18. Agriculture seems to be one of the most affected but the least equipped as far as climate change is concerned. Discuss the statement with special emphasis on developing countries and their need for agriculture finance and subsidies.

जलवायु परिवर्तन के संबंध में कृषि सर्वाधिक प्रभावित तथापि इसका सामना करने में सबसे कम साधन-संपन्न क्षेत्र प्रतीत होता है। विकासशील देशों तथा उनकी कृषि-वित्त और सब्सिडी संबंधी आवश्यकताओं पर विशेष बल देते हुए इस कथन पर चर्चा कीजिए।

Agriculture is largely dependent on climate and its elements for growth of crops and thus primarily affected by climate change. But there have been very few interventions to equip it to deal with this problem.

- (1) The climate change is causing increase in global temperature, unpredictable rains etc. which is likely to influence agroclimatic zones and thereby cropping patterns.
- (2) This effect is more pronounced in developing countries as they lack resources and technology to adapt their agriculture to changed conditions.
- (3) There are many crops unable to bear the stress due to this change and this may cause serious food security problems especially in the developing countries as they have huge population.
- (4) Further in developing countries wide range of population is dependent on agriculture for livelihood and any disruption via climate change may be disastrous for economy.

- (5) Thus these countries need help from developed countries and financial institutions to make themselves ready for climate adaptation.
- (6) Further the agricultural subsidies are required to be continued in these countries to continue investment in climate smart agriculture and mitigate the effects of climate change of agriculture.
- (7) Further there is need of technology transfer to ensure that climate engineering practices are employed to build climate change resilient crops.

Thus developing countries like India are extremely vulnerable to climate change especially in agriculture domain which require urgent redressal to ensure timely mitigation. India has launched national mission on climate smart agriculture to address this concern.

19. Discuss the lacunae in implementation of Minimum Wages Act in ensuring the welfare of agricultural labour. Also, suggest some other measures to improve the situation of agricultural labourers in the country.

कृषि श्रमिकों के कल्याण को सुनिश्चित करने की दिशा में न्यूनतम मजदूरी अधिनियम के कार्यान्वयन में विद्यमान कमियों पर चर्चा कीजिए। साथ ही, देश में कृषि मजदूरों की स्थिति सुधारने हेतु कुछ अन्य उपायों का सुझाव दीजिए।

minimum wages Act was enacted to ensure that the workers and agricultural labourers get basic income to address their minimum basic needs and live a life of dignity. But there are many lacunae in implementation of this Act.

LACUNAE:

- (1) The Act does not provide a clear definition of agricultural labourer.
- (2) Secondly it doesn't provide for indexing of the wages as per inflationary or other pressures in agricultural sector arising due to fluctuation in prices of crops.
- (3) Also the monitoring authority is at district level making the power distance large to ensure that there is no adequate grievance redressal.
- (4) Also the Act doesn't empower Gram Sabha or Panchayat to ensure implementation of Act.
- (5) Moreover it doesn't provide for minimum wages during the lean season.

MEASURES REQUIRED

- (1) Amendments in the Minimum wages Act to make sure

- that agricultural labourers enjoy same security as that by the industrial workers
- (2) Registration of all such workers with Panchayat or Gram Sabha so that adequate targeting is done.
 - (3) Further there is need to develop food processing industries so that they can get employment there during lean season.
 - (4) Model Act shall be enacted by centre to channelise all state laws in this regard into single stream all over the country.
 - (5) Establish grievance redressal cells at local levels to ensure adequate welfare of agricultural labourers

Thus it is to be noted that they are the basic units of our agricultural system and strengthening them would be a good step in bottom-up approach of agricultural and economic development.

20. Discuss the potential of horticulture sector in realizing the government's vision of doubling the farm income. Also, highlight the challenges which are needed to be addressed for realizing full potential of this sector.

कृषि आय को दोगुना करने की सरकार की परिकल्पना को साकार करने में बागवानी (हॉर्टिकल्चर) क्षेत्र की क्षमता पर चर्चा कीजिए। साथ ही, इस क्षेत्र की सम्पूर्ण क्षमता को वास्तविकता में परिणत करने के लिए उन चुनौतियों पर भी प्रकाश डालिए जिनसे निपटना आवश्यक है।

Horticulture sector represents an untapped arena ~~not~~ having the potential to boost farmers income as well as develop the agricultural sector as a whole.

POTENTIAL:

- (1) many states in India especially the hilly states and northeastern states have potential for developing into orchards
eg: Apples, Apricots, walnuts etc. are grown in Jammu and Kashmir, Himachal Pradesh etc.
- (2) These can provide year round income to farmers by growing different fruits and vegetables during different seasons.
- (3) Also the horticulture requires only one time investment which can be provided by government enabling a sustainable source of income.
- (4) This can also develop in areas having less water availability as tree crops require less water and hence adequate livelihood to farmers there.
- (5) India is largest producer of vegetables and these can be exported if quality is maintained, thereby boosting

- (6) farmers income.
Also ~~settle~~ it can drive food processing industries providing market to farmers.

CHALLENGES WHICH NEEDS TO ADDRESSED

- (1) First is the huge investment required initially as farmers have less access to organised source of finance.
- (2) Secondly there are fragmented lands in India whereas large land tracts are required to make this a sustainable livelihood option.
- (3) maintaining adequate quality of crops require skill training to farmers.
- (4) Lack of adequate cold chain infrastructure and food processing industries in the absence of which then fruits and vegetables may perish.
- (5) Adequate pricing mechanism like MSP to ensure guaranteed minimum return on cost incurred.

Thus though it has potential to double farmer's income but adequate credit, infrastructure and training is required to develop this sector fully in the country.

