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**1. In which of the following state has highest inland water resource in the form of brackish water?**

- a. Odisha**
- b. Tamandu
- c. Karnataka
- d. West Bengal
- e. Kerala

**This Question is about highest inland water resource in the form of brackish water.**

**brackish water:** - it is also known as brack water, this water comes naturally in the environment, salinity level of this water is more than fresh water and less than sea water, in many research it is said that it forms after mixing of sea water and fresh water.

**Odisha has largest area of brackish water, according to the data of 2018 total brackish water is 430 thousand hectares in Odisha.**

**2. Name the physiological disorder in the mango where fruit from outside looks normal but inside patch flesh become sponge, yellow, sour?**

- a. Mango malformation
- b. Black tip
- c. Clustering
- d. Alternate bearing

**e. Spongy tissue**

**Spongy tissue in fruit**

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A non-edible sour patch developed in the mesocarp of mango fruit is broadly termed spongy tissue. The malady has been reported only in Alphonso. The peculiarity of this malady is that external symptoms of the fruit affected by spongy tissue are not apparent at the time of picking or at the ripe stage. These can be detected only on cutting the ripe fruit. This malady renders the fruit unfit for human consumption. It is a physiological disorder in which fruit pulp remains unripe because of unhydrolyzed starch due to physiological and biochemical disturbances caused by heat in mature fruit at pre- and post-harvest stages.

Single and double preharvest dip of fruits in calcium solution significantly increased the calcium content in the ripe fruits, whereas there was no significant increase in calcium content by post-harvest Ca dip treatment.

The pre harvest dip significantly reduced the occurrence of spongy tissue in the ripe 'Alphonso' fruits. The use of windbreaks for protecting the orchard from warm air during May, and use of proper precautions at post-harvest stage checks the disorder.

3. The farming system where crop and livestock form synergy with recycling allow maximum use of available resources is known as?

- a. Agroforestry System
- b. Integrated Nutrient System
- c. Mixed Farming System

**d. Integrated Farming System**

**Integrated Farming System (IFS):** - A sub system of a high-level land use system like a village or a watershed which includes crop production, raising livestock, fishery, poultry, beekeeping etc. on a particular farm with a objective of higher profitability without altering ecological and socio-economic balance on one hand and to meet the national goals on the other hand.

OR

Integrated Farming System (IFS) also defined as biologically integrated farming system which integrates natural resources and

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regulation mechanisms into farming activities to achieve maximum replacement of off-farm inputs, secures sustainable production of high quality food and other products through ecologically preferred technologies, sustain farm income, eliminates or reduces sources of present environment pollutions generated by agriculture and sustains the multiple function of agriculture.

**OR**

Integrated Farming System (IFS) is a combination of many systems, it attempts to increase farmers income using natural resources on sustainability basis which can be obtained by integrating crop husbandry with allied enterprises is called as IFS.

**4. Calcareous soil give effervescence visibly when treated with diluted 0.1 N HCL due to release of?**

**a. CO<sub>2</sub>**

b. NO<sub>2</sub>

c. CH<sub>4</sub>

d. NH<sub>3</sub>

Calcareous soils are those that contain enough free calcium carbonate (CaCO<sub>3</sub>) and give effervescence visibly releasing CO<sub>2</sub> gas when treated with dilute 0.1 N hydrochloric acid. The pH of calcareous soil is > 7.0 and also regarded as an alkaline (basic) soil.

**Formation**

The soil is formed largely by the weathering of calcareous rocks and fossil shell beds like varieties of chalk, marl and lime stone and frequently a large amount of phosphates. Soils are often very fertile, thin and dry. They are found in large part of arid and semiarid regions, which may prove very fertile when sufficient moisture for crops is available.

Soils also can become calcareous through long term irrigation with water contains small amounts of dissolved CaCO<sub>3</sub> that can accumulate with time. Calcareous soils can contain from 3% to >25% CaCO<sub>3</sub> by weight with pH values with a range of 7.6 to 8.3.

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**Management of Calcareous soil**

Fertilizer management in calcareous soils is different from that of non-calcareous soils because of the effect of soil pH on soil nutrient availability and chemical reactions that affect the loss or fixation of some nutrients. The presence of  $\text{CaCO}_3$  directly or indirectly affects the chemistry and availability of nitrogen (N) Phosphorus (P), Magnesium (Mg), Potassium (K), Manganese (Mn), Zinc (Zn) and iron (Fe). The availability of copper (Cu) also is affected.

Application of acid forming fertilizers such as ammonium sulphate and urea fertilizers, sulphur compounds, organic manures and green manures is considered as effective measures to reduce the pH of soil to neutral pH value.

**5. IRRI and its national research partner developed golden rice to complement the deficiency of?**

- a. Vit A**
- b. Vit B
- c. Vit D
- d. Ca
- e. Fe

The International Rice Research Institute (IRRI) and its national research partners have developed Golden Rice to complement existing interventions to address vitamin A deficiency (VAD). VAD is a serious public health problem affecting millions of children and pregnant women globally.

In the south and southeast Asian countries, where at least half of daily caloric intake is obtained from rice, Golden Rice can help in the fight against VAD, particularly among the people who depend mostly on rice for nourishment.

Golden Rice is intended to be used in combination with existing approaches to overcome VAD, including eating foods that are

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naturally high in vitamin A or beta-carotene, eating foods fortified with vitamin A, taking vitamin A supplements, and optimal breastfeeding practices.

**6. HQ of ICAR Indian institute of soil and water conservation?**

- a. Bhopal
- b. Jaipur
- c. Dehradun**
- d. Nagpur

The institute headquarters is located at Dehradun (Uttarakhand - INDIA). It represents typical humid subtropical climate of Western mid to foot hill Himalayas receiving average annual rainfall of 1681 mm spread over 98 rainy days. Average maximum and minimum temperatures are 30 degrees and 3.5 degrees Celsius during May and January respectively.

**7. Development of Agriculture ecosystem intended to be sustainable and self-sufficient?**

- a. Interculture
- b. Permaculture**
- c. Horticulture
- d. Pisciculture

**Permaculture can be understood as the growth of agricultural ecosystems in a self-sufficient and sustainable way.**

This form of agriculture draws inspiration from nature to develop synergetic farming systems based on crop diversity, resilience, natural productivity, and sustainability. Still, since the early 1980s, the pre-conceived idea of permaculture extended to a systemic approach that goes far beyond the agricultural domain.

Nowadays synonymous with permanent culture in its broadest sense, permaculture is a global ethic method for designing integrated

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**systems based on the idea of sustainable development. Therefore, human activities must consider natural ecosystems and operate in harmony with them.**

**8. Total agroclimatic zone of India**

a. 12

**b. 15**

c. 6

d. 8

e. 10

The Planning Commission has categorised 15 agro-climatic zones in India, taking into account the physical attributes and socio-economic conditions prevailing in the regions.

**I. Western Himalayan Region:**

The Western Himalayan Region covers Jammu and Kashmir, Himachal Pradesh and the hill region of Uttarakhand.

Topography and temperatures show great variation. Average temperature in July ranges between 5°C and 30 °C, while in January it ranges between 5 °C and -5 °C. Mean annual rainfall varies between 75 cm to 150 cm; in Ladakh, however, it is less than 30 cm. There is alluvial soil in the valleys of Kashmir, Kullu and Dun, and brown soil in the hills.

The valley floors grow rice, while the hilly tracts grow maize in the kharif season. Winter crops are barley, oats, and wheat. The region supports horticulture, especially apple orchards and other temperate fruits such as peaches, apricot, pears, cherry, almond, litchis, walnut, etc. Saffron is grown in this region.

The high-altitude alpine pastures, locally known as 'dhoks' or 'margs', are used by the Gujjars, Bakarwals and Gaddis to rear their sheep, goats, cattle and horses. The economy is largely agrarian.

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The main problems of this region are poor accessibility, soil erosion, landslides, inclement weather, inadequacy of marketing and storage facilities. The population is generally rural-based and poor.

Research in better seeds and extension service for agricultural development are required.

**II. Eastern Himalayan Region:**

The Eastern Himalayan Region includes Arunachal Pradesh, the hills of Assam, Sikkim, Meghalaya, Nagaland, Manipur, Mizoram, Tripura, and the Darjeeling district of West Bengal. The topography is rugged. Temperature variation is between 25 °C and 30 °C in July and between 10 °C and 20 °C in January. Average rainfall is between 200-400 cm. The red-brown soil is not highly productive. Jhuming (shifting cultivation) prevails in the hilly areas.

The main crops are rice, maize, potato, tea. There are orchards of pineapple, litchi, oranges and lime.

Infrastructural facilities in the region need to be improved and shifting cultivation controlled by developing terrace farming.

**III. Lower Gangetic Plain Region:**

West Bengal (except the hilly areas), eastern Bihar and the Brahmaputra valley lie in this region. Average annual rainfall lies between 100 cm-200 cm. Temperature in July varies from 26 °C to 41 °C and for January from 9 °C to 24 °C. The region has adequate storage of ground water with high water table.

Rice is the main crop which at times yields three successive crops (Aman, Aus and Boro) in a year. Jute, maize, potato, and pulses are other important crops. Planning strategies include improvement in rice farming, horticulture (banana, mango and citrus fruits), pisciculture, poultry, livestock, forage production and seed supply.

**IV. Middle Gangetic Plain Region:**

The Middle Gangetic Plain region includes large parts of Uttar Pradesh and Bihar. The average temperature in July varies from 26 °C to 41 °C and that of January 9 °C to 24 °C average annual rainfall is between 100 cm and 200 cm. It is a fertile alluvial plain drained by the Ganga and its tributaries. Rice, maize,

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millets in kharif, wheat, gram, barley, peas, mustard and potato in rabi are important crops.

Alternative farming systems, and utilising chaur lands for pisciculture are some measures to boost agricultural production.

Reclamation of user lands, wastelands, and fallow lands for agriculture and allied activities (agro-forestry, silviculture, floriculture etc.) should be done.

**V. Upper Gangetic Plains Region:**

In the Upper Gangetic Plains region come the central and western parts of Uttar Pradesh and the Hardwar and Udham Nagar districts of Uttarakhand.

The climate is sub-humid continental with temperature in July between 26 °C to 41 °C and temperature in January between 7 °C to 23 °C. Average annual rainfall is between 75 cm-150 cm. The soil is sandy loam. Canal, tube-well and wells are the main source of irrigation. This is an intensive agricultural region wherein wheat, rice, sugarcane, millets, maize, gram, barley, oilseeds, pulses and cotton are the main crops.

Besides modernising traditional agriculture the region needs special focus on dairy development and horticulture. Strategies should include developing multiple mixed cropping patterns.

**VI. Trans-Ganga Plains Region:**

This region (also called the Satluj-Yamuna Plains) extends over Punjab, Haryana, Chandigarh, Delhi and the Ganganagar district of Rajasthan. Semi-arid characteristics prevail over the region, with July's mean monthly temperature between 25 °C and 40 °C and that of January between 10 °C and 20 °C.

The average annual rainfall varies between 65 cm and 125 cm. The soil is alluvial which is highly productive. Canals and tube-wells and pumping sets have been installed by the cultivators and the governments. The intensity of agriculture is the highest in the country.

Important crops include wheat, sugarcane, cotton, rice, gram, maize, millets, pulses and oilseeds etc. The region has the credit of introducing Green Revolution in the country and has adopted modern methods of farming with

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greater degree of mechanisation. The region is also facing the menace of waterlogging, salinity, alkalinity, soil erosion and falling water table.

Some steps that may be required to make agriculture in the region more sustainable and productive are:

(i) diversion of some rice-wheat area to other crops like maize, pulses, oilseeds and fodder; (ii) development of genotypes of rice, maize and wheat with inbuilt resistance to pests and diseases; (iii) promotion of horticulture besides pulses like tur and peas in upland conditions; (iv) cultivation of vegetables in the vicinity of industrial clusters; (v) supply of quality seeds of vegetables and planting material for horticulture crops; (vi) development of infra-structure of transit godowns and processing to handle additional fruit and vegetable production; (vii) implementation of policy and programmes to increase productivity of milk and wool; and (viii) development of high quality fodder crops and animal feed by stepping up area under fodder production.

**VII. Eastern Plateau and Hills:**

This region includes the Chhotanagpur Plateau, extending over Jharkhand, Orissa, Chhattisgarh and Dandakaranya. The region enjoys 26 °C to 34 °C of temperature in July, 10 °C to 27 °C in January and 80 cm-150 cm of annual rainfall. Soils are red and yellow with occasional patches of laterites and alluviums. The region is deficient in water resources due to plateau structure and non-perennial streams. Rainfed agriculture is practised growing crops like rice, millets, maize, oilseeds, ragi, gram and potato.

Steps to improve agricultural productivity and income include cultivation of high value crops of pulses like tur, groundnut and soyabean etc. on upland rain-fed areas, growing crops like urad, castor, and groundnut in kharif and mustard and vegetables in irrigated areas, improvement of indigenous breeds of cattle and buffaloes, extension of fruit plantations, renovation including desilting of existing tanks and excavation of new tanks, 95.32 lakh ha of acidic lands through lime treatment, development of inland fisheries in permanent water bodies, and adopting integrated watershed development approach to conserve soil and rain water.

**VIII. Central Plateau and Hills:**

The region is spread over Bundelkhand, Baghelkhand, Bhandar Plateau, Malwa Plateau, and Vindhya Hills. Semi-arid climatic conditions prevail over the

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region with temperature in July 26 °C to 40 °C, in January 7 °C to 24 °C and average annual rainfall from 50 cm-100 cm. Soils are mixed red, yellow and black.

There is scarcity of water. Crops grown are millets, wheat, gram, oilseeds, cotton, and sunflower. In order to improve agricultural returns, measures to be adopted are water conservation through water saving devices like sprinklers and drip system, dairy development, crop diversification, ground water development, reclamation of ravine lands.

**IX. Western Plateau and Hills:**

Comprising southern part of Malwa plateau and Deccan plateau (Maharashtra), this is a region of the regur (black) soil with July temperature between 24 °C and 41 °C, January temperature between 6 °C and 23 °C and average annual rainfall of 25 cm-75 cm. Wheat, gram, millets, cotton, pulses, groundnut, and oilseeds are the main crops in the rain-fed areas, while in the irrigated areas, sugarcane, rice, and wheat, are cultivated. Also grown are oranges, grapes and bananas.

Attention should be paid to increasing water efficiency by popularizing water saving devices like sprinklers and drip system. The lower value crops of jowar, bajra and rainfed wheat should give way to high value oilseeds. Five per cent area under rain-fed cotton and jowar could be substituted with fruits like ber, pomegranate, mango and guava. Improvement of milk production of cattle and buffalo through cross-breeding along with poultry development should be encouraged.

**X. Southern Plateau and Hills:**

This region falls in interior Deccan and includes parts of southern Maharashtra, the greater parts of Karnataka, Andhra Pradesh, and Tamil Nadu uplands from Adilabad District in the north to Madurai District in the south. The mean monthly temperature of July varies between 25 °C and 40 °C, and the mean January temperature is between 10 °C and 20 °C. Annual rainfall is between 50 cm and 100 cm.

It is an area of dry-zone agriculture where millets, oilseeds, and pulses are grown. Coffee, tea, cardamom and spices are grown along the hilly slopes of Karnataka plateau.

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Some of the area under coarse cereals may be diverted to pulses and oilseeds. Horticulture, dairy development and poultry farming should be encouraged.

**XI. Eastern Coastal Plains and Hills:**

In this region are the Coromandal and northern Circar coasts of Andhra Pradesh and Orissa. The mean July temperature ranges between 25 °C and 35 °C and the mean January temperature varies between 20 °C and 30 °C. The mean annual rainfall ~ varies between 75 cm and 150 cm.

The soils are alluvial, loam and clay and are troubled by the problem of alkalinity. Main crops include rice, jute, tobacco, sugarcane, maize, millets, groundnut and oilseeds. Main agricultural strategies include improvement in the cultivation of spices (pepper and cardamom) and development of fisheries.

These involve increasing cropping intensity using water-efficient crops on residual moisture, discouraging growing of rice on marginal lands and bringing such lands under alternate crops like oilseeds and pulses; diversifying cropping and avoiding mono-cropping; developing horticulture in upland areas, social forestry and dairy-farming.

**XII. Western Coastal Plains and Ghats:**

Extending over the Malabar and Konkan coastal plains and the Sahyadris, the region is humid with the mean July temperature varying between 25 °C and 30 °C and mean January temperatures between 18 °C and 30 °C. The mean annual rainfall is more than 200 cm.

The soils are laterite and coastal alluvial. Rice, coconut, oilseeds, sugarcane, millets, pulses and cotton are the main crops. The region is also famous for plantation crops and spices which are raised along the hill slopes of the Western Ghats.

The agricultural development must focus attention on raising of high value crops (pulses, spices, and coconut). Development of infra- structural facilities and promotion to prawn culture in brackish water should be encouraged.

**XIII. Gujarat Plains and Hills:**

This region includes the hills and plains of Kathiawar, and the fertile valleys of Mahi and Sabarmati rivers. It is an arid and semi-arid region with the mean July

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temperature reading 30 °C and that of January about 25 °C. The mean annual rainfall varies between 50 cm and 100 cm.

Soils are regur in the plateau region, alluvium in the coastal plains, and red and yellow soils in Jamnagar area. Groundnut, cotton, rice, millets, oilseeds, wheat and tobacco are the main crops. It is an important oilseed producing region.

The main strategy of development in this region should be canal and groundwater management, rainwater harvesting and management, dry land farming, agro-forestry development, wasteland development and developing marine fishing and brackish/back-water aquaculture development in coastal zones and river deltas.

**XIV. Western Dry Region:**

Extending over Rajasthan, West of the Aravallis, this region has an erratic rainfall of an annual average of less than 25 cm. The desert climate further causes high evaporation and contrasting temperatures—28 °C to 45 °C in June and 5 °C to 22 °C in January. Bajra, jowar, and moth are main crops of kharif and wheat and gram in rabi. Livestock contributes greatly in desert ecology.

The main areas needing a thrust for development are rainwater harvesting, increasing yield level of horticultural crops like water melon, guava and date palm, adopting high quality germ-plasm in cattle to improve their breed; and adopting silvi-pastoral system over wastelands.

**XV. Island Region:**

The island region includes Andaman-Nicobar and Lakshadweep which have typically equatorial climate (annual rainfall less than 300 cm; the mean July and January temperature of Port Blair being 30 °C and 25 °C respectively). The soils vary from sandy along the coast to clayey loam in valleys and lower slopes.

The main crops are rice, maize, millets, pulses, arecanut, turmeric and cassava. Nearly half of the cropped area is under coconut. The area is covered with thick forests and agriculture is in backward stage.

**9. Green house technology started in which decade of India?**

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- a. 1960's decade
- b. 1970's decade
- c. 1980's decade**
- d. 1990's decade

While greenhouses have existed for more than one and a half centuries in various parts of the world, in India use of greenhouse technology started only during 1980's and it was mainly used for research activities. This may be because of our emphasis, so far had been on achieving self-sufficiency in food grain production. However, in recent years in view of the globalization of international market and tremendous boost and fillip that is being given for export of agricultural produce, there has been a spurt in the demand for greenhouse technology. The National Committee on the use of Plastics in Agriculture (NCPA-1982) has recommended location specific trials of greenhouse technology for adoption in various regions of the country

**10. Which Soil has high water holding capacity but poor drainage?**

- a. Black soil**
- b. Red soil
- c. Laterite soil
- d. Alluvial soil

**Black Soil**

These soils are locally known as the 'Regur Soil' or the 'Black Cotton Soil'.

Internationally, these are known as 'tropical chernozems'. These soils are famous for the cultivation of cotton.

**Formation:**

These have mainly formed from the Deccan Trap rocks —> Zonal Soils

**Areas:**

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**These are found in the Deccan trap region. Black soil covers most of the Deccan Plateau which includes parts of: Maharashtra, Madhya Pradesh, Gujarat, Andhra Pradesh and some parts of Tamil Nadu.**

**Soil Texture:**

**Black cotton soil (regur soil) is highly argillaceous i.e. clayey. It is deep and impermeable and thus has high water retention capacity.**

**Soil Colour: These soils are black in colour due to the presence of iron, aluminium compounds, and humus.**

**Other Characteristic Features:**

**These soils are rich in minerals and known for their fertility. The soil depth varies from place to place. It is very thick in lowlands but very thin on highlands.**

**Also, in the upper reaches of the Godavari and the Krishna, and the north-western part of the Deccan Plateau, the black soil is very deep.**

**These soils swell and become sticky when wet and develop deep wide cracks when dry.**

**This helps in self-aeration, which leads to absorption of nitrogen from atmosphere.**

**Thus, there occurs a kind of 'self-ploughing'. This aeration and oxidation to deep levels contributes to maintenance of fertility of these soils.**

**This continued fertility is favourable in low rainfall for cotton cultivation even without irrigation.**

**Due to slow absorption and loss of moisture, the black soil retains the moisture for a very long time, which helps the crops, especially, the rain fed ones, to sustain even during the dry season.**

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**Chemically, the black soils are rich in lime, iron, magnesia and alumina. They also contain potash. But they lack in phosphorous, nitrogen and organic matter.**

**Suitable Crops:** These soils are highly productive and well suited to the cultivation of cotton, pulses, millets, linseed, tobacco, sugarcane, vegetables and citrus fruits.

**Note:** In the southern and eastern parts of the country where rainfall is heavy, black soils often occur in close proximity to red soils. Black soils occupy valleys and low-level areas whereas the red soils occur on higher slopes and hill tops. Mixed black and red soils occur in Coimbatore, Madurai, Tirunelveli (Tamil Nadu) and Bundelkhand region.

**11. Blue colour certificate tag indication of?**

**a. Certified seed**

b. Foundation seed

c. Breeder seed

d. Registered seed

**Each class of certified seed is associated with a coloured seed tag. Certified seed tags are blue, registered are purple, and foundation tags are white.**

**seed**

**The certification class refers to the number of generations away from the original variety that was developed by the plant breeder.**

**The first class is Breeder – the seed provided by the breeder of the new plant variety.**

**Progeny from Breeder seed is the Foundation class, or one generation removed from Breeder seed.**

**The Registered class is progeny of Foundation seed, and two generations removed.**

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The final class is Certified, and it may be the progeny of Registered seed or Foundation seed.

This is the seed most generally available to farmers. The progeny of Certified seed must enter the commodity market and may not be used for planting seed. This system ensures that planting seed is mostly free of genetic and physical contamination.

Information provided on the certification tag includes class of certification, kind of crop, variety, lot number, and name and address of the owner. The certification class is stated and color-coded.

The foundation seed “white tag” appears only on seed that has been inspected in the field and meets purity standards for foundation seed. Foundation seed is priced higher than commercial seed since it is a premier grade and intended for increase and not commercial production

Lot number is for identification purposes and is used to trace seed to its originator.

Lot number allows seed to be traced back to a specific grower and field.

The producer whose name and address appears on the tag may or may not be the actual grower but is the party responsible for seed contained in the bag.

**12. Which silk known as golden treasure of assam?**

- a. Mulberry silk
- b. Tassar silk
- c. Muga silk**
- d. Eri silk

The golden colour and shine of the fabric is one of the most unique features of Muga silk. In fact, the shine of the fabric is said to improve

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after each wash making it a product that will last you a lifetime, and also making it one of the costliest silks in the world.

A Muga Mekhela Chador, the traditional dress of Assamese women remains one of the most coveted fashion items for locals.

### **Colours**

A golden yellow base colour is the main selling point of this silk. Additional colours are added via embroidery and zari work to make the product more attractive. However, if you have to invest in a Muga silk saree, the bright gold colour is a classic must-have.

### **Motifs**

Traditional motifs that are used on the fabric includes Jappi (the typical Assami topi), Miri Gos Butta (a pattern of miniature tree motifs) and kabutar (pigeons). These motifs are always geometrical in shape and have not changed over the years. Pure jari work is also found on the fabric, giving it a very royal, classy feel.

### **Varieties**

Mekhela chadors, a two-piece saree and the traditional outfit of Assamese women, often worn during weddings, and the five-yard saree are the biggest varieties of this fabric. You also get the silk in “reeha”, which is a piece of fabric that is worn on special occasions like pujas, weddings and festivals. You also see the Muga silk used in making shawls and dress material.

### **Current state of the art**

Muga silk has the Geographical Indication status, which helps in ensuring authentic products and controlling quality in the market. In the last year alone, India produced 158 tonnes of Muga silk, out of which 136 tonnes was produced in Assam. India's totally output that very year was 28,708 tonnes.

Muga silk remains a classic item that every woman desire to own, however its traditional outlook, and non-versatility (it hasn't really

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evolved much beyond the traditional Mekhela chadors), makes the demand a little niche.

Nevertheless, the fabric does have a global connect especially in Japan where designers are using it to make kimonos and other traditional Japanese dresses.

**Price range**

Muga silk is one of the highest qualities of silk and its ability to retain the original golden glow, makes the cost worthwhile. An original piece of work can cost you anywhere between Rs.10,000 to Rs.1,50,000.

**13. Which of the following is neutral fertilizer?**

- a. CAN**
- b. UREA
- c. SSP
- d. Ammonium Sulphate

Calcium ammonium nitrate or CAN, also known as nitro-limestone or nitrochalk, is a widely used inorganic fertilizer, accounting for 4% of all nitrogen fertilizer used worldwide in 2007

**14. MSP announced by?**

- a. CACP**
- b. Central govt.**
- c. Agricultural university
- d. ICAR

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 based

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on the recommendations of the Commission for Agricultural Costs and Prices (CACP).

MSP is price fixed by Government of India to protect the producer - farmers - against excessive fall in price during bumper production years.

The minimum support prices are a guarantee price for their produce from the Government. The major objectives are to support the farmers from distress sales and to procure food grains for public distribution.

In case the market price for the commodity falls below the announced minimum price due to bumper production and glut in the market, government agencies purchase the entire quantity offered by the farmers at the announced minimum price.

#### **Historical perspective of MSP**

The Price Support Policy of the Government is directed at providing insurance to agricultural producers against any sharp fall in farm prices. The minimum guaranteed prices are fixed to set a floor below which market prices cannot fall. Till the mid 1970s, Government announced two types of administered prices :

#### **Minimum Support Prices (MSP)**

##### **Procurement Prices**

The MSPs served as the floor prices and were fixed by the Government in the nature of a long-term guarantee for investment decisions of producers, with the assurance that prices of their commodities would not be allowed to fall below the level fixed by the Government, even in the case of a bumper crop.

Procurement prices were the prices of kharif and rabi cereals at which the grain was to be domestically procured by public agencies (like the FCI) for release through PDS. It was announced soon after harvest began. Normally procurement price was lower than the open market price and higher than the MSP. This policy of two official

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prices being announced continued with some variation upto 1973-74, in the case of paddy.

In the case of wheat it was discontinued in 1969 and then revived in 1974-75 for one year only. Since there were too many demands for stepping up the MSP, in 1975-76, the present system was evolved in which only one set of prices was announced for paddy (and other kharif crops) and wheat being procured for buffer stock operations.

**Determination of MSP**

In formulating the recommendations in respect of the level of minimum support prices and other non-price measures, the Commission takes into account, apart from a comprehensive view of the entire structure of the economy of a particular commodity or group of commodities, the following factors:-

- Cost of production
- Changes in input prices
- Input-output price parity
- Trends in market prices
- Demand and supply
- Inter-crop price parity
- Effect on industrial cost structure
- Effect on cost of living
- Effect on general price level
- International price situation
- Parity between prices paid and prices received by the farmers.
- Effect on issue prices and implications for subsidy

**15. Agriculture produce market regulated by**

a. Central govt

**b. APMC by state govt**

c. ICAR

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**Agricultural Produce Market Committee (APMC) is a statutory market committee constituted by a State Government in respect of trade in certain notified agricultural or horticultural or livestock products, under the Agricultural Produce Market Committee Act issued by that state government.**

**APMCs are intended to be responsible for:**

- **ensuring transparency in pricing system and transactions taking place in market area;**
- **providing market-led extension services to farmers;**
- **ensuring payment for agricultural produce sold by farmers on the same day;**
- **promoting agricultural processing including activities for value addition in agricultural produce;**
- **Publicizing data on arrivals and rates of agricultural produce brought into the market area for sale; and**
- **Setup and promote public private partnership in the management of agricultural markets**

**There are about 2477 principal regulated markets based on geography (the APMCs) and 4843 sub-market yards regulated by the respective APMCs in India.**

**The typical amenities available in or around the APMCs are: auction halls, weigh bridges, godowns, shops for retailers, canteens, roads, lights, drinking water, police station, post-office, bore-wells, warehouse, farmers amenity center, tanks, Water Treatment plant, soil-testing Laboratory, toilet blocks, etc.**

#### **Legal Background of APMCs**

**Under Constitution of India, agricultural marketing is a state (provincial) subject. While intra-state trades fall under the jurisdiction of state governments, inter-state trading comes under Central or Federal Government (including intra-state trading in a few commodities like raw jute, cotton, etc.). Thus, agricultural markets are established and regulated mostly under the various State APMC Acts.**

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Most of the state governments and Union Territories have since enacted legislations (Agriculture Produce Marketing Committee Act) to provide for development of agricultural produce markets and to achieve an efficient system of buying and selling of agricultural commodities. Except the States of Jammu and Kashmir, Kerala, Manipur and small Union Territories such as Dadra and Nagar Haveli, Andaman and Nicobar Islands, Lakshadweep, etc. all other States and UTs in the country have enacted such State Marketing Legislations. The purpose of these Acts is basically the same i.e. regulation of trading practices, increased market efficiency through reduction in market charges, elimination of superfluous intermediaries and protecting the interest of producer-seller.

The whole geographical area in the State is divided and each one is declared as a market area which is managed by the Market Committee (APMC) constituted by the State Government. States also constitute a Market Board which supervises these market committees. APMCs generally consist of representatives of farmers, traders, warehousing entities, registrar of cooperative societies etc. Market Boards generally consists of chairmen of all APMCs, representatives from the relevant Government Departments etc.

Once a particular area is declared as a market area and falls under the jurisdiction of a Market Committee, no person or agency is allowed to freely carry on wholesale marketing activities. APMC Acts provide that first sale in the notified agricultural commodities produced in the region such as cereals, pulses, edible oilseed, fruits and vegetables and even chicken, goat, sheep, sugar, fish etc., can be conducted only under the aegis of the APMC, through its licensed commission agents, and subject to payment of various taxes and fee. The producers of agricultural products are thus forced to do their first sale in these markets.

**16. Name the irrigation method in which maximum water, fertilizer and pesticide can be utilized?**

- a. Sprinkler irrigation
- b. Surface irrigation
- c. Drip irrigation**

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d. Basin

**Drip System**

Drip irrigation is the most water-efficient way to irrigate many different plantings. It is an ideal way to water in clay soils because the water is applied slowly, allowing the soil to absorb the water and avoid runoff. Drip devices use a fraction of the water that overhead spray devices use. "Point source" drip systems are comprised of drip tubing that is laid throughout a planting bed and feeds water directly to the base of the plants at a rate the soil can absorb without losing water to misting, overspray, or runoff.

There are many different types of drip equipment, including drippers, bubblers, soakers (inline emitters), and micro-sprayers. Drip systems can be customized to meet each plant's needs. However, you should not mix different equipment in the same zone or distribution line, if possible. In other words, you wouldn't put inline emitter pipe in the same zone with bubblers. Use separate zones for each type of equipment.

The discharge rate of drip emitters varies from one-half gallon per hour to two gallons per hour and depends on the plant and its size, as well as the soil type. Micro-sprayers use much more water — up to 15 gallons per hour, but still much less than above-ground sprinklers. Generally, you will need at least one emitter device for every two-and-a-half feet of plant canopy.

**17. Minimum lease period of land of Mega food park?**

- a. 25 yr
- b. 50 yr
- c. 75 yr**
- d. 40 yr

**Land can either be purchased or can be taken on long term lease. In case of lease, the minimum period should be 75 years**

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**18. High input cost of crop production and unstable market facing by farmer which results in huge loss and debt to farmer to overcome from this problem which of the farming system will be most recommended?**

**a. Zero budget Farming**

b. Integrated farming

c. Mixed farming

d. Cooperative farming

**Zero Budget Natural Farming (ZBNF) technology uses locally available resources to manage soil nutrition, fertility, pests, and weeds.**

**The technology completely avoids the use of inorganic fertilisers, pesticides, and herbicides. It emphasises the effective utilisation of water through specified methods and recommends less tilling, to produce higher yields.**

**This farming practice asserts that ZBNF is resilient to climate change, reduces the cost of cultivation, and increases farmers' income.**

**Universal Principles of Natural Farming**

- **Soil To Be Covered with Crops 365 Days (Living Root)**
- **Minimal Disturbance of Soil**
- **Biostimulants As Necessary Catalysts**
- **Use Indigenous Seed**
- **Diverse Crops, Trees 15 -20 Crops**
- **Integrate Animals in To Farming**
- **Increase Organic Residues on The Soil**
- **Pest Management Through Botanical Extracts**
- **No Synthetic Fertilizers, Pesticides, Herbicides**

**Benefits**

**A study taken up in the implementation area reports the following benefits**

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**ZBNF processes require 50%–60% less water and less electricity (than non-ZBNF) for all the selected crops.**

**For the irrigated crops, ZBNF requires 45% - 70% less input energy (12–50 GJ per acre) and results in 55%–85% less emissions (1.4–6.6 Mt CO<sub>2</sub>e) than non-ZBNF.**

**For the rain-fed crops, ZBNF requires 42%–90% less input energy (1.1–16 GJ per acre) and results in 85%–99% less emissions (0.5–11 Mt CO<sub>2</sub>e).**

**ZBNF reduces methane emissions significantly through multiple aeration. It also has the potential to avoid residue burning by practising mulching.**

**The cost of cultivation is lower in ZBNF for all crops by INR 3,000–INR 22,000 per acre, except in cotton (higher by INR 9,000, due to greater labour engagement).**

**The difference in yield between ZBNF and non-ZBNF for chilli and paddy is negligible.**

**For the remaining crops, non-ZBNF exhibits higher yields, with an increase in the range of 0.3 Mt/acre–0.7 Mt/acre.**

**The net revenue is higher in ZBNF by INR 9,000–INR 37,000 for all the crops (except cotton), because of the lower cost of cultivation. Furthermore, non-ZBNF-based chilli, maize, and groundnut show higher dispersion (more risk) than ZBNF crops.**

**The study also observed a positive outlook towards ZBNF by the farmers, in terms of ease of production and health benefits.**

**19. Premium of kharif season?**

**a. 2% of SI**

b. 1.5% of SI

c. 5% of SI

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### **Pradhan Mantri Fasal Bima Yojana**

#### **Objectives**

- To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.
- To stabilise the income of farmers to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- To ensure flow of credit to the agriculture sector.

#### **Highlights of the scheme**

- There will be a uniform premium of only 2% to be paid by farmers for all Kharif crops and 1.5% for all Rabi crops. In case of annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%.
- The premium rates to be paid by farmers are very low and balance premium will be paid by the Government to provide full insured amount to the farmers against crop loss on account of natural calamities.
- There is no upper limit on Government subsidy. Even if balance premium is 90%, it will be borne by the Government.
- Earlier, there was a provision of capping the premium rate which resulted in low claims being paid to farmers. This capping was done to limit Government outgo on the premium subsidy.
- This capping has now been removed and farmers will get claim against full sum insured without any reduction.
- The use of technology will be encouraged to a great extent. Smart phones will be used to capture and upload data of crop cutting to reduce the delays in claim payment to farmers. Remote sensing will be used to reduce the number of crop cutting experiments.
- PMFBY is a replacement scheme of NAIS / MNAIS, there will be exemption from Service Tax liability of all the services involved in the implementation of the scheme. It is estimated that the new scheme will

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ensure about 75-80 per cent of subsidy for the farmers in insurance premium.

Farmers to be covered

- All farmers growing notified crops in a notified area during the season who have insurable interest in the crop are eligible.
- To address the demand of farmers, the scheme has been made voluntary for all farmers from Kharif 2020.
- Earlier to Kharif 2020, the enrollment under the scheme was compulsory for following categories of farmers:
- Farmers in the notified area who possess a Crop Loan account/KCC account (called as Loanee Farmers) to whom credit limit is sanctioned/renewed for the notified crop during the crop season. and
- Such other farmers whom the Government may decide to include from time to time.

**Voluntary coverage :** Voluntary coverage may be obtained by all farmers not covered above, including Crop KCC/Crop Loan Account holders whose credit limit is not renewed.

Risks covered under the scheme

- Yield Losses (standing crops, on notified area basis). Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, such as Natural Fire and Lightning, Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane, Tornado. Risks due to Flood, Inundation and Landslide, Drought, Dry spells, Pests/ Diseases also will be covered.
- In cases where majority of the insured farmers of a notified area, having intent to sow/plant and incurred expenditure for the purpose, are prevented from sowing/planting the insured crop due to adverse weather conditions, shall be eligible for indemnity claims upto a maximum of 25 per cent of the sum-insured.
- In post-harvest losses, coverage will be available up to a maximum period of 14 days from harvesting for those crops which are kept in “cut & spread” condition to dry in the field.

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- For certain localized problems, Loss / damage resulting from occurrence of identified localized risks like hailstorm, landslide, and Inundation affecting isolated farms in the notified area would also be covered.

**Unit of Insurance**

The Scheme shall be implemented on an 'Area Approach basis' i.e., Defined Areas for each notified crop for widespread calamities with the assumption that all the insured farmers, in a Unit of Insurance, to be defined as "Notified Area" for a crop, face similar risk exposures, incur to a large extent, identical cost of production per hectare, earn comparable farm income per hectare, and experience similar extent of crop loss due to the operation of an insured peril, in the notified area.

Defined Area (i.e., unit area of insurance) is Village/Village Panchayat level by whatsoever name these areas may be called for major crops and for other crops it may be a unit of size above the level of Village/Village Panchayat. In due course of time, the Unit of Insurance can be a Geo-Fenced/Geo-mapped region having homogenous Risk Profile for the notified crop.

For Risks of Localised calamities and Post-Harvest losses on account of defined peril, the Unit of Insurance for loss assessment shall be the affected insured field of the individual farmer.

**20. Legal entity formed by primary producer i.e. farmer, milk producer fisherman, etc, which can be producer company cooperative society or any legal firm which provide sharing of profit among members known as?**

- a. SHG
- b. JLG
- c. Farmers club

**d. Producer organization**

**A Producer Organisation (PO) is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural**

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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. In some forms like producer companies, institutions of primary producers can also become member of PO.

Farmers Producer Organisation (FPO) is one type of PO where the members are farmers. Small Farmers' Agribusiness Consortium (SFAC) is providing support for promotion of FPOs.

PO is a generic name for an organization of producers of any produce, e.g., agricultural, non-farm products, artisan products, etc.

### **NEED OF FARMERS PRODUCER ORGANISATION (FPO)**

The main aim of PO is to ensure better income for the producers through an organization of their own. Small producers do not have the volume individually (both inputs and produce) to get the benefit of economies of scale. Besides, in agricultural marketing, there is a long chain of intermediaries who very often work non-transparently leading to the situation where the producer receives only a small part of the value that the ultimate consumer pays.

Through aggregation, the primary producers can avail the benefit of economies of scale. They will also have better bargaining power vis-à-vis the bulk buyers of produce and bulk suppliers of inputs.

### **ESSENTIAL FEATURES OF A PRODUCER ORGANISATION (PO)**

- It is formed by a group of producers for either farm or non-farm activities.
- It is a registered body and a legal entity.
- Producers are shareholders in the organization.
- It deals with business activities related to the primary produce/product.
- It works for the benefit of the member producers.
- A part of the profit is shared amongst the producers.

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- Rest of the surplus is added to its owned funds for business expansion.

### 21. Lowest seed multiplication ratio?

a. Groundnut

b. Paddy

c. Sunflower

d. Bajra

#### Seed Multiplication Ratio

It is nothing but the number of seeds to be produced from a single seed when it is sown and harvested. According to expert group of seeds (1989), the seed multiplication ratio for different crops are as follows.

| Crop      | Seed Multiplication Ratio | Crop        | Seed Multiplication Ratio |
|-----------|---------------------------|-------------|---------------------------|
| Wheat     | 1:20                      | Lucerne     | 1:25                      |
| Paddy     | 1:80<br>(Varieties)       | Oats        | 1:15                      |
|           | 1:100<br>(Hybrids)        | Bhendi      | 1:100                     |
| Maize     | 1:80<br>(Varieties)       | Tomato      | 1:400                     |
|           | 1:100<br>(Hybrids)        | Brinjal     | 1:450                     |
| Sorghum   | 1:100                     | Chillies    | 1:240                     |
| Bajra     | 1:200                     | Watermelon  | 1:100                     |
| Ragi      | 1:80                      | Pumpkin     | 1:160                     |
| Gram      | 1:10                      | Bittergourd | 1:41                      |
| Blackgram | 1:40                      | Bottlegourd | 1:99                      |
| Greengram | 1:40                      | Ridgegourd  | 1:83                      |
| Cowpea    | 1:40                      | Cucumber    | 1:200                     |

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|                  |            |                      |       |
|------------------|------------|----------------------|-------|
| Horsegram        | 1:40       | French bean          | 1:9   |
| Moth bean        | 1:40       | Clusterbean          | 1:50  |
| Red gram         | 1:100      | Peas                 | 1:19  |
| Cole crops       | 1: 433     | Onion                | 1:171 |
| Potato           | 1:4        | Radish               | 1:100 |
| <b>Groundnut</b> | <b>1:8</b> | Carrot               | 1:83  |
| Linseed          | 1:50       | Mustard and rape     | 1:100 |
| Cotton           | 1:50       | Soybean              | 1:16  |
| Jute             | 1:100      | Sunflower            | 1:50  |
| Mestha           | 1:40       | Sesame               | 1:250 |
| Sunhemp          | 1:30       | Safflower and castor | 1:60  |
| Berseem          | 1;10       | Lucerne              | 1:25  |

**22. A cold treatment given to plant, and it responds with its flowering is refer as?**

**a. Vernalization**

b. Stratification

c. Transpiration

**What is Vernalization in Plants?**

Vernalization is a process of going dormant in cold temperatures, which helps certain plants prepare for the following year.

Plants that have vernalization requirements must be exposed to a certain number of days of cold temperatures below a certain threshold.

The required temperatures and lengths of chilling depend on the plant species and variety. This is one reason gardeners need to choose plant varieties that are suited to their climate for the best results and the healthiest plants.

After vernalization, these plants are capable of flowering. In years or regions in which the winter does not provide enough chilling time, these plants will produce a poor crop or, in some cases, they will not flower or produce fruit at all.

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**23. Highest organic certified area in which state?**

- a. MP**
- b. UP
- c. Sikkim
- d. HP

**Madhya Pradesh has maximum certified area under organic farming. In Madhya Pradesh certified area of 2.32 lakh hectares under organic farming out of a total 7.23 lakh hectares in India.**

**24. Lowest inland water reservoir in which state?**

- a. Kerala
- b. WB
- c. Odisha

**d. TN**

**25. Soil loss equation  $A = RKLSCP$  K Stands for?**

- a. Soil erosivity
- b. Soil erodibility**
- c. Soil covering
- d. Soil conservation

**Universal Soil Loss Equation**

The Universal Soil Loss Equation (USLE) is a powerful tool that is widely used by soil conservationists in the United States and many other countries.

The USLE was developed by W. H. Wischmeier, D. D. Smith, and others with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Soil Conservation Service (SCS), and Purdue University in the late 1950s. Its field use was institutionalized in the form of USDA Agricultural Handbook 282 in 1965, and later updated as USDA Agricultural Handbook 537 in 1978.

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The USLE estimates average annual soil loss by sheet and rill erosion on those portions of landscape profiles where erosion, but not deposition, is occurring. It does not estimate deposition like that at the toe of concave slopes, and it does not estimate sediment yield at a downstream location. Also, it does not include ephemeral gully erosion.

The USLE is an empirically based equation, derived from a large mass of field data, especially erosion plots and rainfall simulator experiments, and computes sheet and rill erosion as follows:  $A = RKLSCP$  where A is computed soil loss, R is the rainfall-runoff erosivity factor, K is a soil erodibility factor, L is the slope length factor, S is the slope steepness factor, C is a cover management factor, and P is a supporting practices factor.

The R-factor is calculated as a product of the kinetic energy of a rainfall times its maximum 30-minute intensity of fall. As durations and intensities of rainstorms vary considerably from year to year, it is essential to consider a sufficiently long time period to obtain a representative R-value.

The K-factor represents the ease with which a soil can be eroded and is influenced by the soil texture, organic matter content, soil structural strength and permeability.

**K-values** therefore need to be determined for individual soil types and can be estimated for known soils using the USDA erodibility nomograph

The L and S factors express the influence of the landscape on soil erosion. The LS combination is the ratio of soil loss from a particular slope to a 'reference slope (22.1 m length and uniform 9% grade).

The C-factor is the ratio of erosion under a specified cover and management to the amount of erosion under a continuous bare fallow. It considers the type and density of vegetative cover on the soil as well as all related management practices, such as time between operations, weed control, tillage, watering, fertilization, crop residues etc. This factor is obviously very complicated and can only be assessed with confidence for research-verified crop/land management combinations.

The P-factor is the ratio of the erosion resulting from the described practice to that which would occur with up-and-down slope cultivation. It recognizes the

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influence of conservation practices, such as contour planting, strip cropping, terracing and combinations.

**26. Land holding of marginal farmer**

**a. Up-to 1 ha**

b. 2 ha

c. 5 ha

d. 2.5 ha

| Sl. No. | Category     | Size-Class              |
|---------|--------------|-------------------------|
| 1.      | Marginal     | Below 1.00 hectare      |
| 2.      | Small        | 1.00-2.00 hectare       |
| 3.      | Semi- Medium | 2.00-4.00 hectare       |
| 4.      | Medium       | 4.00-10.00 hectare      |
| 5.      | Large        | 10.00 hectare and above |

**27. Distance of rural godown from poultry and dairy farms?**

a. 300 m

b. 500 m

c. 40 m

d. 100 m

| Sl No | Units                                      | Distance from godown |
|-------|--------------------------------------------|----------------------|
| 1.    | Kilns, bone-crushing mills, garbagedumping | 500 m                |

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|    |                                                                                                                                                           |      |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|    | grounds,slaughterhouses, tanneries and hide-curing centres or such other places, the vicinity of which is deleterious to the safe storage of food grains. |      |
| 2. | Dairies and poultry farms                                                                                                                                 | 300m |
| 3. | Factories and other sources of fire such as workshops, haystacks, timber stores and petrol pumps.                                                         | 150m |

**28. 20 HP tractor subsidy to women**

**a. 35% up to 1 lakh**

b. 20% upto 50000

c. 40% upto 50000

**Tractor (up to 20 PTO HP) (Cost Norms -Rs.3.00 lakh/unit) 35% of cost, subject to a maximum of Rs. 1.00 lakh per unit for women as compared to 25% of cost, subject to a maximum of Rs.0.75 lakh/unit for men**

**29. In which crop PepsiCo pvt ltd. and govt of Maharashtra collaborate started a ppp drip irrigation?**

a. Mango

**b. Potato**

c. Tomato

d. Cotton

Maharashtra govt join hands with PepsiCo, Unilever and others to develop value chains for vegetable crops  
The public-private collaboration on agriculture in Maharashtra is part of the World Economic Forum's project, under which eight commodity-wise groups have been formed to develop agricultural value chains.

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The working group on vegetables has identified Unilever, PepsiCo and Jain Irrigation as main value-chain partners for potato and onions respectively.

**30. Crossing of cross breed animal to its pure parent known as**

**a. Back crossing**

b. Cross breeding

c. Line breeding

d. Inbreeding

**31. Urea is made of?**

a.  $\text{NH}_3 + \text{CO}_2 + \text{NITRIC ACID}$

**b. Anhydrous ammonia +  $\text{CO}_2$**

**Urea is made when carbon dioxide is reacted with anhydrous ammonia.**

**This process happens under intense pressure, at 350 degrees Fahrenheit.**

**Urea is processed to take the form of granules or solid globules known as pills.**

**32. NPOP ministry > ministry of commerce and industry**

The Ministries of Industries and Commerce, Government of India has implemented the National Programme for Organic Production (NPOP) to provide a focused and well-directed development of organic agriculture and quality products. This national programme proposes for the promotion of organic farming and provides an institutional mechanism for the implementation of National Standards for Organic Production and provides information on systems, criteria and procedure for accreditation of Inspection and certification bodies, the national organic logo. In this article, we will look at the National Programme for Organic Production (NPOP) in detail.

Objective of NPOP

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The key objective of the National Programme for Organic Production (NPOP) is explained in detail below:

- NPOP has formulated for providing the evaluation of certification programme for organic agriculture and products including the wild harvest, aquaculture, livestock products
- To facilitate certification of organic products in conformity with the importing countries organic standards as per equivalence agreement between the two countries or as per importing country requirements
- The National Programme for Organic Production (NPOP) is implemented for the development of organic farming and organic processing
- To accredit certification programme of Certification Bodies seeking accreditation
- To facilitate certification of organic products in conformity to the National Standards for Organic Products

33. **Granular form fertilizer** > granulated fertilizer

34. What is the name of disease comes from symptoms which causes bunchy appearance at the top of the tree and new leaves that are produced are narrower than normal yellow and flat

**a. Bunchy top**

**Banana Bunchy Top is a virus that stunts and deforms banana trees (BBTV). In the rare cases where an infected tree produces fruit, the bunch is small and misshapen. The virus is spread from plant to plant by banana aphids.**

35. **Highest surface water irrigation covered area under which river basin**

**a. Godavari**

b. Mahanadi

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c. Narmada

i. (bhramputra>ganga>Godavari)

**The Kaleshwaram project on Godavari River surpasses the records of the world's biggest lift irrigation projects till date.**

**36. Extension and training work: KVK**

**A Krishi Vigyan Kendra (KVK) is an agricultural extension centre in India. The name means "farm science centre". All KVKs fall under the jurisdiction of one of the 11 Agricultural Technology Application Research Institutes (ATARIs) throughout India. As of May 2021, there are approximately 722 KVKs throughout India.**

**37. PMFBY Threshold yield:** Threshold Yield for a crop in an Insurance Unit shall be based on average yield of last seven years excluding two years of declared calamity if any, multiplied by the level of indemnity of the area.

**PMMY is a scheme that helps in facilitating micro credit upto Rs. 10 lakh to small business owners. Prime Minister Employment Generation Programme (PMEGP) Provides information about PMEGP for creation of rural and urban enterprises. Procurement and Marketing Support.**

**38. Youth entrepreneurship scheme: ACBC**

**39. Minimum per day income of BPL family:** Rs 32 in rural areas and Rs 47 in urban areas

**40. Part of a wastewater treatment plant where solid impurities separate from water:** settling tank

**41. extent of bank finance in the, margin money operated by National Minorities Development & Finance Corporation (25%)**

**42. which principal of farm management implies that saving in the resource replaced must be greater than that the cost of resource added in choosing between the two completing resources for profit maximization> principle of least cost**

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**43. downward movement of water through gravity: percolation**

**44. embryo transfer technique is developed by : NDDB**

**45. NHB subsidy in general for open field projects > 20% of the total project cost limited to Rs 25 lakh per project in general area**

**46. Lowest N is in which fertilizer**

a. Urea

b. CAN

**c. Ammonium sulphate**

d. Ammonium nitrate

**47. Parameter used by big cooperative companies for agri project?**

**48). krishi vigyan kendra**

**49). Agri clinics and Agri business centre**

**About the Scheme**

- The Ministry of Agriculture and Farmers' Welfare, Government of India, in association with NABARD and MANAGE has launched this unique scheme to take better methods of farming to each and every farmer across the country. This programme aims to tap the expertise available in the large pool of Agriculture Graduates. Irrespective of whether you are a fresh graduate or not, or whether you are currently employed or not, you can set up your own AgriClinic or AgriBusiness Centre and offer professional extension services to innumerable farmers.
- Committed to this programme, the Government is now also providing start-up training to graduates in Agriculture, or any subject allied to Agriculture like Horticulture, Sericulture, Veterinary Sciences, Forestry, Dairy, Poultry farming, and Fisheries, etc. Those completing the training can apply for special start-up loans for venture.

**Objectives**

- To supplement efforts of public extension by necessarily providing extension and other services to the farmers on payment basis or free of cost as per business model of agri-preneur, local needs and affordability of target group of farmers

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- To support agricultural development.
- To create gainful self-employment opportunities to unemployed agricultural graduates, agricultural diploma holders, intermediate in agriculture and biological science graduates with PG in agri-related courses.

### **Concept**

**Agriclinics :** Agri-Clinics are envisaged to provide expert advice and services to farmers on various aspects to enhance productivity of crops/animals and increase the incomes of farmers. Agri-Clinics provide support in the following areas:

- Soil health
- Cropping practices
- Plant protection
- Crop insurance
- Post-harvest technology
- Clinical services for animals, feed and fodder management
- Prices of various crops in the market, etc.

**Agribusiness Centres :** Agri-Business Centres are commercial units of agri-ventures established by trained agriculture professionals. Such ventures may include maintenance and custom hiring of farm equipment, sale of inputs and other services in agriculture and allied areas, including post-harvest management and market linkages for income generation and entrepreneurship development.

### **Eligibility**

The scheme is open to following categories of candidates:

1. Graduates in agriculture and allied subjects from SAUs/ Central Agricultural Universities/ Universities recognized by ICAR/ UGC. Degree in Agriculture and allied subjects offered by other agencies are also considered subject to approval of Department of Agriculture & Cooperation, Government of India on recommendation of the State Government.
2. Diploma (with at least 50% marks)/ Post Graduate Diploma holders in Agriculture and allied subjects from State Agricultural Universities, State Agriculture and Allied Departments and State Department of Technical Education.
3. Diploma in Agriculture and allied subjects offered by other agencies are also considered subject to approval of Department of Agriculture & Cooperation, Government of India on recommendation of the State Government.
4. Biological Science Graduates with Post Graduation in Agriculture & allied subjects.

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5. Degree courses recognized by UGC having more than 60 percent of the course content in Agriculture and allied subjects.
6. Diploma/Post-graduate Diploma courses with more than 60 percent of course content in Agriculture and allied subjects, after B.Sc. with Biological Sciences, from recognized colleges and universities.
7. Agriculture related courses at intermediate (i.e. plus two) level, with at least 55% marks.

The scheme covers full financial support for training and handholding, provision of loan and credit linked back ended composite subsidy as per the details given in the following section  
**Project activities**

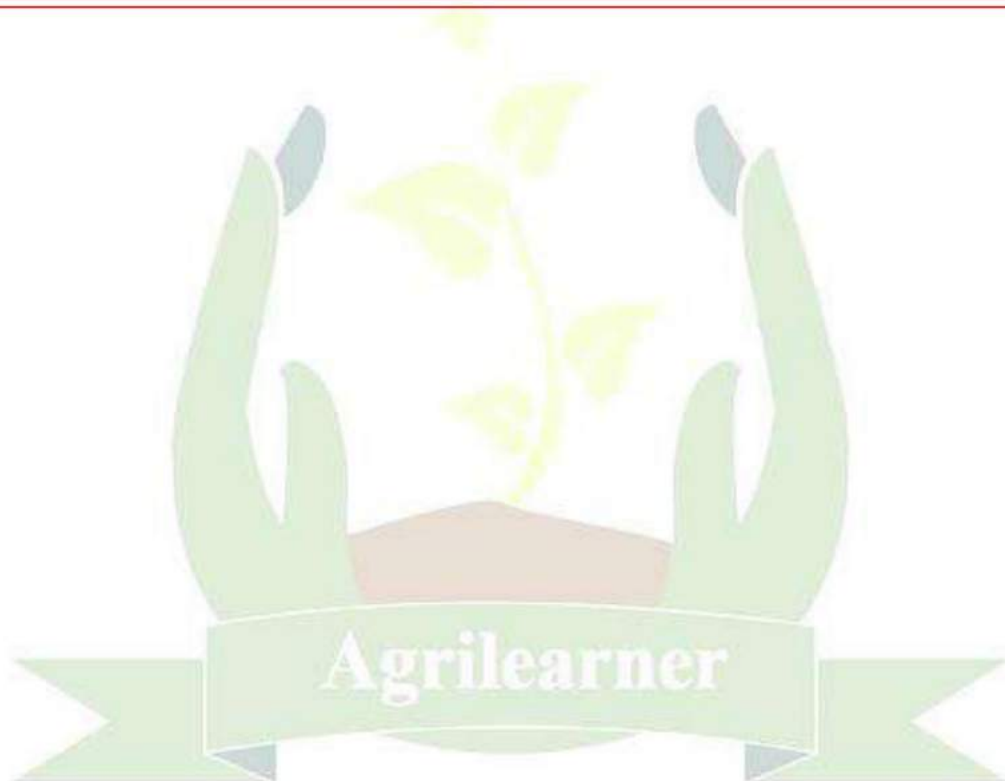
- Extension consultancy services
- Soil and water quality cum inputs testing laboratories (with Atomic Absorption Spectrophotometers)
- Pest surveillance, diagnostic and control services
- Maintenance, repairs and custom hiring of agricultural implements and machinery including micro irrigation systems (sprinkler and drip)
- Agri Service Centres including the three activities mentioned above (Group Activity).
- Seed Processing Units
- Micro-propagation through Plant Tissue Culture Labs and Hardening Units
- Setting up of Vermiculture units, production of bio-fertilisers, bio-pesticides, bio-control agents.
- Setting up of Apiaries (bee-keeping) and honey & bee products' processing units
- Provision of Extension Consultancy Services
- Hatcheries and production of fish finger-lings for aquaculture
- Provision of livestock health cover, setting up veterinary dispensaries & services including frozen semen banks and liquid nitrogen supply
- Setting up of Information Technology Kiosks in rural areas for access to various agriculture related portals
- Feed Processing and testing units
- Value Addition Centres
- Setting up of Cool Chain from the farm level onwards (Group Activity)
- Retail marketing outlets for processed agri-products
- Rural marketing dealerships of farm inputs and outputs

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**Any combination of two or more of the above viable activities along with any other economically viable activity selected by the Graduates, which is acceptable to the Bank**

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