

PRELIMS EXCLUSIVE PROGRAMME

PRELIMS TEST SOLUTIONS

PEP 2020

CRACK PRELIMS IN ONE GO!

IASBABA.COM

PEP@IASBABA.COM



Q.1) Solution (d)

Silviculture: Silviculture is the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society such as wildlife habitat, timber, water resources, restoration, and recreation on a sustainable basis.

Pisciculture: Fish farming or pisciculture involves raising fish commercially in tanks or enclosures such as fish ponds, usually for food. It is the principal form of aquaculture.

Animal husbandry: Animal husbandry is the branch of agriculture concerned with animals that are raised for meat, fibre, milk, eggs, or other products. It includes day-to-day care, selective breeding and the raising of livestock.

Apiculture: "Apiculture is the scientific method of rearing honeybees. "The word 'apiculture' comes from the Latin word 'apis' meaning bee. So, apiculture or beekeeping is the care and management of honey bees for the production of honey and the wax.

Sericulture: Sericulture, or silk farming, is the cultivation of silkworms to produce silk. Although there are several commercial species of silkworms, Bombyx mori is the most widely used and intensively studied silkworm. Silk was believed to have first been produced in China as early as the Neolithic Period.

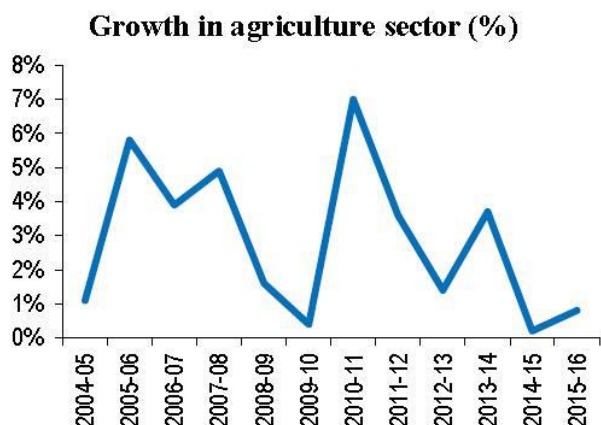
Farming: Farming is the act or process of working the ground, planting seeds, and growing edible plants. Farming is a great way to describe the lifestyle and work of people whose jobs are in the agriculture industry

Q.2) Solution (b)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	Incorrect	Incorrect
Agriculture sector employs around 50% of the total workforce in the country. Hence the largest employing sector.	Agriculture contributes nearly 16-17% to the total GDP of the nation.	The agricultural growth rate has seen a lot of volatility in the last decade. It has not increased gradually, but in fact stagnated at around 2.9% GR for the last five years.

The figure gives an idea about GR of agriculture in India:



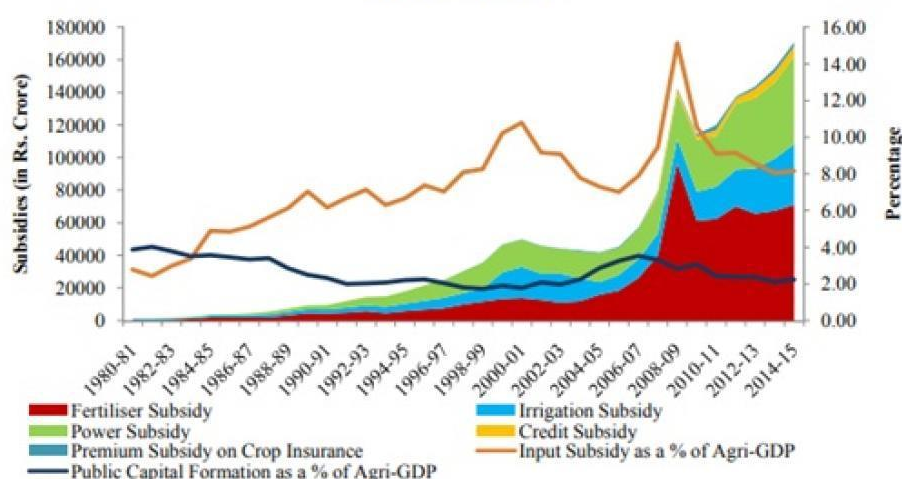
Sources: Agricultural Statistics at a Glance 2015, Ministry of Agriculture; PRS.

Q.3) Solution (a)

Statement 1	Statement 2	Statement 3
Correct	Incorrect	Incorrect
Agriculture input subsidy is the second biggest expenditure after food subsidy. Allocations for fertilizer subsidy have been increasing at an annual rate of 11.4% between 2000 and 2016.	Government subsidies to agriculture sector includes subsidies in fertilizers, power, irrigation, credit etc.	Increasing subsidy bill will lead to reduced capital investment in the agriculture sector. This would amount to increasing crowding out effect with respect to investments.

Graph to display the increase in government subsidies to agriculture sector

Figure 1: Structure and Trend of Input Subsidies in Indian Agriculture vis-à-vis Trend in Public Investment



Q.4) Solution (c)

Negative impacts of increasing agricultural subsidies in India include:

- Rising agricultural input subsidies has made it **difficult to keep fiscal and revenue deficit under the control**. This has further created fiscal imbalances in the country.
- Increased focus on subsidy support to farmers has **shifted the attention away from the knowledge disbursement and technological application**. Hence a shift away from agri-extension
- Similarly, due to **less focus on agri-extension, lesser investment is made on the R&D** in agriculture sector
- Neglect of simple pricing economic principles while subsidising has led to wastage of precious resources
- India has been at the cross-fires of developed countries and the WTO, as the latter requires India to reduce the input subsidies given to farmers
- Inefficient usage of the chemical fertilizers and pesticides **would degrade the quality of soil in the longer run**. The water runoff also creates eutrophication in the nearby water bodies.
- Moreover, subsidies have not actually reached the real beneficiaries as most of it gets consumed by the richer farmers.
- Increased subsidy has supported agricultural production positively, which in turn has increased the yield. But due to insufficient storage capacity, food grains are wasted in the warehouses.

Q.5) Solution (d)

Reasons for low productivity in Indian agriculture are:

- Population Pressure
- Uneconomic Holdings
- Uncertain Monsoons and Inadequate Irrigation Facilities
- Subsistence Nature of Farming
- Decline in Soil Fertility
- **Lack of Support Services and marketing**
- Poor Organisation of Resources and Lack of Entrepreneurship
- **Market volatility**
- **Skewed MSP prices**
- **Policy paralysis**

Q.6) Solution (d)

Outcome 1	Outcome 2	Outcome 3	Outcome 4
Correct	Incorrect	Correct	Correct
Volatility in the amount of rainfall has created rural distress, as farmers are unsure of how much rainfall is expected during the cropping season. If crops fail, farmers are forced to move out in search of new livelihood opportunities.	There is no certainty in this monsoon based/dependent irrigation potential of a given year. This is due to low coverage of artificial irrigation facilities in the country.	A frequent droughts/deficient year in the country has led to large scale crop failures, exacerbating the rural-farmer distress.	Due to increase in frequency of crop failures, agricultural NPAs are on the rise.

Q.7) Solution (d)

Factor 1	Factor 2	Factor 3	Factor 4
Correct	Correct	Correct	Correct
Differences in intensity and length of monsoon periods in different parts of the country have created different cropping patterns	Irrigation facilities are not equally distributed across the country. While Punjab and Haryana has well networked system, Bihar lacks	The technical capability and skill sets of the farmers also vary widely across the country. Some are mechanised farmers,	Soil fertility is not the same across the nation, hence productivity levels too vary accordingly.

and levels of productivity in the country.	the same. Hence the change in levels of productivity.	while some are subsistence level farmers.	
--	---	---	--

Q.8) Solution (d)

Statement 1	Statement 2
Incorrect	Incorrect
Government of India aims to double farmers' income by the year 2022, not 2025.	Ashok Dalwai committee has recommended the steps to realise this vision of the government regarding doubling farmers' incomes.

Q.9) Solution (a)

Agriculture Census in India is conducted at five-year intervals to collect data on structural aspects of farm holdings. It is carried out by the Ministry of Agriculture and Farmer welfare.

Highlights of the Census:

- As per the latest data, more women are participating in the farming sector with an overall increase of small and medium land holding farmers and tillers.
- The percentage of female operational land holders increased from 12.79% in 2010-11 to 13.87% in 2015-16.
- It also showed a decline of 1.53% of total operated area to 157.14 million hectare as compared to 159.59 million ha in 2010-11 data. And in terms of operated area women participation increased from previous 10.36% to 11.57%
- By the number of people tilling the land, Uttar Pradesh topped the chart followed by Bihar and Maharashtra.
- Uttar Pradesh had 23.82 million (**16%**) farmers and tillers in 2015-16, followed by Bihar at 16.41 million and Maharashtra with 14.71 million.
- **In terms of total operated area: Rajasthan** comes first followed by **Maharashtra, Uttar Pradesh, Madhya Pradesh and Karnataka.**
- The total operational holdings aggregate to over **146 million** hectares an increase of 5.33 per cent from **138 million** in 2010-11.
- Among the states, the highest increase in number of operational holdings is topped by **Madhya Pradesh** followed by **Andhra Pradesh, Rajasthan, Kerala, Meghalaya, Karnataka and Nagaland.**
- **Goa** has witnessed the sharpest fall and **Manipur** had the lowest in number of operational holdings.
- In terms of area **14 states** account for **88.08%** of operational holdings. They are: West Bengal, Madhya Pradesh, Andhra Pradesh, Maharashtra, Uttar Pradesh,

Odisha, Rajasthan, Tamil Nadu, Telangana, Karnataka, Bihar, Chhattisgarh, Gujarat, Kerala.

- Around **86.21%** of India's cultivated and uncultivated land is under the small and marginal farmers holding **less than 2 hectares** of land. They have a share of **47.34%** from previous have 44.31% five years earlier.
- Comparing this to the farmers holding **10 hectares and more** account for just **0.57%** and had a share of **9.04** per cent in the operated area.
- Semi-medium and medium operational holdings (2-10 ha) in 2015-16 were **13.22** per cent, with 43.61 per cent of operated area.
- The **average size** of agriculture **landholding** declined to **1.08 hectare in 2015-16** from 1.15 hectare in 2010-11.
- The individual, joint and institutional holdings have shown growth of 5.04%, 7.07% and 10.88%, respectively.
- The average size of farm holding was the highest in Nagaland at 5.06 hectares and the lowest in Kerala at 0.18 hectare.

Q.10) Solution (c)

PM Kisan Samman Nidhi (PM-KISAN)

It is a Central Sector Scheme, aims to supplement the financial needs of the Small and Marginal Farmers in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income at the end of each crop cycle.

This would also protect them from falling in the clutches of moneylenders for meeting such expenses and ensure their continuance in the farming activities.

The number of eligible SMFs under the scheme has been estimated on the basis of projection of Agricultural Census 2015-16 data for 2018-19. The projected number of holding of SMFs landholder farmer families for FY 2019-20 is 14.5 crore.

Under the Scheme, a direct payment of Rs. 6000 per year will be transferred in three equal instalments of Rs. 2000 every four months into the Aadhar ceded bank accounts **of eligible landholding SMFs families** (not every farmer). However, there is no rule that money credited should be used only for input purchase.

Q.11) Solution (c)

The premiums charged are very less, which could be seen in the table below. Moreover, charging higher premiums is a disadvantage to the farmers, hence cannot be a reason for their increased safety.

S.No	Season	Crops	Maximum Insurance charges payable by farmer (% of Sum Insured)
1	Kharif	Food & Oilseeds crops (all cereals, millets, & oilseeds, pulses)	2.0% of SI or Actuarial rate, whichever is less
2	Rabi	Food & Oilseeds crops (all cereals, millets, & oilseeds, pulses)	1.5% of SI or Actuarial rate, whichever is less
3	Kharif & Rabi	Annual Commercial / Annual Horticultural crops	5% of SI or Actuarial rate, whichever is less

Actuarial rate is an estimate of the expected value of future loss. Usually, the future loss experience is predicted on the basis of historical loss experience and the consideration of the risk involved.

- The subsidy is divided equally between the state and Central government.
- The balance premium will be paid by the government to provide the complete insured amount to farmers against crop loss on account of natural calamities.
- There will be one insurance company for the entire state.
- The scheme also provides for coverage of post-harvest losses.
- Remote sensing will be used to reduce the number of crops cutting experiments.
- The scheme covers loanee farmers (those who have availed of institutional loans through Kisan Credit Cards etc.), non-loanee farmers (those who avail of insurance cover on a voluntary basis), sharecroppers and tenant farmers (those who farm on rented land). PMFBY is compulsory for loanee farmers.
- The use of technology like smart phones will be used to capture and upload data of crop cutting to reduce the delays in claim payment to farmers.
- There is no upper limit on government subsidy for actuarial premium.
- 25 per cent of the likely claim will be settled directly on farmers account.
- The scheme will also cover localised crop losses like hailstones.

Q.12) Solution (b)

Statement 1	Statement 2	Statement 3	Statement 4
Correct	Incorrect	Correct	Incorrect
FLW creates a moral hazard, where farmers tend to delay their loan repayment, in speculation of having a loan waiver. This	FLW creates crowding out effect, as large amount of resources are meant to waive off the loans rather than for investment in	With lesser credibility of farmer's loan repayment, banks try to avoid lending them loans in the first place.	Farm loan waiver has a de-stressing effect on the farmers, but it's a positive impact not an ill impact on farmers.

impacts the credit culture and moral attitude among the bankers and farmers respectively.	productive usage. It would also leave banks with reduced resources for lending.		
---	---	--	--

Q.13) Solution (b)

The government announced to double farm incomes by 2022 in its Union Budget 2016-17.

In line with this it appointed an 8-member inter-ministerial committee headed by Ashok Dalwai, to consider major reforms in agriculture sector.

The recommendations of the committee are:

- **Demand Driven Agricultural Logistics System** for post-production operations such as produce aggregation, transportation, warehousing, etc.
- **Developing Hub and Spoke System** at back-end as well as front-end to facilitate and promote a new market architecture so that all kinds of farmers can avail services that empowers them to physically connect and supply to any market in the country of their choice.
- **Marketing Intelligence System** to provide demand led decision making support system - forecasting system for agricultural produce demand and supply, and crop area estimation to aid price stabilisation and risk management.
- **Agricultural Value System (AVS)** as an integration of the supply chain and to drive market led value system – District level, State level and National Level Value-System Platforms to promote individual value chains to integrate into a sector-wide supply chain.
- **Farmer-centric National Agricultural Marketing System** by restructuring for a new market architecture, consisting of Primary Retail Agriculture Markets (PRAMs/GrAMs numbering 22,000) and Primary Wholesale Agricultural Markets (APMCs/APLMs- other markets numbering around 10,000), as also secondary & tertiary agricultural markets, all of which are networked by online platforms to facilitate a pan-India market access; as also integrating the domestic market with export market by considering the latter as a targeted market activity and not just an add-on.
- **Promoting Sustainable Agriculture** – Climate Resilient Agriculture, Rainfed Agriculture, Conservation Agriculture, Ecology Farming, Watershed Management System, Integrated Farming System, Organic Farming, Agro-Climatic Regional Planning, Agricultural Resources Management and Micro-Level Planning, etc.
- **Effective Input Management achieving Resource-Use-Efficiency (RUE) and Total Factor Productivity (TFP)** – Water, soil, fertilisers, seeds, labour-farm mechanisation,

credit and precision farming, so as to reduce farm losses, while ensuring sustainable and eco-friendly practices.

- **Enhancing Production through Productivity**– to achieve & sustain higher production out of less and release land and water resources to diversify into higher value farming for enhanced income.
- **Farm Linked Activities** to include secondary agriculture that utilises local manpower and biological resource in the vicinity of farms. These can also comprise manufacturing and services activities of KVIC (Khadi and Village Industries Commission) and MSME (Micro, Small and Medium Enterprises) scale, for promoting near-farm and off-farm income generating opportunities as well as to facilitate more of the farm produce to capture more of the market value.
- **Agricultural Risk Assessment and Management** including drought management, demand & price forecast, weather forecast, management of biotic stress including vertebrate pests, access to credit among farmers for farming operations; providing long term credit, post-production finance to preventing distress sale by farmers, and crop & animal risk management through insurance.
- **Empowering Farmers** through Agricultural Extension, Knowledge Diffusion and Skill Development.
- **Research & Development and ICT** designed to support the Doubling of Farmers' Income strategy in the short run, and help accelerate the pace of income enhancement on a sustainable basis in the long run.
- **Structural and Governance Reforms in Agriculture**, including building a database of farmers, facilitating farmer & produce mobilisation, institutional mechanism at district, state & national levels for coordination & convergence, digital monitoring dashboard at district, state & national level for seamless & real-time monitoring of field delivery, utilising Panchayat Raj Institutions, and farm income measurement as key delivery channels for transparent and inclusive development.
- It also calls for **paying special attention to non-timber forest produce (NTFP)** to support tribal farming communities to capture higher value and non-farm incomes therefrom.

Q.14) Solution (a)

National Agriculture Market (eNAM) is a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities. By this farmer can sell his products at any mandi irrespective of his geographical location. It's meant to promote uniformity in agriculture marketing by streamlining of procedures across the integrated markets, removing information asymmetry between buyers and sellers and promoting real time price discovery based on actual demand and supply.

A Producer Organisation (PO) is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural artisans, craftsmen. A PO can be a producer company, a cooperative society or any other legal form which provides for sharing of profits/benefits among the members. It gives stronger bargaining power with the APMCs, hence weaken the say of the latter.

Essential commodities Act is deterring investment in agricultural marketing (because it imposes stocking limits). Agriculture, unlike manufacturing, is seasonal. At harvest, supply is maximum, and consequently, prices are at their lowest. If farmers (or traders) store produce, supply is smoother and price volatility reduces. However, the ECA effectively criminalises this supply smoothing through storage of agricultural goods. APMCs play a major role in it.

Gramin Agriculture Markets also GrAM is a village level markets in India. There are 22,000 such rural agricultural markets, which help farmers in selling their produce locally. These local markets, GrAMs, will be linked with the electronic farmer marketplace, eNAMs to sell their produce nationally.

Q.15) Solution (b)

Objectives of the Agriculture Export Policy are as under:

- To double agricultural exports from present **~US\$ 30+ Billion to ~US\$ 60+ Billion by 2022 and reach US\$ 100 Billion in the next few years** thereafter, with a stable trade policy regime.
- To **double farmers' incomes**
- To diversify our export basket, destinations and boost high value- and value-added agricultural exports including focus on perishables.
- To promote novel, indigenous, organic, ethnic, traditional and non-traditional Agri products exports.
- To provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.
- To strive to double India's share in world agri exports by integrating with global value chain at the earliest.
- Enable farmers to get benefit of export opportunities in overseas market.

UAE and Saudi Arabia has decided to use India as a base to address their food security concerns.

Q.16) Solution (d)

Statement 1	Statement 2	Statement 3	Statement 4
-------------	-------------	-------------	-------------

Correct	Correct	Correct	Correct
As India is one of the largest producers of foodgrains, there lies excess buffer stocks with the FCI. This is due to the policy of assured government procurement of the food grains from the farmers.	Though FCI has excess food grains, it does not have adequate storage facilities like cold storage chains and warehouses.	Corruption in the distribution processes of FCI is wide spread, majorly because of low levels of accountability.	FCI's procurement, storage and distribution through PDS network is a high cost involving activity. Hence it increases the fiscal burden on the government.

Q.17) Solution (a)

Mariculture is a specialised branch of aquaculture involving the cultivation of economically important marine plants and animals in the sea or any other water body having tidal influence. It is practiced in the territorial waters off the coastline, and **not in the deep oceans**.

It involves three phases using the following types of facilities in land or in the sea and distinct skill sets –

- Hatcheries involve land-based facilities to rear broodstock and produce seeds.
- Nurseries involve rearing of juveniles to a size conducive to stocking in the grow-out systems which are land based or inshore.
- Grow-out systems include culture of marine plants and animals in the sea, water bodies with tidal influence and land-based re-circulating systems using seawater.



Q.18) Solution (a)

Statement 1	Statement 2
Correct	Incorrect
<p>Operation Greens seeks to stabilize the supply of Tomato, Onion and Potato (TOP) crops and to ensure availability of TOP crops throughout the country round the year without price volatility.</p> <p>The Ministry of Food Processing Industries has launched the scheme. NAFED will be the Nodal Agency to implement price stabilisation measures.</p>	<p>China is the largest horticulture producing country in the world. India is only next to it, holding second position.</p>

Q.19) Solution (c)

Scheme	Description
Pradhan Mantri Fasal Bima Yojana	PMFBY is an actuarial premium based crop insurance scheme under which farmer has to pay maximum premium of 2% for Kharif, 1.5% for Rabi

	food & oilseed crops and 5% for annual commercial/horticultural crops and remaining part of the actuarial/bidded premium is shared equally by the Centre and State Government.
Paramparagat Krishi Vikas Yojana	Paramparagat Krishi Vikas Yojana is an elaborated component of Soil Health Management (SHM) of major project National Mission of Sustainable Agriculture (NMSA). Under PKVY Organic farming is promoted through adoption of organic village by cluster approach and PGS certification.
Pradhan Mantri Vaya Vandana Yojana	Pradhan Mantri Vaya Vandana Yojana (PMVVY) is a Pension Scheme announced by the Government of India exclusively for the senior citizens aged 60 years and above
Pradhan Mantri Matsya Sampada Yojana	PMMSY aims to establish a robust fisheries management framework and check gaps in the value chain.
Innovation in Science Pursuit for Inspired Research (INSPIRE)	Department of Science & Technology (DST) has developed an innovative programme named Innovation in Science Pursuit for Inspired Research (INSPIRE) to attract talent to the excitement and study of science at an early age, and to help the country build the required critical resource pool for strengthening and expanding the S&T system and R&D base with a long term foresight.

Q.20) Solution (d)

The list of crops and their growing periods are given below

Agricultural Season	Crops
Kharif	The Kharif crop is the summer crop or monsoon crop in India. Kharif crops are usually sown with the beginning of the first rains in July, during the south-west monsoon season. Major Kharif crops of India include Millets (Bajra & Jowar), Cotton, Soyabean, Sugarcane, Turmeric, Paddy (Rice), Maize, Moong (Pulses), Groundnut, Red Chillies, etc.

Rabi	It is sown in October last and harvested in March April every year. Major Rabi crops in India include wheat, barley, oats (cereals), chickpea/gram (pulses), linseed, mustard (oilseeds) etc.
Zaid	Prominent examples are Muskmelon, Watermelon, Vegetables of cucurbitaceae family such as bitter gourd, pumpkin, ridged gourd etc.

Q.21) Solution (d)

Statement 2 is incorrect because majority of people were ready for land reforms as most of the people in the post-Independence era were poor landless labourers. It was only a small minority of landlords, that opposed the land reforms.

Some of the major causes for failure of land reforms in India are:

Reasons for the Failure of Land Reforms

- **Lack of Political Will:** Under the pressure and directions of large farmers govts were not interested in implementing the legislation enacted.
- **Land as a symbol of social prestige in India:** People have emotional attachments with the land in India and it is not considered merely an economic asset unlike in other countries.
- **Dearth of Land Records:** The reporting system of land records is irregular and there is no systematic review of progress at periodic intervals, sometimes even wrong record with mala-fide motives are retained
- **Due to the transfer of land to family members:** In order to circumvent the ceiling laws zamindars transferred land to their family members.
- **Indifference attitude of Bureaucracy:** Lack of political will and indifference attitude of bureaucracy both are interlinked with each other. Bureaucracy has tried to play safe by aligning itself with large landlords.
- **Shortfalls in the Ceiling Laws:** Levels of ceiling among different states and within different areas of the same state differed noticeably, which created confusions and frequent disputes.

Q.22) Solution (d)

Statement 1	Statement 2	Statement 3
Correct	Correct	Correct
Because green revolution was to be practiced on a large undivided lands so as to get the maximum results.	PL480 scheme which India resorted to, import food grains from USA was obstructing India from having an independent	The new breeds of Rice were first successfully experimented in Philippines, while in the case of Wheat, it was done in Mexico. These

	foreign policy during the cold war era.	inspired the Indian green revolution.
--	---	---------------------------------------

Q.23) Solution (b)

Chemical pesticides, fertilizers and weedicides were the major component of the Green revolution. Green revolution also emphasised on the improved methods of distribution and marketing especially when new crops had to be accepted by the people.

However, the concept of micro-irrigation is of a recent origin, hence it has got nothing to do with green revolution. Green revolution focuses on canal and flood irrigation methods to improve the crop productivity.

Q.24) Solution (a)

Statement 1	Statement 2	Statement 3
Incorrect	Incorrect	Correct
Though one can say that green revolution brought food security in the country as India no longer needed any food imports. But it cannot be said the same with regard to nutritional security. Nutritional security is about having balanced diet, but green revolution focused only on two crops: rice and wheat.	Green revolution has not led to inclusive growth as it has prevented further land reforms and rich farmers have become richer and poor farmers poorer.	The large-scale use of chemical fertilizers and pesticides led to bio-accumulation. Bioaccumulation is the gradual accumulation of substances, such as pesticides, or other chemicals in an organism.

Q.25) Solution (a)

Cropping pattern refers to proportion of area under different crops at different points of time. It also indicates the time and spatial arrangement or sequence of crops and / or fallow in a particular land area.

Factors that decide the cropping pattern of that area are:

- Landform and altitude: decide what crops can be grown for example what can be grown in plains cannot be done on hill slopes and in high altitudes (temperature variance)

- Land ownership: the amount of land available decides the choice of crops. For eg., commercial crops need large estates of land.
- Food culture of that region influences what crops are required to be grown in that region. Eg; paddy in south India and wheat in north India
- Mechanisation is also very important determinant of cropping pattern. Presence of large estates of promote mechanisation of agriculture as it allows to attain economies of scale.
- Agricultural extension is another way that decides which crop is good and productive in a given region.

Q.26) Solution (a)

- **Statement 1 is correct:** In mixed crop – livestock farming, all the required inputs like fertilizers and pesticides are readily available in the same piece of land. The excreta of livestock can very well be used in the farming. This is promoted today in the form of zero budget natural farming.
- **Statement 2 is correct:** The nationwide per-capita availability of milk also rose from 225 grams per day in 2001-02, to 375 gm/day in 2017-18. Whereas the global per capita availability is around 229 gm/day
- **Statement 3 is correct:** Piggery is majorly promoted in the tribal areas of Northeast. It is majorly promoted there because pork consumption is a part of the tribal culture, but is not very common in the rest of India due to various cultural and religious reasons.
- **Statement 4 is incorrect:** as poultry is one of the sectors that releases large amount of greenhouse gases, especially methane (CH₄).

Q.27) Solution (a)

Minimum Support Price (MSP) is a form of market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices. The minimum support prices are announced by the Government of India at the beginning of the sowing season for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP).

Statement 1 is incorrect: The final decision on the MSP is taken by the Cabinet Committee on Economic Affairs (CCEA) based on the recommendations of the CACP.

Statement 2 is incorrect: Government announces minimum support prices (MSPs) for 22 mandated crops and fair and remunerative price (FRP) for sugarcane. The mandated crops are 14 crops of the kharif season, 6 rabi crops and two other commercial crops. In addition,

the MSPs of toria and de-husked coconut are fixed on the basis of the MSPs of rapeseed/mustard and copra, respectively.

The list of crops are as follows.

- Cereals (7) - paddy, wheat, barley, jowar, bajra, maize and ragi
- Pulses (5) - gram, arhar/tur, moong, urad and lentil
- Oilseeds (8) - groundnut, rapeseed/mustard, toria, soyabean, sunflower seed, sesamum, safflower seed and nigerseed
- Raw cotton
- Raw jute
- Copra
- De-husked coconut
- Sugarcane (Fair and remunerative price)
- Virginia flu cured (VFC) tobacco

Statement 3 is correct: as MSP supported crops are most grown crops. Hence MSP plays a major role in influencing the cropping pattern of a region.

Q.28) Solution (b)

Respective areas of study of mentioned committees

- Meena kumari committee: Deep Sea Fishing
- Shanta kumar Committee: Reforms in Food Corporation of India and Food security
- Vijay Kelkar committee: Task Force on Direct & Indirect Taxes and Evaluation Public-Private-Partnership model in India
- Rangarajan committee: Assessment of Poverty line for India

Q.29) Solution (d)

Statement 1	Statement 2	Statement 3
Incorrect	Incorrect	Incorrect
Food subsidy in the country takes the largest portion of the country's subsidy budget. While farm input subsidies come next to the food subsidy bill.	Input subsidies on fertilizers, irrigation bills etc would be an example of indirect subsidy. If direct cash payment is made to the farmer, then it would be considered as the form of direct subsidy.	PM KISAN yojana is a cash incentivization scheme where every eligible farmer gets 6000 rupees annually. This is a form of direct subsidy.

Q.30) Solution (c)

Statement 1 is correct because indirect agricultural subsidies like fertilizer subsidy, power subsidy etc would play a great supporting role in enhancing the productivity of the crops.

Statement 2 is correct as farm loan waivers indirectly supports that finance of the farmers, so can be considered as indirect subsidy. It cannot be considered as direct subsidy because they are not receiving any direct cash transfer under this process.

Q.31) Solution (d)

Statement 1	Statement 1	Statement 1	Statement 1
Correct	Correct	Correct	Correct
Food security is defined as the availability of food and one's access to it. A household is considered food secure when its occupants do not live in hunger or fear of starvation. It includes Food safety, availability and access.	It is true that whenever war occurs, first impact is seen in the form of food insecurity. Hence higher the chances of war, greater are the chances for food insecurity. Hence directly proportional.	The term food security includes food availability, food quality as well as balanced diet. Hence food security inherently satisfies nutritional security.	Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

Q.32) Solution (d)

Challenges to food security include:

- **Climate Change:** Higher temperatures and unreliable rainfall makes farming difficult. Climate change not only impacts crop but also livestock, forestry, fisheries and aquaculture, and can cause grave social and economic consequences in the form of reduced incomes, eroded livelihoods, trade disruption and adverse health impacts.
- Inadequate distribution of food through public distribution mechanisms (PDS i.e. Public Distribution System)
- Lack of access to remote areas: For the tribal communities, habitation in remote difficult terrains and practice of subsistence farming has led to significant economic backwardness.

- **Increase in rural-to-urban migration**, large proportion of informal workforce resulting in unplanned growth of slums which lack in the basic health and hygiene facilities, insufficient housing and increased food insecurity.
- **Biofuels**: The growth of the biofuel market has reduced the land used for growing food crops.
- Overpopulation, poverty, lack of education and gender inequality
- **Corruption**: Diverting the grains to open market to get better margin, selling poor quality grains at ration shops, irregular opening of the shops add to the issue of food insecurity.
- Deserving beneficiaries of the subsidy are excluded on the basis of non-ownership of below poverty line (BPL) status, as the criterion for identifying a household as BPL is arbitrary and varies from state to state.
- Conflict: Food can be used as a weapon, with enemies cutting off food supplies in order to gain ground. Crops can also be destroyed during the conflict.
- Unmonitored nutrition programmes: Although a number of programmes with improving nutrition as their main component are planned in the country but these are not properly implemented.
- Lack of coherent food and nutrition policies along with the absence of inter-sectoral coordination between various ministries

Q.33) Solution (c)

World Food Programme	The World Food Programme (WFP) is the food-assistance branch of the United Nations and the world's largest humanitarian organization addressing hunger and promoting food security.
World Bank	The World Bank Group works with partners to build food systems that can feed everyone, everywhere, every day by improving food security, promoting 'nutrition-sensitive agriculture' and improving food safety. ... Strengthening safety nets to ensure that vulnerable families have access to food and water.
International Maritime Organisation (not related to food security)	The IMO's primary purpose is to develop and maintain a comprehensive regulatory framework for shipping and its remit today includes safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping.
International Fund for Agricultural Development	It is an international financial institution and a specialised agency of the United Nations that works to address poverty and hunger in rural areas of developing countries.

Q.34) Solution (b)

Statement 1	Statement 2	Statement 3
Incorrect	Correct	Correct
NMOOP aims to enhance the domestic production of the oilseeds and palm oil. Also, to reduce the import of edible oil (not crude oil) from abroad.	The Mission was launched to converge & synergize all the efforts through integration of existing programs & address the problems and bridge the gaps through appropriate programs in mission mode to ensure adequate, appropriate, timely & concurrent action to make coconut farming competitive & to ensures reasonable returns.	Accelerated Maize development program is a scheme under Technology Mission on oilseeds and pulses, being implemented by the Ministry of Agriculture and Farmer welfare.

Q.35) Solution (b)

The Govt. of India launched Technology Mission on Cotton in February 2000. The objective of TMC was as under:

- To improve the yield and quality of cotton, particularly in respect of staple length, micronaire, strength, etc. through development of better cotton varieties as well as through improved seeds, and integrated water, nutrient and pest management technologies.
- To increase the income of the cotton growers by reducing the cost of cultivation as well as by increasing the yield per hectare through proper transfer of technology to the growers
- To improve the quality of processing of cotton, particularly in respect of trash, contamination, etc. by improving the infrastructure in the market yards for cotton and by modernizing the existing ginning & pressing factories and setting up new units.

TMC had four Mini Missions (MM) as under

- **Mini Mission I: Cotton Research & Technology Generation**
- **Mini Mission II: Transfer of Technology & Development**
- **Mini Mission III: Development of Market Infrastructure**
- **Mini Mission IV: Modernization / Setting up of new G&P factories.**

For MM-III & IV Ministry of Textiles was the nodal agency and The Cotton Corporation of India Ltd. (CCI) was the implementing agency.

Q.36) Solution (a)

Statement 1	Statement 2
Correct	Incorrect
The objective of the Saffron National Mission is to improve the overall production of saffron, enhancing quality of saffron, enhancement of research and extension capability and develop appropriate system for organized marketing for the growers. It aims to rejuvenate the saffron production in the Jammu and Kashmir region.	National Mission on Agricultural Extension is not about expanding the area under the agriculture but Mission on Agricultural Extension will focus on awareness creation and enhanced use of appropriate technologies in agriculture & allied sectors.

Q.37) Solution (d)

All the mentioned examples are correctly matched with the respective boxes.

The three boxes of WTO are explained below



<p>Green Box</p> <p>Subsidies that do not distort trade, or cause minimal disruption.</p> <p>No limit.</p>	<p>Amber Box</p> <p>Broad range of subsidies.</p> <p>Limited to 5% of agricultural production (10% for developing countries)*.</p>	<p>Blue Box</p> <p>Broad range of subsidies allowed but must be designed to minimise trade distortion</p> <p>No limit.</p>
---	---	---

Just relate each example with the information given in the boxes.

Q.38) Solution (d)

- Sale of harvested sugarcane is just an economic activity and has nothing to do with food processing. If the sugarcane is crushed and converted to sugar, then it would be considered as an activity under food processing sector.
- Similarly, production of paper from the wooden bark is not related to food sector. Food processing includes only those which are edible in nature.

List of food processed products are given below:

Materials	Processes	Processed food products
Beef, lamb, pork, poultry & fish	<ul style="list-style-type: none"> Slaughtering, cutting up, boning 	<ul style="list-style-type: none"> Frozen, refrigerated in bulk or retail packs
	<ul style="list-style-type: none"> Comminuting, fermentation, extrusion, drying 	<ul style="list-style-type: none"> Small goods such as salami, bologna, sausages, jerky, cured dried meat/fish products, surimi
	<ul style="list-style-type: none"> Cooking, pasteurization, sterilization, high pressure processing 	<ul style="list-style-type: none"> Ready to eat meal, meal components, luncheon or canned meat/fish products
Grains, cereal & legumes with may need dairy and other ingredients	<ul style="list-style-type: none"> Grinding, sifting, milling 	<ul style="list-style-type: none"> Flour, milled rice, oat bran/grain
	<ul style="list-style-type: none"> Rolling, steaming, puffing, drying, extrusion, frying 	<ul style="list-style-type: none"> Breakfast cereal, crispy snack foods, meat analogues
	<ul style="list-style-type: none"> Cooking, steaming, sterilization, baking, fermentation, kneading 	<ul style="list-style-type: none"> Baked goods e.g. cake, bread, ready to eat grains e.g. precooked rice, beer, wine other healthy grain beverages
Dairy products	<ul style="list-style-type: none"> Pasteurization, sterilization, separation, homogenization, high pressure processing, pulse electric field 	<ul style="list-style-type: none"> Liquid whole cream, skim and flavored cold pasteurize, pasteurized and UHT milks, cream
	<ul style="list-style-type: none"> Fermentation, agitation, shearing and mixing 	<ul style="list-style-type: none"> Yoghurt, cheese, butter, whipped cream
	<ul style="list-style-type: none"> Evaporation, sterilization, drying, separation 	<ul style="list-style-type: none"> Evaporated milk, condensed milk, milk powder, whey protein concentrate, whey, protein isolate
Fruits and vegetables	<ul style="list-style-type: none"> Crushing, maceration, vacuum concentration, pasteurization, UHT, high pressure processing, pulse electric field 	<ul style="list-style-type: none"> Various concentrates, juices and juice mixes
	<ul style="list-style-type: none"> Fermentation, picking, drying 	<ul style="list-style-type: none"> Kimchi, jams, dried and other form of pickled or preserved fruits and vegetables
	<ul style="list-style-type: none"> Freezing, sterilization 	<ul style="list-style-type: none"> Frozen and canned fruits and vegetables products
	<ul style="list-style-type: none"> Minimally processed 	<ul style="list-style-type: none"> Fresh produced

Q.39) Solution (c)

Social infrastructure	Types of social infrastructure include healthcare (hospitals), education (schools and universities), public facilities (community housing and prisons) and transportation (railways and roads).
Critical infrastructure	Security services from the police and military, transportation infrastructure such as roads and ports, utility infrastructures such

	as the power grid and telecommunication lines, and government facilities.
--	---

Q.40) Solution (b)

Statement 1 and 2 are correct as PPP model enables government to share the financial responsibility and also allows public finance such projects without much resistance. For e.g.: Toll collection over private build highways.

Statement 3 is incorrect because government and private parties share the risk of the project.

Statement 4 is incorrect as government has its own role in deciding about the plan, design aspects of the project. It is not left completely to the discretion of the private partner.

PPP advantages:

- Ensure the necessary investments into public sector and more effective public resources management;
- Ensure higher quality and timely provision of public services;
- Mostly investment projects are implemented in due terms and do not impose unforeseen public sectors extra expenditures;
- A private entity is granted the opportunity to obtain a long-term remuneration;
- Private sector expertise and experience are utilized in PPP projects implementation;
- Appropriate PPP project risks allocation enables to reduce the risk management expenditures;
- In many cases assets designed under PPP agreements could be classified off the public sector balance sheet.

Q.41) Solution (c)

Build Own Operate Transfer	Build–operate–transfer (BOT) or build–own–operate–transfer (BOOT) is a form of project financing, wherein a private entity receives a concession from the private or public sector to finance, design, construct, own, and operate a facility stated in the concession contract. The private party needs to transfer the property after the stipulated time.
Hybrid Annuity Model	Government would provide upfront around 40% of the project cost to developer to start the work and remaining 60% would be borne by the private player. Once the project is completed, the NHAI will collect toll and refund the private players in instalments for 15-20 years. This implies that the toll collection job will be done by NHAI.

Toll Operate and Transfer	Toll Operate and Transfer (TOT) model under which the Public funded projects operational for two years shall be put to bid wherein the right of collection and appropriation of fee shall be assigned for a pre-determined concession period (30 years) to Concessionaires (Developers/Investors) against upfront payment of a lump sum amount to NHAI. Operation and Maintenance (O&M) obligation of such projects shall be with the concessionaire till the completion of the concession period.
----------------------------------	--

Q.42) Solution (a)

Statement 3 is incorrect: UDAN scheme has been taking help from this VGF facility extended by **Ministry of Civil Aviation**.

Statement 1 is correct: Viability Gap Finance means a grant to support projects that are economically justified but not financially viable. It is done by providing a capital subsidy to attract the private sector players to participate in PPP projects that are otherwise financially unviable. Projects may not be commercially viable because of long gestation period and small revenue flows in future.

Statement 2 is correct: The usual grant amount given by Central Government is up to 20% of the total capital cost of the project. Funds for VGF will be provided from the government's budgetary allocation. Sometimes it is also provided by the statutory authority who owns the project asset. If the sponsoring Ministry/State Government/ statutory entity aims to provide assistance over and above the stipulated amount under VGF, it will be restricted to a further 20% of the total project cost.

Q.43) Solution (c)

Statement 1	Statement 2
Correct	Correct
Infrastructure Debt Funds (IDFs) are investment vehicles for channelizing investment into the infrastructure sector. They are sponsored by commercial banks and NBFCs in India in which domestic/offshore institutional investors, specially insurance and pension funds can invest through units and bonds issued by the IDFs.	An Infrastructure Investment Trust (InvITs) is like a mutual fund, which enables direct investment of small amounts of money from possible individual/institutional investors in infrastructure to earn a small portion of the income as return. InvITs work like mutual funds or real estate investment trusts (REITs) in features. InvITs can be treated as the modified version of REITs designed to suit the specific circumstances of the infrastructure sector.

Q.44) Solution (d)

Statement 1 is correct: Construction of hostels and running catering services in the hostels are done by private parties. This is an example of how PPP model can be implemented in education sector.

Statement 2 is correct: In Ayushman Bharat scheme, a patient can get treatment in various govt empanelled private hospitals.

Statement 3 is correct: Establishment of free Google WiFi hotspots in various railway stations across the country has helped in PPP led internet penetration in the country.

Q.45) Solution (d)

Statement 3 is incorrect as infrastructure status does not mean getting loans at zero interest rates.

The status enables a sector to avail infrastructure lending at:

- Easier terms and Projects can avail government tax-cuts and subsidies
- Longer maturity periods
- Enhanced limits
- Access to larger amounts of funds as external commercial borrowings (ECB)
- Access to longer tenor funds from insurance companies and pension funds and be eligible to borrow from India Infrastructure Financing Company Limited (IIFCL).

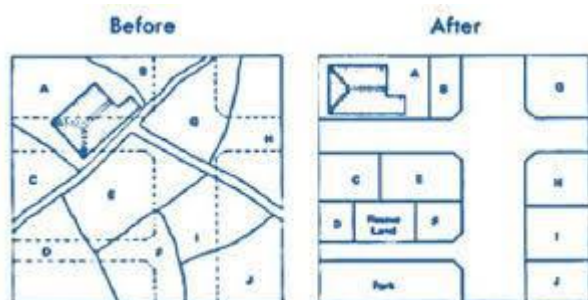
Q.46) Solution (d)

Statement 1 and 2 are incorrect: As Jal Vikas Marg runs on the Ganga river only. It covers the distance between Allahabad (not Varanasi) and Haldia

Statement 3 is incorrect as project has got the support of only World Bank.

The **Jal Marg Vikas Project (JMVP)** for capacity augmentation of navigation on National Waterway-1 (NW-1) is being implemented by the support of World Bank. The project will contribute in bringing down the logistics cost in the country and will provide an alternative mode of transport which will be environment friendly and cost effective. It is being implemented by the Inland Waterways Authority of India (Ministry of Shipping). It envisions, developing a navigable channel on the River Ganga, between Allahabad and Haldia (1620 Kms).

Q.47) Solution (b)



The picture is best defined by the **term 'Land Pooling'**. Under the land pooling mechanism, a group of land-owners pool their land and hand it over to government agency for the development of infrastructure projects. After the development of land, the agency redistributes the land after deducting some portion as compensation towards infrastructure costs. Generally, people who part with their land parcels get 60-70% of their holdings back after the infrastructure is developed on it. This is done to develop potential infrastructure to reduce the load on the existing congested and saturated areas.

Land Acquisition involves government purchasing private lands for various developmental needs. Here private parties do not get back their parted land. Instead they are paid some compensatory amount.

Real estate development or property development, is a business process, encompassing activities that range from the renovation and re-lease of existing buildings to the purchase of raw land and the sale of developed land or parcels to others.

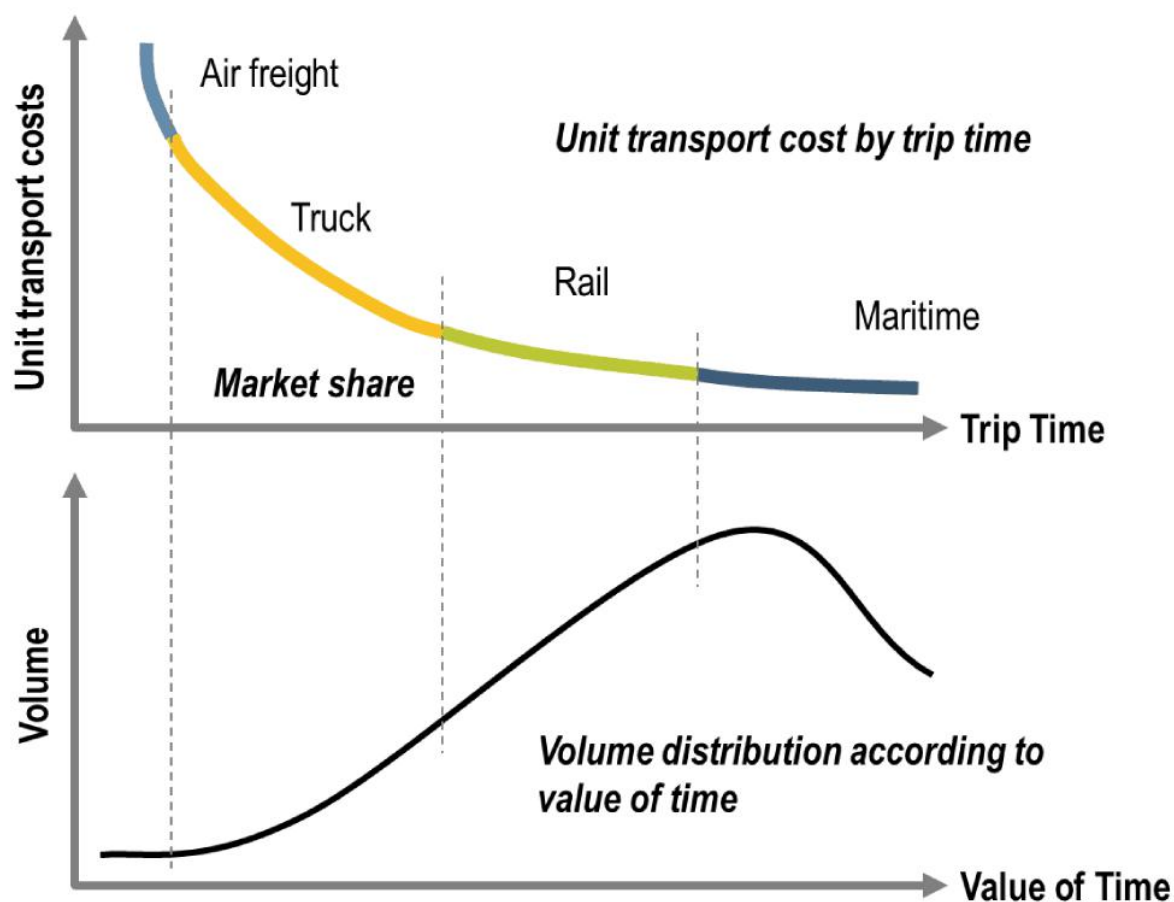
Urbanization refers to the population shift from rural areas to urban areas, the gradual increase in the proportion of people living in urban areas, and the ways in which each society adapts to this change. This is a demographic concept; hence the diagram does not explain the phenomenon of urbanisation.

Q.48) Solution (c)

Statement 1	Statement 2
Correct	Correct
Mumbai–Ahmedabad High Speed Rail Corridor is an under construction high-speed rail line connecting the cities of Ahmedabad, Gujarat, and India's economic hub Mumbai. JICA (JAPAN) agreed to fund 81% of the total project cost ₹88,087 crore (US\$12 billion), through a 50-year soft loan at an interest rate of 0.1% with a moratorium on repayments up to 15 years.	The Diamond Quadrilateral is a project of the Indian railways to establish a high-speed rail network in India. The Diamond Quadrilateral will connect the four mega cities in India, Delhi, Mumbai, Kolkata and Chennai, similar to the Golden Quadrilateral expressway system.

Q.49) Solution (d)

The below diagram explains the cost comparison of different modes of transport. Maritime transport/Ship transport is the cheapest, while air transport is the costliest.



Q.50) Solution (d)



The **Smart Cities Mission** is an innovative and new flagship initiative by the Government of India to drive economic growth and improve the quality of life of people by enabling local development and harnessing technology as a means to create smart outcomes for citizens.

The Mission will cover 100 cities and its duration will be five years from 2015 to 2020. The Mission is implemented by the Ministry of Urban Development (MoUD). SCM will be operated as a Centrally Sponsored Scheme (CSS) where in the central Government proposes to provide financial support up to Rs. 100 crore per city per year. An equal amount, on a matching basis, will have to be contributed by the State/ULB.

The strategic components of area-based development in the Smart Cities Mission are city improvement (**retrofitting**), city renewal (**redevelopment**) and city extension (**greenfield development**) plus a Pan-city initiative in which Smart Solutions or unique solutions (**sui-generis**) are applied covering larger parts of the city.

Area-based development will transform existing areas (**brownfield**), including slums, into better planned ones, thereby improving liveability of the whole City. New areas (Greenfield) will be developed around cities in order to accommodate the expanding population in urban areas.

Copyright © by IASbaba

All rights are reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission of IASbaba.

