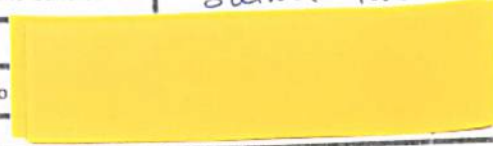


GENERAL STUDIES

Name of the Candidate

Saima Khan

Email ID



Roll No.

Date

17/7/22

Mobile No

INDEX TABLE			INSTRUCTIONS		
Q.No	Max.Marks	Marks Obtained			
1	10	5.4	1. Please write your Name, Email, UPSC Roll No. and Mobile number in the answer sheet 2. There are 20 questions printed in English, all questions are compulsory 3. The number of marks carried by a question or part is indicated against it. 4. Answers must be written in the medium authorized in the admission Certificate (English), which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. 5. Word limit in questions, if specified, should be adhered to. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be struck off.		
2	10	4			
3	10	4			
4	10	4.5			
5	10	4			
6	10	3.5	Any specific message from Educrat IAS Mentors/Evaluators with respect to your copy? Mentor's Remarks:		
7	10	3.5			
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16	15	6	Start Time: 10:45 End Time: 1:45 Mode of Examination: Online <input type="checkbox"/> Offline <input type="checkbox"/> Medium of Examination:		
17	15	6.5			
18	15	6			
19	15	7			
20	15	7.5			
Total Marks		106	TEST CODE:		

1. In what ways can land reforms contribute towards holistic development of agriculture? Also, critically analyze the achievements of land reforms in country. (Answer in 150 words, 10 marks)

Land reforms are essential in India in order to ensure equitable distribution of wealth under Art 39(b) of DPSP.

Need of land reforms:

- 1) Reduce judicial burden - more than 66% cases in civil courts are related to land disputes.
- 2) Increase access to credit - land ownership can ensure credit access as land can be a collateral.
- 3) Proper implementation of welfare schemes - eg: PM Kisan Samman Nidhi
- 4) Women empowerment - women only own 2% of land.
- 5) Increased productivity of land through better utilisation eg: Land Use Advisory Services.

Land reforms implemented during 1st Five Year plan led to some benefits but also created issues.

Benefits

- of More than 2 cr ~~tenants~~ connected to government - Abolition of Zamindari Act.
- 2) Operation Bargaon in West Bengal gave tenants ownership.
- 3) Land consolidation increased productivity due to economies of scale.

Challenges

- 1) Increase in Benami transactions to avoid land ceiling.
- 2) Only 2% of total land was redistributed.
- 3) Mostly wasteland were redistributed.
- 4) Judicial burden increased due to violation of Right to Property.

There is a need to shift to Land Reforms 2.0 to overcome challenges of earlier reforms through UJID and SVAMVITVA scheme.

2. National Monetization Pipeline (NMP) has the potential of providing a positive trigger for the economy by designing a roadmap for realizing the true value of underutilized government assets. In context of the statement, examine the opportunities and challenges involved. (Answer in 150 words, 10 marks)

National Monetization Pipeline was launched by the government in order to monetise the underused and unused assets to create new sources of revenue for the government.

It can be beneficial:

- 1) Increase revenue: target of generating upto 1 lakh cr has been set under this programme.
- 2) Increase employment opportunities by utilising neglected assets eg: using abandoned railways for coal transfer.
- 3) Holistic development: It will target a wide range of sectors — PSU; roads, railways etc along with state participation.

- 4) Increased investment through Public Private partnership eg: Hybrid Annuity model
- 5) Promotes stewardship in governance.

Challenges:

- 1) low level of investment registered due to complex and multiple laws.
- 2) Shifts government responsibilities to private in guise of lean structures - can cause unemployment
- 3) Projects used covered under this have long gestation period
- 4) Target set has no clear action plan

* may trigger sale of private sector
* Loss of trust
* Dispute resolution mechanism
* level of independent regulators

National Monetisation Pipeline has now been subsumed under cash shakti water plan in order to develop synergy among 16 ministries for better outcome realisation.

3. How has the Industrial policy in India evolved since independence? Have these policies succeeded in attaining their objectives? Argue your case. (Answer in 150 words, 10 marks)

During independence era, India's contribution to world GDP had reduced to 3% from erstwhile 23%. This facilitate the need for industrial policy.

Evolution of industrial Policy since independence:

1) Focus on Heavy industries under Nehru Mahalanobis Plan (1950s-60s)
eg: Rourkela, Durgapur Plants.

*Bank nationalization
→ Lack of focus on consumer based industries

2) Harrod Domar model: focus on savings and low ICOR segment.

3) 1990s → with LPGs, service sector boom witnessed in India - eg: BPO, call centres → IT Revolution

4) Shift from import substitution to open economy after LPGs.

5) 2020s → focus on self sufficiency

and Atmanirbharata - eg: Make in India,
PLI etc

Success in attaining objectives:

- 1) Growth in GDP → India now 5th largest economy.
- 2) Employment increase - Labour force participation at more than 45%.
- 3) Forex increased due to increased export eg: India FX was \$550 bn worth of forex.
- 4) Increased investment: India 4th largest FDI receiving country

Challenges

- Manufacturing sector stagnant - only 17% contribution to GDP
 - jobless growth - Reduced labour force participation
 - agriculture sector still the major employer - more than 50% population engaged.
- credit access still a major hurdle

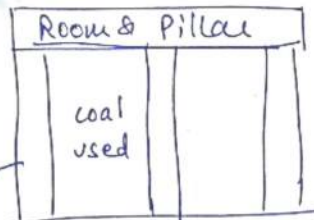
The industrial policy of India has shifted with changing times and must continue to be agile in order to achieve its targets.

4. Despite a bountiful reserve of coal, its shortage has become systematic and perennial. Highlighting the causes, recommend some corrective measures. (Answer in 150 words, 10 marks)

India is the 5th largest producer of coal in the world. Yet, India continues to be dependent on coal imports for meeting its energy needs.

Reasons for shortage

1) Room and Pillar method: the method leads to significant underutilisation of coal reserves.



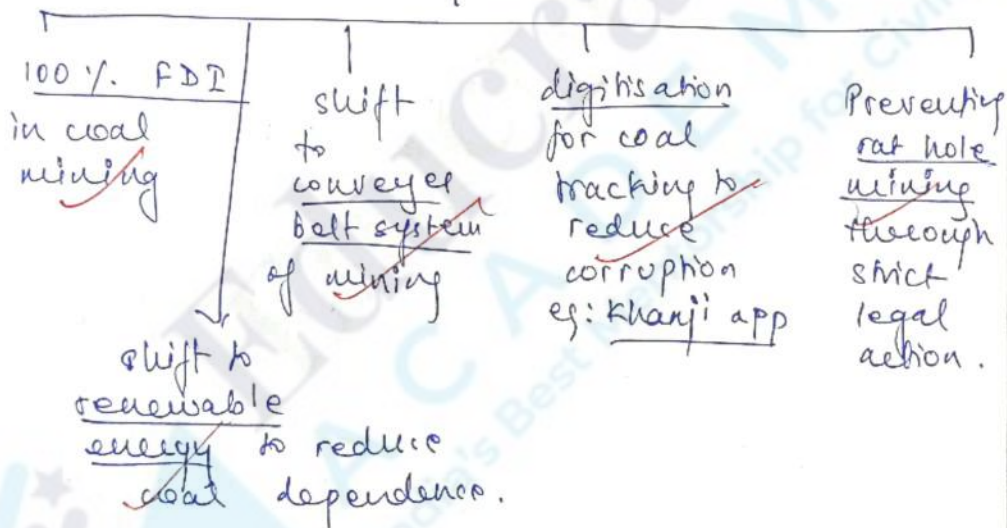
2) Rat hole mining leads to illegal mining of coal creating artificial scarcity.

3) Low level of coking coal - India has reserves of bituminous coal but coking coal reserves are not sufficient.

Handwritten notes in red:
 + reduced imports
 + ramped up payments by DISCO
 + Coal Block allocation

- 4) Monopoly of coal india limited leads to corruption and decreased competition
- 5) Increasing population and climate change leads to increased energy demands
- 6) Protests against coal mining eg: Naxalism.

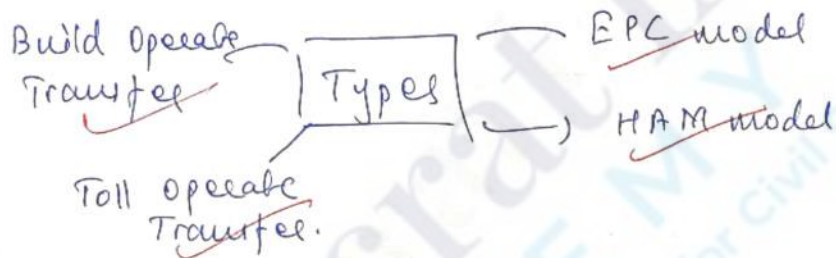
Measures



Coal is a non renewable source of energy and its demand should be reduced by replacing it with renewable energy systems as much as possible.

5. Evaluate the Hybrid Annuity Model (HAM) in addressing the challenges of Public Private Partnership (PPP) in the country.
(Answer in 150 words, 10 marks)

Public private partnerships are a hybrid model of financing projects for infrastructure development.



Hybrid Annuity Model benefits:

- 1) Blended finance: government and private both contribute financially

$$\begin{array}{ccc} \text{Govt.} & + & \text{Prt} \\ 40\% & & 60\% \end{array}$$
- 2) De-risking projects: risks are distributed equally among both players
- 3) Golden mean between BOT (private has sub's burden) and EPC (govt

has entire burden)

4) Private gets continued profits as government gives its annuity every year

5) Public welfare as ownership rests with the government.

Challenges

long gestation projects leads to delayed profits

faulty model concessionaire agreement results in non-realisation of targeted revenue

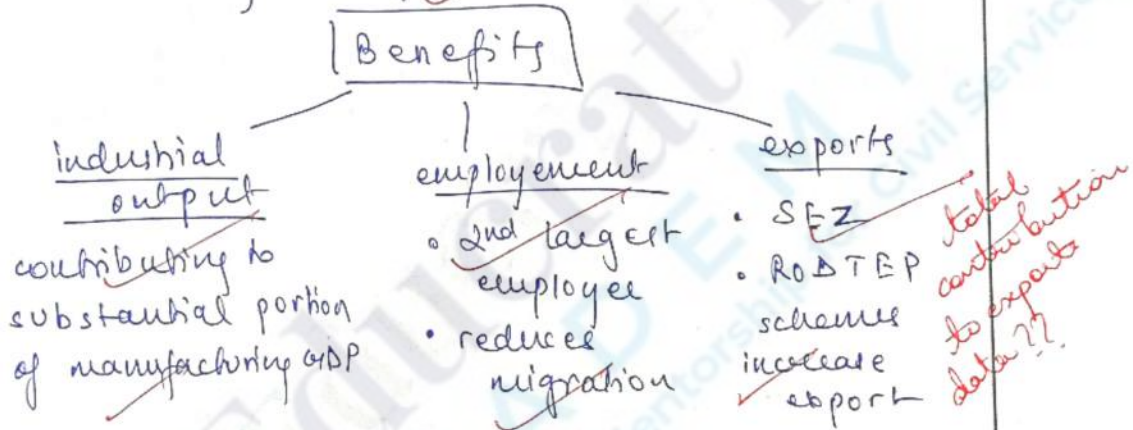
delays due to government clearances, land acquisition make these projects unviable.

- * Bidding beyond capacity
- * wasteful and allocations
- * no provision to penalize for poor service.

While HAM is a perfect blend of government and private contribution, there should be a shift to plug and play model in order to overcome issues of HAM.

6. The MSME sector is a significant contributor to industrial output, employment generation, and exports; however, its potential remains untapped due to several factors. Elucidate. (Answer in 150 words, 10 marks)

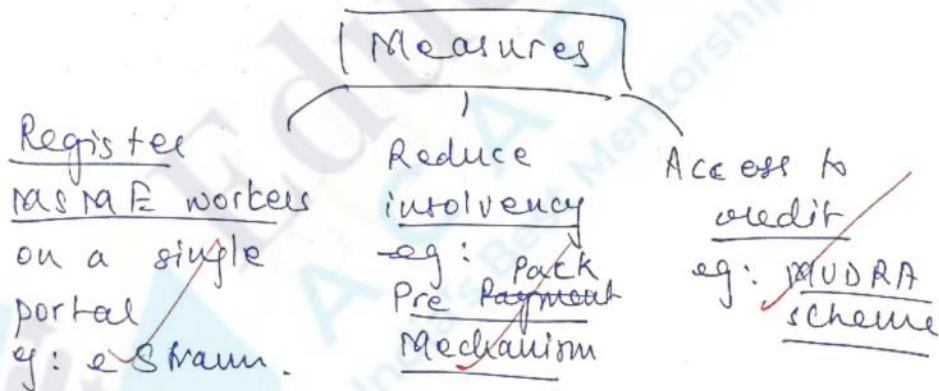
In India, the MSME sector is the 2nd largest employee contributing to growth and development



Challenges:

- 1) Concentrated in low skilled jobs: most MSME employees are working in primary production facilities.
- 2) less value addition in MSME sector.

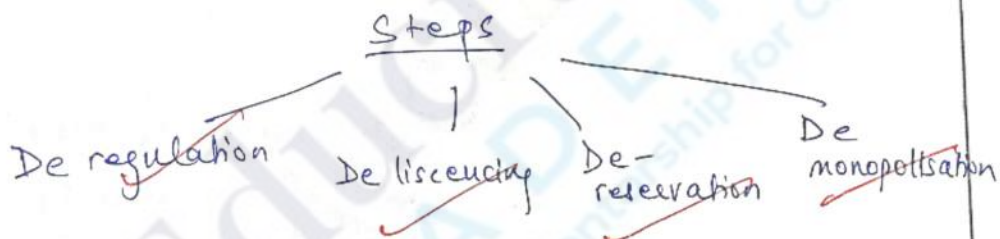
- 3) Low access to credit - only 12% MSMEs have access to finance
- 4) High levels of informality - no database on actual number of MSME units
- 5) COVID 19: made many MSMEs bankrupt and pushed them into poverty.
- 6) Lack of social security benefits to employees due to high informal nature.



MSME sector in India has huge potential to improve the manufacturing GDP and push India towards a \$5 trillion economy

7. What do you understand from Liberalisation, Privatisation and Globalisation (LPG)? Examine the effects of LPG reforms on different sectors of Indian economy. (Answer in 150 words, 10 marks)

LPG were a set of reforms taken by India during 1990s to open up its economy to global world and shift from import substitution to competition.



Impact on various sectors :

Positive

- 1) Agriculture: availability of HYV seeds, improved technology led to increased productivity eg: farm mechanisation
- 2) Service sector: India witnessed IT Revolution and service sector boom.

- Increase in employment and GDP - service sector contributing to 55% GDP
- 3) Industry: better quality products due to improved competition.
eg: FMCG sector.
- 4) More choice to consumers due to availability of foreign brands.
- 5) Increased FDI leading to growth in export potential.

Negative

1) Ruin of small scale farmers as they could not compete with global brands

2) Manufacturing - India became a hub of assembling rather than output.

3) Growth of primary service sector eg: BPO rather than tertiary eg: R&D.

4) Destruction of domestic industries due to increased competition

LPB integrated India into the world economy but needs further reforms to manage its challenges.

Income inequality
Excessive
Focus on selected
sectors eg. IT, Pharma
HSME Sector

8. A robust infrastructure sector is indispensable for putting the country in a consistent socio-economic growth trajectory. Analyse the statement and evaluate the role of PM-Gatishakti and National Infrastructure Pipeline (NIP) in infrastructure development of the country? (Answer in 150 words, 10 marks)

India is the world's
most populous country and infrastructure
is the lifeline for connectivity and
growth.

Need:

- 1) Improved connectivity: Roads, railways etc important to promote connectivity
- 2) Employment generation: infrastructure development will generate jobs
- Keynesian approach
- 3) GDP growth - increase backward and forward linkages industry eg: cement industry
- 4) Social skill development: due to better schools and hospitals..
- 5) National security eg: Chauhan

project reducing time for troop mobilisation

2 major projects

PM Gati Shakti
- connecting 16 ministries
for holistic development

National Infrastructure
Pipeline (NIP)
- focus on road,
railway with
through public-
private partnership.

Their role in infrastructure development:

- 1) Promote investment - 50% contribution by private in NIP
- 2) Increased synergy - coordination among 16 ministries will lead to de-duplication of work.
- 3) Promotes EODB - single window portal for all clearances eg: PM Gati Shakti Master Portal
- 4) Holistic development - focus on road, railway etc to remove lopsided development.

Both these measures by the government will reduce India's logistic cost from 16% to 8% as targetted and improve realisation of last mile connectivity goal under Saptarishi

9. In the financial year 2021-22, Indian merchandise exports have crossed the 400 billion USD mark. Identify the reasons for this spectacular performance of Indian exports and suggest reforms to further boost the exports. (Answer in 150 words, 10 marks)

In 2021-22 India witnessed a current account surplus for 2 quarters as merchandise exports crossed \$400 bn mark.

Reasons

1) Improved export due to increased production eg: PLI scheme

2) Reduction in import due to:

a) COVID 19 led to increased

protectionism

b) Supply chain disruption due to Ukraine war.

3) Policy measures by government

eg: Foreign trade Policy - export hub development.

4) International measures eg: friendship

* China manufacturing suffered
* Diversification of Supply Chain
* Backing for trade partners

led to increased exports to USA.

5) Bilateral agreements: eg: MoU with Australia.

⇒

Further reforms for promoting exports:

1) Districts as export hubs: focusing on developing export potential of entire district

2) Mentorship programmes to promote exports by startups eg: Niryat Bandhu

3) Increasing deemed exports as well
eg: SEZ Act

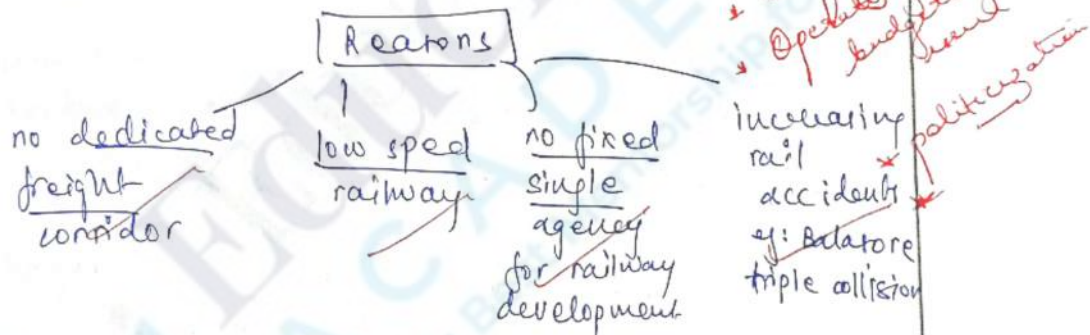
4) Single window clearances for promoting Ease of Doing export eg:
e-Sugam portal

5) Incentives on achieving export target
eg: RoDTEP scheme.

India has set up a target of ~~7800~~ 9500 bn exports. It is essential to achieve Aatma Nirbhar Bharat goal.

10. Why has Indian Railways been unable to become competitive, fast, and efficient as their counterparts in developed economies? Discuss the need and ways to its holistic overhaul. (Answer in 150 words, 10 marks)

India has the 4th largest railway network in the world. While it is the lifeline for India's connectivity, it still has not achieved efficiency, speed and competitive edge like other nations.



Need to develop railways :

if improve connectivity: Railways can connect remote corners of the nation where other transport is difficult
eg: North East.

- 2) Cheap: the railways fare are the least expensive when compared to roads or flights.
- 3) Agriculture development. eg: Krichi Rail system.
- 4) Role in Covid - eg: Oxygen rail
- 5) Increasing population - it provides a safe and convenient mode of transport.
- 6) Security eg: Rail lines in Naxal regions.

Ways to improve Rail connectivity

- 1) Increased finance: government allocated Rs 1 lakh cr to railways in 2022-23 budget.
- 2) Privatisation of some railways for better amenities.
- 3) Develop High Speed Railway as opposed to bullet train - Niti Dayog.
- 4) Track renewal for improved safety.
- 5) Deploying KAVACH in order to prevent collisions.
- 6) Dedicated freight corridors for achieving efficiency. eg: East-West corridor.

Railways should be overhauled for efficiency and safety of passengers.

11. The role of private sector is indispensable in increasing India's share in the global space industry. Highlighting the challenges faced by the private sector, suggest measures for facilitating their greater participation. (Answer in 250 words, 15 marks)

With Industrial Revolution 4.0, India has achieved a position in the global space industry. Private sector participation is essential for fortifying India's space interest.

Role of private sector in space industry

Increase in finance for carrying out space operations

Improved R&D - India's R&D is only 0.07% of GDP

Innovative solutions eg: Space X reusable launch vehicle

Increased competition leading to better quality service

Profitability of space operations will increase eg: promoting space tourism

Challenges faced by India's private sector:

- 1) Space monopolisation: government has been the only player in space industry since independence
- 2) Insurance problem: with increasing fear of space collision, Kessler syndrome who will bear the liability for such damage is unclear.
- 3) Low R & D: Only 24% institutions of private sector are engaged in R & D
- 4) Capital intensive: space sector requires billions of dollars and only few companies in India have the potential for space exploration.
- 5) Limited usage: space tourism etc are still ignored in India and private keep on competing for same traditional roles.
eg: space satellite
- 6) Multiple approvals: there is no single body for promoting EOSS in space. Multiple organisations prevent investment - ISRO,

NSIL, D.O. Space etc.

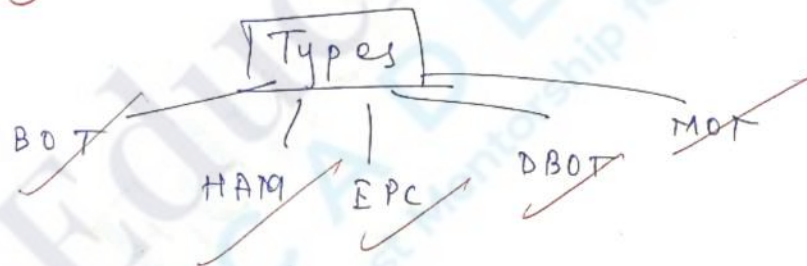
Measures for increasing private sector participation:

- 1) Promote space startups eg: NSIL
encouraging startups
- 2) Venture into new fields - space tourism, defence etc
- 3) Easy clearances for improved investment
- 4) Improve public - private partnership in space industry eg: skyrout of Hyderabad
- 5) Promote foreign investment in space industry eg: Autrix
- 6) Improve competition among private sector for projects eg: Space Hackathon

India has huge potential in space industry as has been witnessed by the recent Chandrayaan launch. India should engage its private sector to further this sector's growth.

12. Why is Public Private Partnership (PPP) required in infrastructural projects? Examine the role of PPP model in the redevelopment of Railway Stations in India. (Answer in 250 words, 15 marks)

Public Private Partnerships are hybrid model of infrastructure development where both government and private sector contribute in their own capacity to develop projects and generate revenue.



Need of PPP in infrastructure projects:

- 1) Blended finance: increased investment as both contribute and it is needed as infrastructure is capital intensive eg: Hybrid Annuity model.
- 2) clear area of operation: there is

a division of responsibilities

eg: EPC : government (finance)
private (engineering)

} Goal

3) Balance between public welfare and profit motive eg: HAMA : private gets profit while government holds ownership leading to reduced toll charges

A) Distribution of risks : no single player bears entire financial or operational burden.

5) Better quality : private brings with it its managerial skills as well.
eg: Chennai.

Need of PPP in developing Railway Stations

1) Increased investment - as private will contribute significant finances.

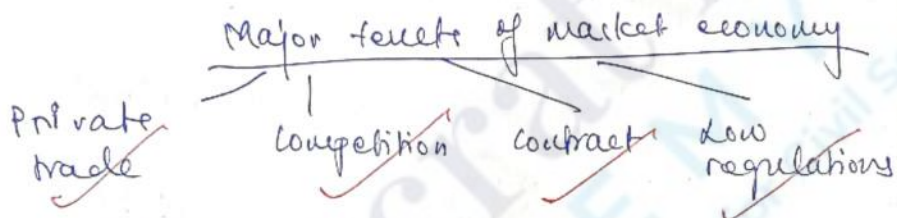
2) Managerial skills of private : private will resort to evidence based

- development eg: capacity of station, foot over bridges etc.
- 3) Reduces government's fiscal deficit
 - 4) Innovative designs and solutions:
eg: ramps, lifts etc - disabled friendly station in Bhubaneswar.
 - 5) Integration of ICT eg: using CCTVs, better communication networks with private involvement.
 - 6) Easy for private as it will not face delays due to clearance issue
eg: Modelise Operate Transfer.

PPP holds great potential for development in India. They should be utilised to develop infrastructure projects under National Infrastructure Pipeline.

13. Is inclusive growth possible under market economy? State the significance of financial inclusion in achieving economic growth in India. (Answer in 250 words, 15 marks)

Market economy is characterised by low government regulation and free market operations.



Inclusive growth is possible under market economy:

- more points can be added here*
- 1) Survival of everyone - everyone is free to carry out their will and choice - no monopoly
 - 2) Low taxation means more savings and higher per capita income.
 - 3) It can lead to increase employment as there is no restriction on growth.
eg: opening multiple factories.

Issues due to market economy leading to no inclusive growth:

1) It promotes survival of the fittest i.e. only those players will do well off who are well established.

2) Public welfare compromised due to low subsidies

3) Same burden on every individual - not proportional

eg: while 10% of richest individual pay 3% GST, bottom 50% pay 64% of GST.

4) Flawed assumption that everyone is equal eg: women, disabled.

A complete market economy cannot ensure inclusive growth. It has to be balanced by state intervention

Measures

progressive taxation

subsidies

low interest rate credit

social skill development

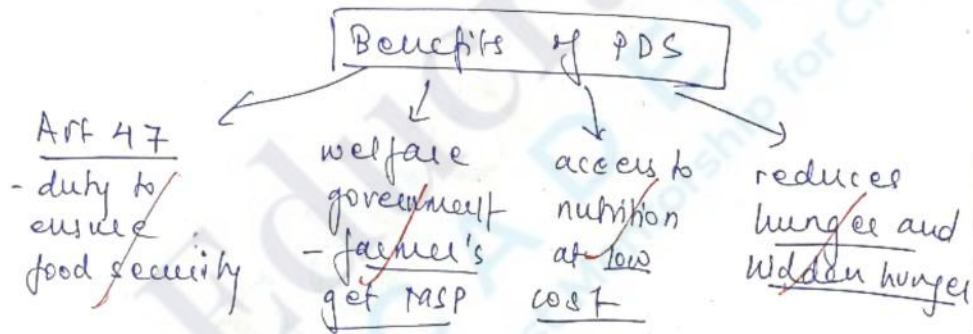
Significance of financial ^{inclusion} growth in achieving economic growth:

- 1) Increased access to credit.
eg: Mobile loans
- 2) Reduces government's fiscal deficit
eg: DBT is at zero cost while earlier
Rs 1 subsidy led to Rs 3 cost burden
- 3) Reduced corruption and fake beneficiaries eg: JAM Trinity
- 4) Better access to government's schemes eg: e-governance: SMS about PDS
- 5) Increases consumer's choice and per capita growth eg: PM Jan Dhan Yojana.

Financial inclusion is the goal of India's growth trajectory. It has been achieved to a great extent through multistakeholder approach.

14. What are the major challenges of Public Distribution System (PDS) in India? How can it be made effective and transparent? (Answer in 250 words, 15 marks)

Public Distribution System (PDS) in India is a welfare measure by the government to ensure food and nutritional security to 67% of India's population.



Challenges in PDS in India:

- 1) Targetting errors: inclusion and exclusion errors leading to unavailability of PDS eg: 27% BPL excluded from PDS.
- 2) fake beneficiaries: due to ghost

cards, corruption etc

- 3) Food wastage due to open procurement policy of FCI - 10% of food grains lost
- 4) Pilferage and misallocation eg: diversion of PDS trucks by Naxal Mafias in Chhattisgarh.
- 5) low quality of food grains being distributed in PDS
- 6) High government burden - govt. has to import in case of low food production to meet PDS targets
- 7) International sanctions: India's MSP programme which provides for PDS is challenged at WTO as Amber Box subsidy

Measures for efficiency and transparency in PDS:

1) Shanta Kumar Committee: procurement

should be done from states where distress sales occur.

2) Using GPS / RFID to track PDS vehicles to prevent diversion.

3) Reducing coverage from 67% to 50% for the population to reduce fiscal burden.

4) M governance - SMS sent to beneficiaries for PDS to reduce corruption.

5) Grain ATM - eg: Annapurna ATM which dispenses grain after biometric authentication.

6) Food coupons - allow consumers to purchase food from any local store via these coupons.

7) Improve storage to reduce losses
eg: Cover and Plinth.

PDS in India should be made more effective in order to achieve the goal of SDG 1 - Zero Hunger.

Good
* End to end computerisation

15. Elaborate the scope and significance of the food processing industry in India. (Answer in 250 words, 15 marks)

The food processing sector in India contributes to 9% of manufacturing GVA. It has immense scope and significance for India's growth.

Scope :

- 1) Only 2% of the total crops are processed in India
- 2) Availability - India is the 5th 2nd largest producer of fruits and vegetables in the world.
- 3) Increase in demand - due to rising middle class income, there is a shift in consumption patterns
- 4) Diversity - India has all 3 types of crops for processing - Kharif, Rabi and Zaid -

* Cattle population
* Total milk production
* Wastage
* Low farm realization

Good

Significance of food processing sector:

- 1) Growth in GDP: it can lead to increased income of farmers eg: dairy processing - Anand
- 2) Employment opportunity: it can promote forward and backward industrial development eg: honey products.
- 3) Nutritional security: processed foods can be fortified for combating vitamin deficiency eg: protein bars, biscuits etc
- 4) Improved shelf life: leading to longer storage and reduction in post harvest losses.
eg: Food Irradiation
- 5) Curb Regional imbalance due to better trade as shelf life increases.
- 6) Women empowerment: as women workforce is major engaged in agriculture, food processing will

be beneficial for them as well.

eg: 70% women workforce in agriculture.

⇒) Export potential: India can be a major exporter of processed food.
eg: khakra / Papad etc abroad.

challenges

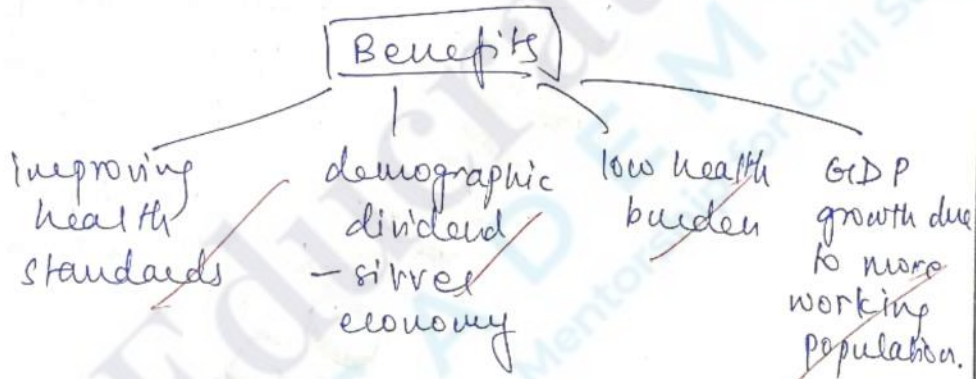
- forward and backward linkages are not developed
- low funding in this sector
- focus on primary processing (eg: grain to flour) rather than tertiary processing

(
Informal sector - 70%.

Government has taken various measures to promote food processing like Trifood initiative, Mega Food Park, scheme for formalisation of Food Processing units, PII etc. This will ensure better development of the sector for both income and nutritional security.

16. The increase in life expectancy in the country has led to newer health challenges in the community. What are those challenges and what steps need to be taken to meet them? (Answer in 250 words, 15 marks)

India has witnessed an increase in life expectancy of its population from earlier 30 years in 1950s to 70 yrs at present.



However, it has also created certain challenges for the nation.

- 1) Demographic Ageing: while India currently has an 8% aged population it is likely to increase in future due to life expectancy
- 2) low skill development means that

that increase in life expectancy is not contributing to GDP growth.

- 3) Increased disease burden - India has become diabetes capital of the world
- 4) Increasing population exceeding carrying capacity
eg: increasing encroachment on forests, wetlands
- 5) Increasing health burden and costs for citizens eg: out of pocket expenditure still accounts for 40% of the health expenses. } Good
- 6) Increasing government expenditure and fiscal deficit
eg: NFIA, limbs for increasing population.

Measures needed to reduce negative impacts:

↳ Skill development - focus on employability

- of older people as well eg: Silver economy
- 2) Reduce pension burden by rationalisation
eg: New Pension scheme
 - 3) Reducing health burden through
insurance facility
eg: Pradhan Mantri Bhawan
 - 4) Curbing population growth to prevent
excessive exploitation
eg: 2 child policy of Assam.
 - 5) Rationalise government schemes
to reduce fiscal deficit
eg: schemes to be made self
sustainable via social welfare
cell.

Increase in life expectancy is a
major milestone for India's National
Health Policy. It should be
managed along with skill development
and education to ensure development.

17. Economic growth in the recent past has been led by increase in labour activity." Explain this statement. Suggest the growth pattern that will lead to creation of more jobs without compromising labour productivity. (Answer in 250 words, 15 marks)

India is the world's 5th
largest economy in the world.
today's time. This growth has
been led by increase in labour
activity.

1) Increase in factories: leading
to more employment, creating
more capital in labour's hand.

2) Infrastructure development guided
by labour activity
e.g. Bhakra Nangal dam.

3) Increase in MSE sector
2nd largest employer
contributing to 56% of
manufacturing GDP.

Issues in labour activity

Informal sector -
 10% sector
 is unorganised

low wages and low
 social security
 benefits

low skilled jobs

complex labour laws

Growth pattern that will create more jobs without compromising labour productivity!

1) Improvement in service sector
 - service sector employment should be increased from 34% to more than 50%.

2) Shift from agriculture to food processing - it can curb the issue of disguised unemployment in India.

3) Focus on innovation economy

eg: Investing in R&D - National Research Foundation.

4) Focus on manufacturing sector

eg: Atmanirbhar Bharat
PLI scheme

Also focusing
on Gov
economy

5) Focus on creative economy

eg: artists

6) Employment of women can
contribute to increase of 27%
in GDP.

India is a welfare
economy and should develop
more opportunities along with
labour productivity through a
capability approach.

18. Do you think India will meet 50 percent of its energy needs from renewable energy by 2030? Justify your answer. How will the shift of subsidies from fossil fuels to renewables help achieve the above objective? Explain (Answer in 250 words, 15 marks)

India's Panchsanskrit goal includes the goal of achieving 50% of its energy needs from renewable energy by 2030.

It is possible for India to achieve this goal

1) India has already achieved renewable energy capacity target of 400 GW

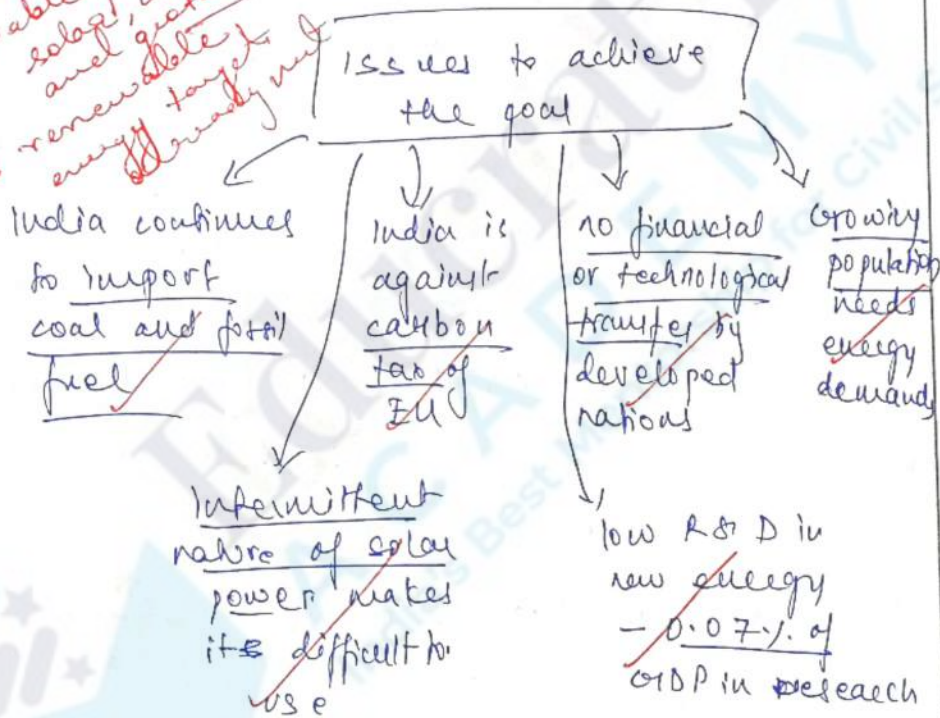
2) There is a reduction in use of fossil fuel in various areas
eg: KUSUM - solar power

3) New forms of energy being researched and developed
eg: Lakshwadeep's OTFC

4) State participation : states have to follow the norm of Renewable Purchase Obligation

5) Private sector participation - cap in energy consumption eg: PAT scheme.

- * RBI notification
- * Renewable purchase obligation
- * solar, wind and geothermal energy targets
- * 40% renewable energy target
- * already met



Nonetheless, India can achieve the goal easily as India has already taken multiple steps towards the aim.

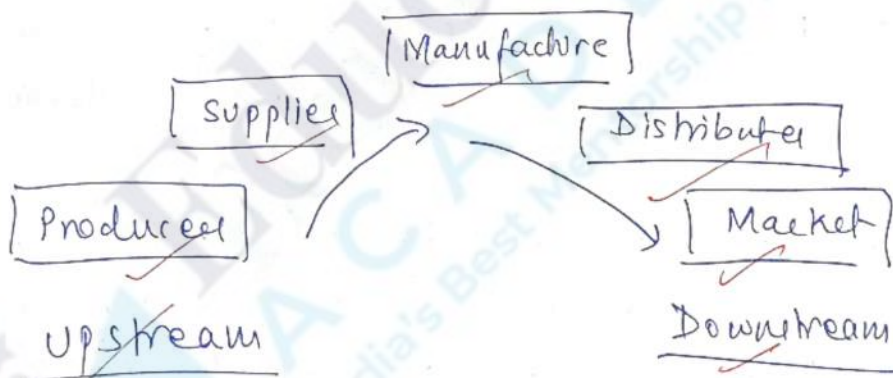
Shift of subsidies from fossil fuels to renewables can help in the following ways:

- 1) Decreased cost of renewable energy will make it more viable for consumers.
- 2) Negative subsidy on fossil fuel will make it further unattractive eg: coal cess.
- 3) Incentives to private sector using renewable will lead to massive market of renewable energy
eg: Promotion OTEC for thermal plants.
- 4) will lead to decentralised use of renewable fuel eg: rooftop solar panels.
- 5) States will further the use of renewables if they are subsidised
eg: Reform linked incentive schemes.

India will meet its Voluntary Determined Contribution goals by 2030 and will move on towards becoming a net zero emitter by 2070.

19. What are the main bottlenecks in upstream and downstream process of marketing of agricultural products in India? (Answer in 250 words, 15 marks)

In India, major portion of the population are employed in agriculture — almost 52%. While India has shifted from "ship to mouth" to "farm to fork", upstream and downstream bottlenecks cause issues.



Major bottlenecks :

1) High transport cost : cost of transporting agricultural produce leads to reducing in marketing beyond state borders.

- 2) Low shelf life due to low food processing
- only 2% crops turn into processed goods
- 3) Bureaucratic hurdles : preventing marketing of agriculture products
eg: APMC
- 4) Lack of storage facilities - low number of godowns and warehouses lead to distress sales
- 5) Post harvest losses - 10% of crops are lost in this leading to reduction in marketing produce
- 6) De facto nationalisation - government purchases almost 70% of grains for PDS and food schemes, leading to crowding out of private.
- 7) Cartelisation by distributors leading to artificial scarcity and food inflation
- 8) Cold storage facilities are lacking

preventing transportation.

Measures needed:

- 1) Better storage: eg: government launching world's biggest grain storage programme
- 2) Improving shelf life eg: food irradiation
- 3) Easy transactions eg: e-negotiable warehousing receipts
- 4) Shankar Guru committee - allow sale of agriculture produce outside APMC
- 5) create a single national market
e-Nam

Food security can be maintained through better marketing of agriculture produce. It will help achieve the goal of Doubling Farmers Income.

20. What is Integrated Farming System? How is it helpful to small and marginal farmers in India? (Answer in 250 words, 15 marks)

Integrated Farming System is a form of agriculture in which agriculture, animal rearing and other activities are taken simultaneously to improve income realisation.

In India, 85% farmers are small and marginal. This will help them in multiple ways:

1) Increase income: multiple crops grown simultaneously reduces risk of crop failure.

2) Employment: since agriculture offers seasonal employment, livestock can help in the rest of the period.

3) Nutritional security: through not

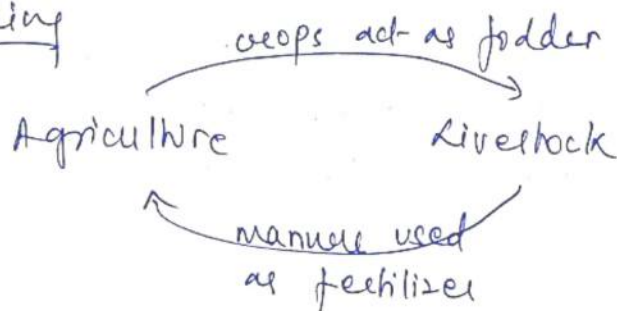
only cereals but milk, meat etc
eg: Animal Cooperatives

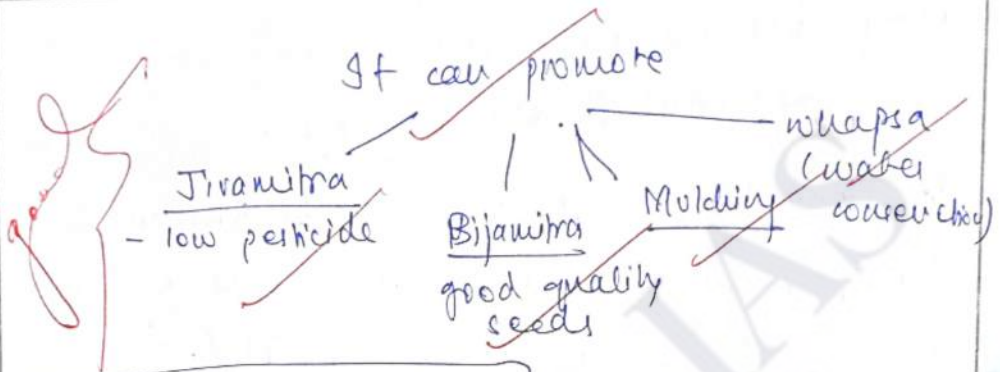
4) Women empowerment: Animal husbandry is a major source of income for women eg: 70%. employed in this sector are women

5) Lower costs: reduction in purchase of pesticide, fertilizer etc as animal manure, bones etc are used as fertilizers

6) Improves soil productivity as balanced application of natural fertilizers are promoted.

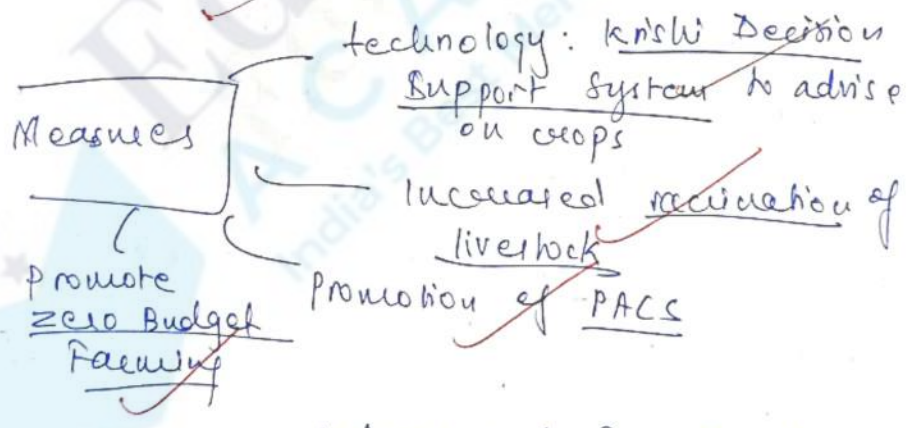
7) Self sufficiency - it can lead to Zero Effect Zero Defect Budget Farming





Issues related to it

- 1) Increased diseases among livestock
eg: lumpy skin disease
- 2) low access to credit due to lack of collateral
- 3) low awareness among farmers



Good

Integrated Farming is the way forward for sustainable development in India.