

INDIAN ECONOMY AND AGRICULTURE

Time Allowed: 3 hrs.

Max. Marks: 250

-Q.	Marks	Instructions to Candidate
1.		<ul style="list-style-type: none">• There are 20 questions.• All questions are compulsory• The number of marks carried by a question is indicated against it.• Answer the questions in NOT MORE THAN 200 words each. Contents of the answer is more important than its length.• Answers must be written within the space provided. <p>Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.</p>
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1. Invigilator Signature

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Name Babtarani Swain

Roll No. —

Mobile No. ██████████

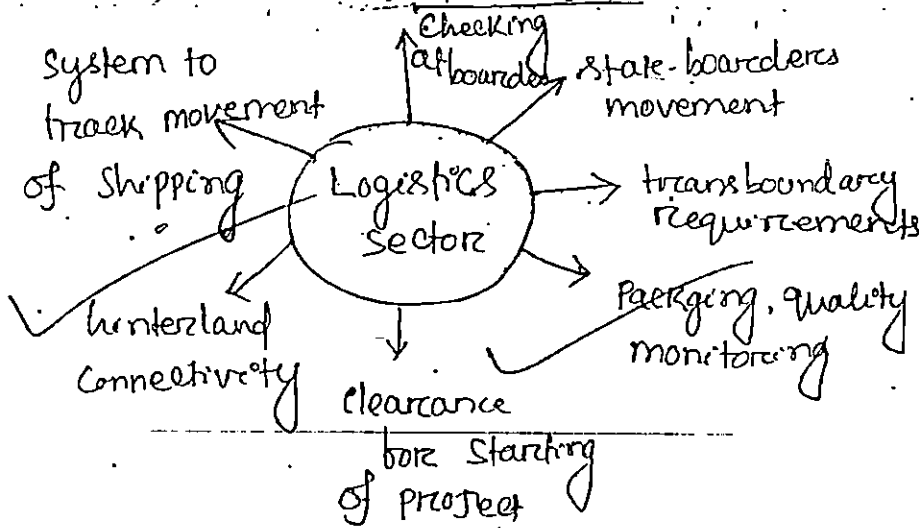
Date 25th august, 2017

Signature Babtarani Swain

REMARKS

8

- Q1. High logistics cost is one of the major reasons for uncompetitive of Indian goods in global markets. In this reference discuss the significance of having multimodal logistic approach in India. What are challenges in present logistics sectors? Also discuss some of the major trans-boundary multimodal projects of India. (12.5 Marks)



Significance of Multimodal logistics approach

- Multimodal logistics approach will ensure seamless transboundary movement of goods.
- Checking clearance at boarders posts will be done in a timely and quick manner.
- This will reduce the transportation cost and make products globally competitive.
- Multimodal logistics will enhance trade & investments in the region, and will also generate employment.

Challenges in present logistic sectors

- WB report on ease of doing business has said that Indian logistics is not modernised.
- There is no proper system to track the shipment

Remarks of goods

→ problems of red-tapism, delay on clearance & checking at borders

→ International move of goods face problems of frequent uploading & downloading

MAJOR Trans-boundary Multimodal Projects in India

① BBIN

Bangladesh - Bhutan, India Nepal Motor vehicle agreement to ease the transboundary movement of goods

② INSTE

Motor vehicle agreement with Myanmar & Thailand is also in progress.

③ Bangladesh - India border check posts

to facilitate trade & investment.

4

→ more freight movement via inland waterways

↳ most cost effective

→ Role of G.S.T. in this context

→ IN-STE

Remarks

Q2. What do you understand by the term Industries 4.0? How it is going to impact the employment generation in India? What possible steps can be taken to avoid any adverse effects on employment generation from Industries 4.0? (12.5 Marks)

Industries 4.0 refers to Fourth Industrial Revolution. i.e. a high level of automation by using robotics, Artificial intelligence, big data, cloud computing etc.

↓ use for data exchange

Industries 4.0 & its impact on employment generation

Good Impact

- ① This will generate highly skilled jobs to operate machines, computers and modern equipments
- ② Scope for job generation in diverse fields - decision making, operating computers etc

Bad Impact

- ① Automation will lead to loss of jobs for unskilled labourers / workers
- ② Workers / manual jobs can be replaced with assembly lines, robots
- ③ Threat to MSME Informal sector, as they can't compete with technologically advanced industries
- ④ may lead to jobless growth & consequent social unrest & demand for reservation in government employments
- ⑤ Threat to demographic dividend

Remarks

Steps to avoid adverse impact

① Skill development

Focus on Skill development, as per modern skill needs of industries. More focus on creating skills in technological fields

② Promotion of ~~entrepreneurship~~ entrepreneurship / self employment

Promotion of ~~start-ups~~ innovative start-ups

③ Employment

academic - industrial collaboration

to bridge skill gaps & enhance employability

④ Creation of jobs in other sunrise sectors to

comp absorb employment loss; labour intensive

Sectors

→ Tourism

→ Textile

→ Construction sector

→ MEME - leather, Jute industry

⑤ Un-employment compensation / assistance

⑥ Agricultural development

making agricultural a profitable business by using technology - GPS, satellite precision farming

→ Innovation ecosystem

④

.. Remarks

→ skill and education regarding context

Q3. This Question contain 2 parts and both are compulsory:

- (a) Analyze the recommendations of Bibek Debroy committee. How this would impact the development of Railway infrastructure in India?
- (b) Indian Government recently established the Rail Development Authority. What is the objective of this authority? Will the setting up of the authority will help in tackling the challenges faced by Indian railways? (12.5 Marks)

Recommendations of Bibek Debroy committee

① improving railway safety

② Focussing on core business & out sourcing of other activities (managing schools etc) to private sector.

③ Promotion of PDS, and investment in equipment manufacturing

④ Independent authority (Rail development authority) to decide on private investment, to maintain level playing field, competition, and decide on cross-subsidisation issue

how this will help in railway infrastructure development

① reduce excessive political interference. cross subsidisation has made brought uncompetitive independent decision making will improve brought sector.

Remarks

→ Transition to commercial accounting

- 2.5
- ② Independent & autonomous institution will inspire confidence of private sector.
 - ③ focus on core-business will enhance effectiveness.
 - ④ ~~simp~~ changes in railway service cadre will bring a dedicated expertise to focus on railway development.

(b) Rail Development Authority

Objectives

- ① reduce political interference
- ② cross-subsidisation-rational decision making
- ③ give private sector a level playing field by maintaining competition on railway infrastructure development
- ④ decision making will be based on experts
- ⑤ critical areas: safety, sanitation, cleanliness will get adequate focus

The IRDA will improve investors' confidence to invest in Indian railways

Further - actions can be taken to attract FDI and technology transfer (high speed rail)

However success of IRDA will depend on its composition of members, powers and authority to take independent decision, and enforce it

2 → enhancement of non-fare revenue.

Remarks

Q4. What do you understand by Universal Basic income? What is the estimated fiscal impact of this scheme and assess its feasibility in Indian purview? (12.5 Marks)

Universal Basic Income (UBI) is an unconditional cash transfer to citizens irrespective of their individual incomes.

It is different from kind transfers (PDS, Kerosene, fertilizers) it is an direct transfer of cash to beneficiaries account.

It is not targeted, but given to all citizens.

Objectives

① to deal with job loss &

unemployment

② reduce poverty, malnutrition

③ health outcomes

generate entrepreneurship

Estimated Fiscal Impact of the Scheme

① If all the citizens are provided with a cash of Rangarajan Committee poverty estimate amount, it will be around 14% of GDP.

Feasibility in India

① UBI if implemented will have adverse impact on fiscal health

② Due to political reasons, UBI introduction will not lead to removal of other programs - PDS, fertilizer subsidy. Hence this will increase fiscal deficit

Remarks

③ diversion of large amount of money to UBI will ineffect reduce the social sector expenditure - health, education, skill development

④ UBI implementation requires Universal internet access and access to banking network.

⑤ Further UBI can't solve the ~~capability~~ governance problems of inefficient targeting, inclusion errors, corruption etc. completely

UBI is desirable in future when fundamental problems are addressed.

- (1) government capacity building &
- (2) increased fiscal resource generation through tax compliance, tax-GDP ratio (now 17%)
- (3) Social expenditure increase.

education - 6%
health - 3%

good

5

Remarks

Q5. This Question contain 2 parts and both are compulsory:

- (a) Indian service sector, especially IT sector, has been the main anchor of growth and employment in the 21st century. However, in recent past, the Indian IT sector has been in news for lay-offs and not for job-creation. What are the reasons for this? What corrective steps needs to be taken in this regard?
- (b) Indian IT sector has been beneficiary of H1B visa allowances and liberal visa policy of USA in case of highly skilled employees. Examine how Indian IT industry is going to be affected following the strict visa policy under Trump regime.

(12.5 Marks)

① Indian Service Sector
 Contribution to GDP - 58%
 Employment generation - 28%

Though Indian service sector contributes 58% to GDP its corresponding result in job growth is not visible. Unlike other countries Brazil (GDP-68%, employment: 58%).

Reasons for job lay-offs

① Skill gap

higher education sector in India is facing problem of quality education, and graduates don't possess industrial skills for employment

② Service sector requires high skills and knowledge however in India enrollment ratio in higher education sector is one of the lowest

③ Lack of skilling by companies

Companies avoid skilling / upgradation of skills of employee to reduce cost of production - this

Remarks: impacts future growth potential

Corrective steps

- ① Academic-Industrial linkage
- ② higher education quality
- ③ Vocational training
- ④ Skill based courses

2.5

Reasons

→ protectionist measures adopted across the major economies

Remarks

Q6. In recent there has been a spurt in digitization. Can digitization help in bringing inclusive growth in India? What steps should be taken to realize the goal of inclusive growth in digital economy? (12.5 Marks)

Digitization or e-governance is aimed at bringing citizens near to government, and making governance citizen-centric.

Role of digitization in bringing Inclusive growth

(1) It can reach to large numbers of citizens in a timely manner.

ex: DBT in scholarship, LPG subsidy

(2) Digital payments apps will make financial transactions easier.

ex: BHIM APP

(3) Bank accounts linked with Aadhar and mobile will ~~exclude~~ solve ~~also~~ inclusion errors (Fake accounts) and focus on the needy.

(4) Smart phone can be used to reach people.

ex: information about agriculture, Kisan project

However there are certain issues which hinder inclusive development:

(1) Digital Divide - World Bank has found that in India, large section of people do not have access to internet.

(2) Penetration of smart phone & internet is not

Remarks significant.

② Digital literacy
 People lack digital literacy to operate
 online financial transactions

④ Cyber security
 chances of online fraud on financial transaction
 deter many to use cashless transaction.

Suggestions to improve the scenario

① Digital India & Bharat Broad Band
Network program should be implemented
 in mission mode for universal access to internet

② Digital literacy
 ex: internet saathi by google can be replicated
 elsewhere.

③ Cyber security
 A bank online ombudsman to deal with
 online fraud and compensation in case of financial
 loss

④ use of USSD - which can function on
 basic phones too.

Digital dividend is an important tool to
 achieve demographic dividend & inclusive
 development. However it requires following
 actions to make it effective.

4.5

Remarks

digitization and focus on → agriculture
 → MSME
 → SE & STs

Q7. RBI has been issuing banking licenses under differentiated bank system Wholesale and Long-Term Finance (WLTF) banks. What is the need of such specialized banks? Discuss the scope and benefits of having WLTF banks. (12.5 Marks)

Banks in India are not only critical for economic growth but equally important for social development and infrastructure growth.

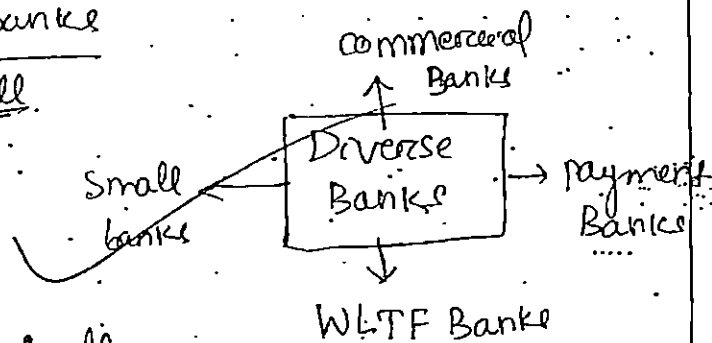
for example Banks in India provide loans for starting a company, starting infrastructure projects, loans, education loans etc.

However this has led to problems of NPA stressed assets as these commercial banks are not suited to lend long term loans.

Need of specialised banks

① Diverse banks will be able to meet specific needs of different sections.

ex: Payment bank - small Farmer, artisans.



② The same way WLTF banks can meet the need of infrastructure (long term) loans.

③ These banks will have specialised management system in place to deal with long term loans

at 2:38

Remarks

SCOPE of WTRF

- ① it can lead to infrastructure loans
- ② industrial growth loans
- ③ expansion of companies.

Benefits of WTRF

- ① it will help reducing burden on commercial banks especially PSB.
- ② investment in infrastructure (Road, Rail, Port) can be stimulated.
- ③ commercial banks can focus on other priority areas: housing loans, loans to SME sector etc.

Differential banking system in India can significantly address the NPA issue and also keep the economic growth & infrastructure growth going.

good

5

Remarks

Q8. Government launched Pradhan Mantri Fasal Bima Yojana (PMFBY) to reduce the vulnerability of farmers from natural calamities and ensure sustainable farm income. While highlighting its major provisions, also discuss the performance and challenges it is facing while implementation. (12.5 Marks)

PMFBY: Came to replace earlier insurance programs (NAIS & MNAIS), which were inadequate in terms of coverage, compensation, timely delivery etc.

Major Provisions

① Uniform and affordable premium

ex:

5%	for horticulture crops
2%	- Rabi 1.5%
2.5%	- Kharif 2%

② Use of technology mandatory

Smart phones, satellites will be used to map the crop yield & timely compensation

③ No cap on compensation - full compensation in case of yield loss, crop damage etc

④ Natural calamities included

unlike earlier schemes, it included crop loss due to natural calamities - hailstorm etc

Performance of PMFBY

① PMFBY is still in nascent stage of implementation

② Still there is inadequate coverage of cropped areas which is just ~20% till now

Remarks

③ Use of technology though mandatory has not taken place significantly.

④ It is still area-based - if one will get compensation only if the whole village is affected & not for localised crop damage.

Challenges

① Lack of awareness

② Majority of farmers are still not aware of the insurance program

③ It doesn't include crop loss due to animals which is a major problem in rural India.

④ Technologies can be used only when there is large penetration of internet & smartphones.

⑤ Local officials have to be trained in the use of new technologies.

⑥ PMFBY has ambitious targets, but its success will depend on effective implementation at ground level. Government has to focus on awareness, coverage and strengthening of technological structures.

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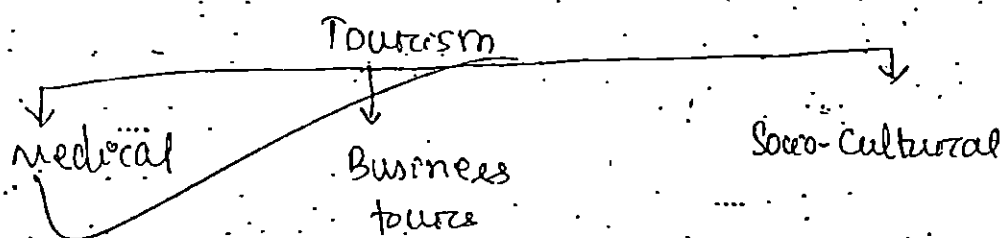
Remarks

→ While loanee farmers get mandatorily enrolled in the scheme, there is not much effort taken to cover non-loanee.

- Q9. Tourism is the one of the major economic activity in many advanced nations, though India is catching up in the sector, however, it's potential is still untapped. Discuss why India's tourism potential still largely untapped? (12.5 Marks)

WEF Report on Tourism has regarded India as one of the most potential destination for tourism in Asia.

Since 2001, the number of tourists in India increased from 4 million to 20-30 million in 2016. & further the earning increased to 40 million. Though it is a large growth, however when compared to other nations US, China, Canada, it is significantly less.



Why potential is untapped

- (1) Visa regulation is complex and cumbersome.
- (2) Hygienic perception: In tourist places there is lack of cleanliness.
- (3) Lack of basic transportation to tourist places
- (4) Lack of water & basic sanitation facilities
- (5) Security & safety of woman tourists

Remarks

(6) For medical tourism - over-regulation of
 Medical tourism, deter many

What has been done?

- ① Visa procedure simplified
- ② Swachh Bharat Mission
- ③ HRIDAY and PRASAD to improve infrastructure and sanitation facilities
- ④ Tourist circuits - Buddhist, Rural, Tribal etc.

What more needs to be done

- ① Simplifying business tourist visa
- ② representing India's tourism unique places in all over the world through various platforms - SAARC, BIMSTES
- ③ Simplifying medical tourism procedures to attract more tourists
- ④ strong laws for safety of woman

Tourism is said to be a sunrise industry & have good potential for employment

generation & social development. Government

need to focus on infrastructure, cleanliness,

safety of tourist, to attract more number

of tourists to India

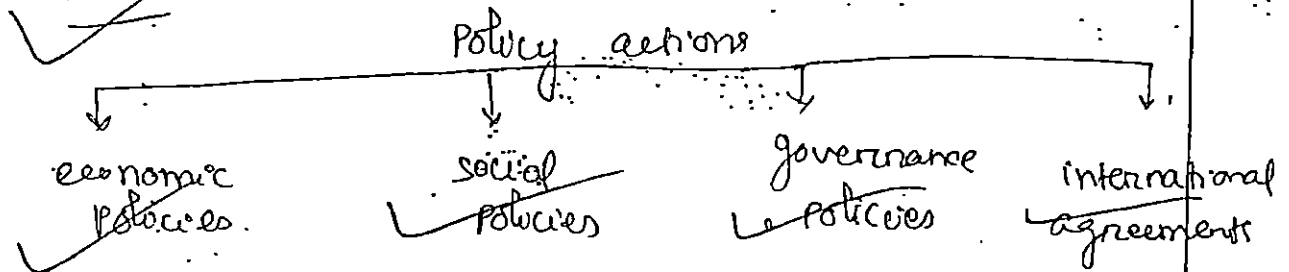
Remarks

5

good

Q10. Niti Aayog recently projected a compound annual growth of about 8% of Indian Economy and its transformation by 2031-32. In this light discuss, what policy actions are required for attain and sustaining this level of growth? (12.5 Marks)

For attaining and sustaining a high level of growth, India needs multi-dimensional policy reforms.



Economic policies

① ease of doing business

WB Index, India: does good in some factors but

faces low on enforcement of contracts and infrastructure.

② labour policies = conducive to Farmers

③ Taxation - simple, transparent and effective taxation. GST is a welcome step

④ infrastructure

electricity, Water, Road, railways, Ports.

ex: Programs: Bharatmala, Sagarmala.

Social Policies

① focus on skill development of Youth

② education: higher education & imparting industrial

Remarks relevant skills

③ Health of employee also linked to higher employment potential

④ focus on gender equality - increasing woman participation in labour force at par with men

⑧ Governance

① Enforcement of contracts on speedy manner - judicial reforms to expedite resolving of industrial disputes

② eliminating Crony Capitalism, Corruption this will also reduce tax evasion, Black money International

③ Multimodal Transport agreements INTC, BBTN etc. can increase our trade & exports.

④ Bilateral talks to attract FDI, investments to make make in India a success

⑤ Multi-dimensional reforms of policy actions are the need of the hour. Further Govt has to integrate Policies (Make in India, Digital India, Skill India) to make economic growth a success

④

→ Strengthening macro economic fundamentals

Remarks

→ fixing banking sector

Q11. Indian manufacturing products are uncompetitive in global market due to their low quality and standards, especially the exports from MSME sector. Discuss the issues pertaining to low quality of Indian manufacturing. Also discuss the significance of Zero Defect - Zero Effect (ZED) scheme in this regard. What else can be done to improve the quality and standards? (12.5 Marks)

MSME sector in India is significant for employment generation and inclusive development. In this regard, export from MSME is significant way to increase profitability & sustainability of MSME sector.

Issues of quality

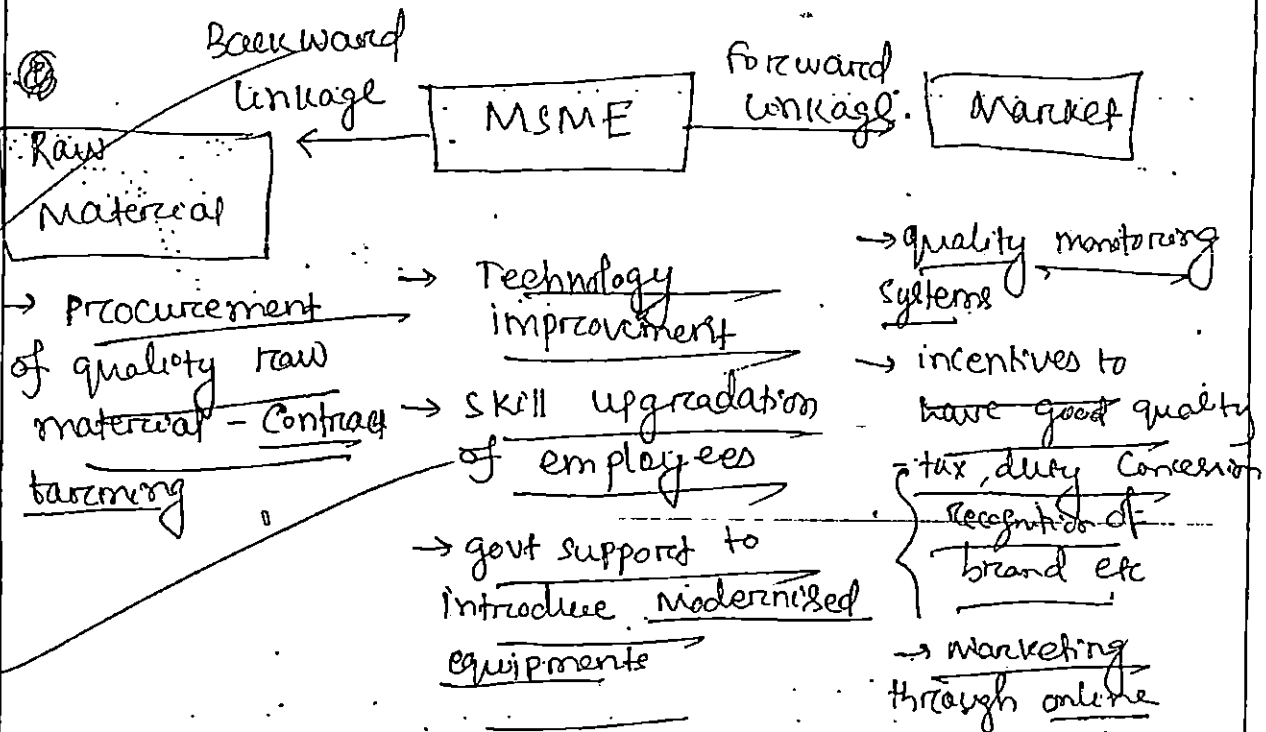
- ① Lack of technological advance affects the quality of products ex: primitive methods to extract Jute
- ② less significant support from govt. to improve standards of manufacturing
- ③ lack of quality monitoring systems in place
- ④ to reduce cost of production, MSME are using low quality raw material
- ⑤ lack of skilled expertise to make high quality goods

Significance of ZED scheme

- ① This will ensure that MSME products are of good quality & they don't have large effect on environment too.
- ② This will help MSMEs to introduce new green technologies.

Remarks

What else can be done ?



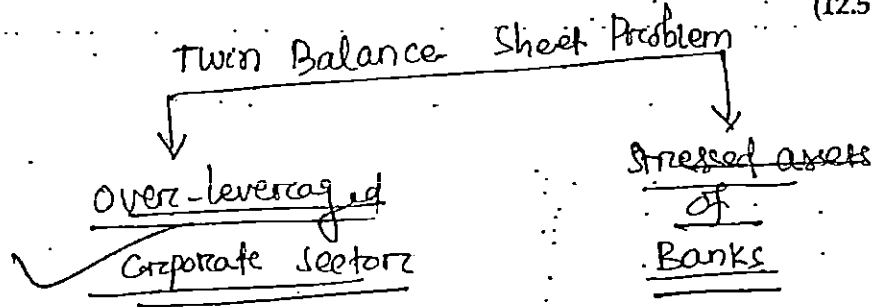
Growth of MSME is very essential for social development & inclusive development. Hence there is a requirement of govt focus on improving capability of MSME sectors to produce quality goods which can compete on global market.

3.5

- Infrastructure on the levels of global quality ecosystem...
- National standards co-ordinating agency.

Remarks

Q12. India has been facing twin balance sheet problem with Indian characteristics. What are Indian characteristics and what steps should be taken to find out the solution? How the recently passed ordinance, empowering RBI, is going to tackle the situation? (12.5 Marks)



Indian characteristics

- ① Corporate sector is over-leveraged - This leads to lack of growth & expansion.
- ② PSBs are normally not lend to infrastructure / long gestation projects in other countries - But in India, same banks lend to infrastructure & highly risk projects.
- ③ This mismatch between supply side & demand side have led to NPA problem
- ④ Crony capitalism, unhealthy nexus between corporate lenders and banking officials have led to NPA growth
- ⑤ lack of 'Corporate governance' has reduced profitability of corporate sector
- ⑥ No strict action against willful defaulter

Remarks

⑥ Entry - exit policy

Though entry is easy after 1991 reforms
 exit is not easy due to Complex labour laws, taxational laws

RBI empowered

① Now RBI can monitor the resolution process of Stressed assets

② This will expediate resolution of debt and stressed asset problem. Banks can transcribe their bank-books

③ RBI has been given more power to directing banks to come up with actual, real bonafide conditions

This will help in early recognition of NPA / Stressed asset problem & facilitate timely action to reduce the problem, further the resolution process can be expediated to recover losses

4

→ Ordinance to enforce expeditious resolution of NPAs and allows the RBI to set up oversight committee for Banks

Remarks

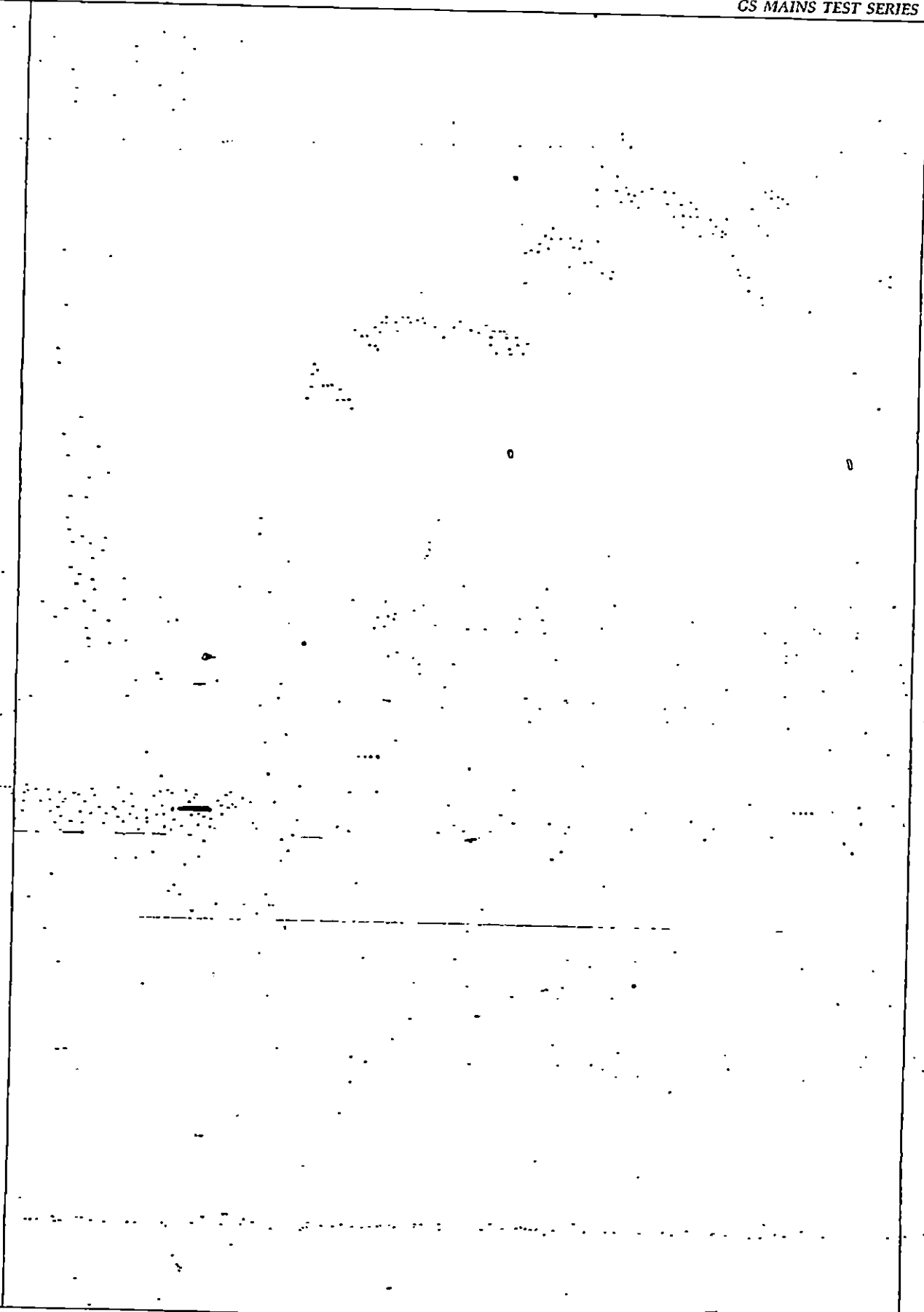
→ Too big to fail kind of attitude by some large corporates

Q13. This Question contain 2 parts; both are compulsory:

- (a) World Bank has been changing its spending pattern from infrastructure to healthcare. How does this change augment the efforts toward achievement of SDG and improved welfare?
- (b) The funding available with the international humanitarian spending agencies, like World Bank, UNCTAD, etc. is far less than optimum. Examine the reasons for such shortfall and suggest how spending deficit can be overcome.

(12.5 Marks)

Remarks



Remarks

Q14. BRICS and AIIB has been two emergent institutions, which can challenge the hegemony of Bretton Woods institutions. However, for that to happen, China requires cooperation of the other developing countries rather than establishing hegemony over the new institutions. Critically analyze. (12.5 Marks)

BRIC & AIIB certainly have potential to challenge hegemony of Bretton Wood institutions (IMF & WB) ~~and~~ further they have potential, to carry out infrastructural development in Asia to make it a growth hub.

Why China requires co-operation of others to make BRICS, AIIB to compete with IMF, WB:

- (1) In BRICS, each country has equal voting as well as equal share. Hence China can't take any unilateral action in BRICS. It needs approval of other countries.
- (2) In AIIB, though China has ~~big~~ majority voting share (26%), India's have (12%), Russia (5%). Here also, it is not possible for unilateral action.
- (3) However at present these institutions don't have required outreach & capital to supplant/ compete with IMF & WB. IMF & WB has created a large network in Asia, Pacific, Africa & elsewhere. However AIIB, till now have reached that level of outreach.

Remarks

Hence to compete with ~~IMF, WB~~ IMF, WB, it has to grow sustainable interms of capital & outreach to other countries

This requires co-operation of all the stakeholders & China unilaterally negotiated can't achieve this.

35

→ funding to these institutions should be in equal proportion based on the size of their economy.

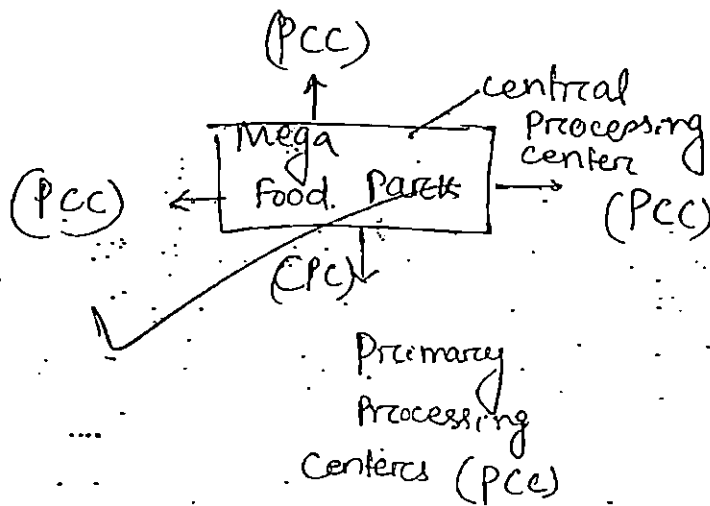
→ open
→ inclusive
→ co-operational attitude

→ from other developing countries

Remarks ..

Q15. Despite the fact that, Food Processing sector is recognized as sunrise sector and paid ample attention in recent years, the recent statistics suggest that many of Mega food parks, which were announced in the scheme have either not been established or they are on the verge of shutdown. Analyze the factors behind this trend; also suggest what should be done to reverse the trend? (12.5 Marks)

Food processing sector holds huge potential for rural development and employment generation. Hence govt. came up with program of Mega Food Parks to establish Food processing industries.



Factor - For non-establishment & shut-downs of Mega Food Parks (MFP)

- ① Budgetary constraints and lack of private investment has led to non-establishment of proposed parks.
- ② In case of existent MFP, due to the lack of APMC reforms, there is lack of inflow of raw materials for processing.

Remarks

- ③ lack of integrated infrastructure - road, rail connectivity to processing centers for exports, and transport to markets.
- ④ lack of cold storage, godowns in rural areas, leading to post-harvest losses, lack of power (24/7)
- ⑤ skill development - There is lack of skilled labour to be employed.

Suggestions

- ① Providing incentives to attract private sector investment in MFPIs
- ② Identify stalled projects & expediate their establishment
- ③ Promote APMC reforms, corporate, contract farming.
- ④ Infrastructure - electricity, road connectivity, connectivity to nearby export hubs, cold storage etc.

4.5

- Barely 6-7% of total fruits and vegetables in India are processed.
- Food Parks should also be involved in production and marketing.

Remarks

Q16. Recent Farmers' agitations and suicide once again highlight the discrepancies in inclusive development. In this reference, analyze the factors behind farmer's suicide with a reference to NCRB report. What steps are needed to break the vicious cycle?

(12.5 Marks)

Agriculture in India is important for inclusive development. Though it only contributes 16% to GDP, but employs more than half the population. Hence improving agricultural growth will also improve the lot of 50% of population, leading to inclusiveness.

Factors behind Farmer's suicide

① Crop loss, damage

Variations of climate, pest attacks, are major reasons for crop loss and damage. The farmers don't have any other source of livelihood to compensate the loss. This leads to debt-trap.

② Market impediments

In many good harvest years too, farmer's suicide is visible. This is because, good harvest leads to low price in market. And MSP coverage is only 6% and covers mostly Rice & wheat. This is insignificant to deal with low prices in market.

③ Access to credit

Small & marginal farmers find it difficult to borrow from banks due to lack of collateral.

Remarks

hence they borrow from money lenders at high cost. Hence Farm loan waivers in case of loss doesn't help these farmers.

④ unsustainable use of water, fertiliser, pesticide decreases future crop yield

⑤ post-harvest losses - lack of godowns, cold storage, food processing centers lead to loss of income

ways to break this vicious cycle

① Alternative livelihood

bee farming, poultry, aquaculture, dairy farming

② Promote APMC reforms for fair price to farmers

③ Promote commodity future markets to protect farmers from volatile market situation

④ wide coverage & awareness of agricultural insurance schemes

⑤ investment in agriculture - irrigation, efficient water use, soil management etc. to increase sustainability of land

⑥ Providing a compensation to farmers for their contribution to ecological service from agro-ecosystems - done in Brazil & China

→ NCRB data regarding 4 farmers suicides

Remarks

2014

5650

2015

8007

42% Increase

Q17. Micro irrigation can be way out for rainfed agriculture and small land holding in India. In this reference, discuss the advantages associated with micro irrigation, initiatives taken by government and challenges associated with it. (12.5 Marks)

Micro-irrigation is a component of precision farming, where focus is on optimization of inputs

how micro-irrigation is a way out for rainfed & small land holding

① Currently half of cropped area is rainfed, leading to uncertainty of production due to climate changes. ~~Drop~~ micro-irrigation can help sustaining the production.

Advantages with Micro-irrigation

① Water use efficiency

Micro-irrigation techniques: ~~Drop~~ and ~~Sprinkler~~ can help in efficient use of scarce water. can solve problem such as canvey issue

② Sustainability of land use

over-use of water leads to problems of salinity & land degradation.

③ efficient use of other i/p

~~drop irrigation~~ can reduce use of fertilizers & ~~pesticides~~ and also reduce growth of ~~weeds~~ weeds

④ Farming/ Cultivation can be done the whole year

Remarks → sayings like 'Per drop more crop'
'Har Khet Ko Pani'

→ micro Irrigation fund under NABARD (initial corpus of 5000 cr)

Govt initiatives

① PMKSY - Pradhan Mantra Krishi Sinchayee Yojna.

It has one component "per drop more crop" to

promote efficient use of water.

Current budget has 40% of allocation to PMKSY to this component.

This will promote use of drip irrigation & sprinkler use.

Challenges

① Cost of installation of micro-irrigation is high.

② Small & marginal farmers will find it difficult to switch to micro-irrigation techniques.

③ Small land holdings is a major problem - as it is economically unviable to use these techniques.

④ Use of drip irrigation networks may hinder mechanisation of agriculture and hence big landowners may shy away from using micro-irrigation techniques.

Govt has to incentivise the use of micro-irrigation.

It also has to give support to small & marginal farmers to use these irrigation methods.

Micro-irrigation if adopted can make it possible.

Remarks

for a 'Second Green Revolution' in India.

45

Q18. The Vulnerability of farmers is not just due to natural vagaries, but also due to defects of public procurement policy. Analyse what should be done to reform the public procurement system? (12.5 Marks)

Today Indian agriculture is facing various problems such as uncertainty of monsoon, frequent drought, crop loss, damage, low yield, volatile market situations & the like. Hence not only natural vagaries but also public procurement policy have large impact.

Defects of public procurement policy Objectives:

① Coverage

Ull now. The coverage of MSP is just 6% - largely states like Andhra Pradesh, Punjab, Haryana benefit.

1. Fair price to Farmers.
2. Food Security of India.

② Lack of awareness among farmers

Recent survey have revealed that only 3% of farmers know about MSP & public procurement.

③ Skewed MSP structure

Though MSP is declared for 32 crops, in effect only wheat & Rice are procured. This has led to unscientific & excessive cultivation of rice & wheat leading to unsustainable land use

Remarks practices, ground water removal, land degradation.

How to reform Public Procurement

① Shanta Kumar Committee recommendations to be implemented, such as limiting procurement of grains to a certain level

② MSP should be universalised, awareness among farmers has to be generated.

③ Balanced MSP structure

It should incentivise farmers to cultivate crops w.r.t. to water, climate, soil requirements.

EX: Marathawada - Jawar, Raji, ba Sra, oil crops
Punjab - Sunflowers, Pulses
Eastern India - Paddy cultivation

④ Coverage of MSP have to be increased from present 6%.

Other reforms to supplement the MSP policy

① Irrigation area to be increased

② focus on scientific land use, precision farming

③ agricultural insurance coverage

A efficient and effective procurement policy with other agricultural reforms (market APMC, irrigation, technology use etc) can make Indian agriculture to prosper & facilitate inclusive development.

4.5

→ Faltry calculations for procurement

Remarks

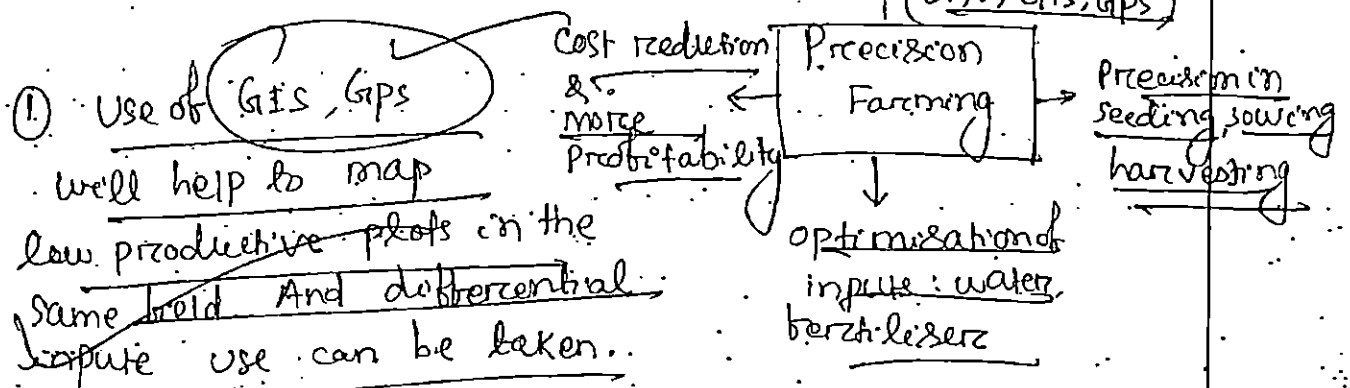
→ Delay in opening of procurement plans

→ exclusion of small farmers

Q19. What is precision agriculture? How precision agriculture can help in improving the resource use efficiency in agriculture, with special focus to irrigation? (12.5 Marks)

Precision agriculture is efficient and optimal use of agricultural inputs (water, fertiliser, pesticide, herbicide). This has the potential for making agriculture profitable & environmentally sustainable.

How it can improve resource use efficiency in agriculture



① Use of GIS, GPS will help to map low productive plots in the same field. And differential input use can be taken.

② Precision Farming focuses on efficient use of water through micro-irrigation, drip & sprinkler uses.

③ These can be integrated with satellite images/data, so that it can provide water to dry areas in the field. This will improve the utilisation of scarce resources such as water & fertiliser.

Remarks

(4) ~~Satellite~~ weather forecasting can also be integrated to use of irrigation.
 For example, if there is forecast for a drought period, water use can be minimized and proper and suitable crops can be planted.

(5) In case of drought instead of sugarcane, paddy, jawar, oil, pulses can be cultivated

(5) efficient fertilizer ^{& water} use will also solve problems of salinity, and water infiltration can improve. This will help in sustainability of agriculture

Precision agriculture can transform the base of Indian agriculture. It has huge potential to

Promote ENTREPRENEURSHIP IN AGRICULTURE by increasing profitability of agriculture.

(4.5)

→ Precision Agriculture

↓
 site specific crop management

→ sensors in fields measure the moisture content and temp.

Remarks

→ predictive analytics software uses the data to provide farmers guidance

Q20. How pink revolution can supplement farmer's income? Critically analyse, how the developments of recent years coupled with steep inflation in animal feed prices have impacted the development of sector? (12.5 Marks)

Pink revolution & farmer's income

① Indian agriculture is facing problems of frequent droughts, crop loss, damage etc.

↳ This has reduced farmer's income.

② Pink revolution can give an alternative source of income to farmers.

③ Rise of ~~new~~ middle class & population increases have led to rise in demand for

↳ Protein-rich food: meat, dairy etc.

↳ This will give profits for farmers

④ This also can help meet the nutritional needs of his own family, helping reduce malnutrition & poverty

Recent development: Steep inflation & animal feed price

① Inflation have increased price of meat and there is trend on shifting to other sources of protein: milk, dairy products.

② animal feed price increase have made the rearing of animals economically unviable for farmers

Remarks

Other problems

① disease

bird flu recently spread rapidly due to lack of monitoring & animal husbandry services in place, it caused huge loss to

farmers

② Export of Meat

Due to quality & health issues, export of meat products from India is not significant

③ Cold storage infrastructure

many farmers don't have access to cold storage leading to loss, damage, quality problems

3.5

Refer hints

Remarks