1.CROP PRODUCTION AND MANAGEMENT

TEACHING TASK

NEET LEVEL QUESTIONS

1.What is the duration of growth typically required for long-term crops?
Answer: (c) More than 180 days
Explanation: Long-term crops (e.g., sugarcane, perennial fruits) require an extended growth period, often exceeding 180 days.

2.Which of the following is a Kharif crop?
Answer: (b) Maize
Explanation: Kharif crops (monsoon crops) include maize, rice, and cotton, sown in June-July and harvested in October-November.

3.When is the rainy season in India?
Answer: (b) June to October
Explanation: The Indian monsoon season typically runs from June to October, crucial for Kharif crops.

4.Which season is ideal for cultivating Rabi crops?
Answer: (b) Winter
Explanation: Rabi crops (e.g., wheat, barley) are sown in winter (October-November) and harvested in spring (March-April).

5.What is the meaning of "Kharif" in Arabic?
Answer: (a) Spring
Explanation: "Kharif" derives from Arabic for "autumn" (harvest season), but in India, it aligns with monsoon sowing.

6.Which factor largely influences crop production timing?
Answer: (c) Flowering mechanism
Explanation: Photoperiodism (response to day/night length) dictates flowering and thus crop timing.

7.What do Long Day Plants require for flowering?
Answer: (a) Short night durations
Explanation: Long Day Plants (e.g., wheat, radish) flower when nights are shorter (e.g., summer).

8.Which crop thrives in longer nights?
Answer: (a) W
Explanation: Wheat is a **Long Day Plant** but is grown in Rabi season; however, the question may imply **Short Day Plants** (e.g., rice). Clarification needed.

9.What do Short Day Plants require for flowering?
Answer: (b) Long night durations
Explanation: Short Day Plants (e.g., rice, soybean) need long, uninterrupted nights to flower.

10.How do Day Neutral Plants respond to night duration?
Answer: (a) They flower regardless of night duration
Explanation: Day Neutral Plants (e.g., tomato, cotton) flower independent of photoperiod.

MORE THAN ONE ANSWER TYPE

11. What are examples of spices grown in India?
Answer: (a) Cumin, (c) Cardamom, (e) Turmeric
Explanation: Spices are aromatic crops used for flavoring. Wheat and millets are cereals, not spices.

12. Which crops are major cash crops in India?
Answer: (c) Cotton, (e) Sugarcane
Explanation: Cash crops are grown for commercial purposes (e.g., cotton for textiles, sugarcane for sugar). Rice, wheat, and pulses are primarily food crops.

13. Where is coffee primarily cultivated in India?
Answer: (a) Karnataka, (b) Kerala, (c) Tamil Nadu
Explanation: Coffee is grown in the Southern states (Western Ghats region). Uttar Pradesh and Andhra Pradesh are not major coffee producers.

REASON AND ASSERTION TYPE

14. Reasoning: What makes India suitable for cultivating a diverse range of crops?
Assertion: India's diverse agro-climatic conditions, including varying temperatures, rainfall patterns, and soil types, facilitate the cultivation of a wide variety of crops.
Answer: Both Reasoning and Assertion are correct, and the Assertion justifies the Reasoning.
Explanation: India's varied climate zones (tropical, subtropical, temperate) and soil diversity support multiple cropping systems.
15. Reasoning: Why are long-term crops like jowar and red gram categorized separately from short-term crops?
Assertion: Long-term crops require a minimum of 180 days or more for harvesting, while short-term crops have a shorter growth period, typically around 100 days.
Answer: Both Reasoning and Assertion are correct, and the Assertion justifies the Reasoning.
Explanation: Classification is based on growth duration (e.g., sugarcane = long-term; radish = short-term).

16. Reasoning: How do seasonal variations influence the availability of fruits and vegetables in India?
Assertion: Different fruits and vegetables are consumed throughout the year in India, with their availability varying depending on the season, abundance, and scarcity.

Answer: Both Reasoning and Assertion are correct, and the Assertion justifies the Reasoning.
Explanation: Seasonal crops (e.g., mangoes in summer, spinach in winter) follow natural growth cycles.

MATRIX MATCHING TYPE

17. Match the Crop with its Flowering Mechanism:
Answer:
Wheat – **A. Requires short night durations for flowering** (Long Day Plant)
Maize – **B. Flowers after specific growth milestones** (Day Neutral Plant)
Soybean – **C. Flowers when nights are longer than 12½ hours** (Short Day Plant)
Cotton – **D. Can flower regardless of night duration** (Day Neutral Plant)
Explanation:
Wheat requires **short nights** (Long Day Plant).
Soybean requires **long nights** (Short Day Plant).
Maize & Cotton are **Day Neutral** (flower based on maturity, not photoperiod).

COMPREHENSION TYPE

18. Based on the passage about paddy cultivation:
i)What crop exemplifies versatile cultivation, adaptable to both Rabi and Kharif seasons?
Answer: (C) Paddy (rice)
Explanation: The passage highlights paddy's adaptability to both seasons with proper techniques.
ii)What natural phenomenon replenishes water sources during the Kharif season, facilitating paddy cultivation?
Answer: (B) Monsoon rains
Explanation: Monsoons (June–October) provide essential water for Kharif paddy.

iii)How do farmers overcome the challenges of drier conditions during the Rabi season for paddy cultivation?
Answer: (A) By employing innovative irrigation techniques
Explanation: Farmers use canals/groundwater irrigation when rainfall is scarce.

LEARNERS TASK

NEET LEVEL QUESTIONS

1.Which crop is a staple in the northern states of India like Punjab and Haryana?
Answer: (b) Wheat
Explanation: Wheat is the primary Rabi crop in Punjab and Haryana due to fertile alluvial soil and cool winters.

2.Where is Basmati rice primarily cultivated in India?

Answer: (c) Northern states
Explanation: Basmati rice is grown in Punjab, Haryana, and Western Uttar Pradesh due to favorable climate and soil.

3.Which millet is commonly grown in drier regions of India?
Answer: (a) Pearl millet (Bajra)
Explanation: Pearl millet thrives in arid regions like Rajasthan and Gujarat due to drought resistance.

4.Which state is NOT among the major producers of sugarcane in India?
Answer: (d) Rajasthan
Explanation: Major sugarcane producers: Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu. Rajasthan's climate is less suitable.

5.Cotton is a major cash crop in which of the following states?
Answer: (b) Gujarat
Explanation: Gujarat is India's top cotton producer, followed by Maharashtra and Telangana.

6.Which oilseed is primarily grown in the northern states of India?
Answer: (b) Mustard
Explanation: Mustard (Rabi crop) dominates in Rajasthan, Uttar Pradesh, Haryana.
7.Where is tea primarily cultivated in India?
Answer: (b) Assam
Explanation: Assam is India's largest tea producer, followed by West Bengal (Darjeeling) and Tamil Nadu.

8.Coffee production is prominent in which of the following states?
Answer: (b) Tamil Nadu
Explanation: Coffee is grown in Karnataka (70%), Kerala, Tamil Nadu (Western Ghats).

9.Which spice is NOT commonly produced in India?
Answer: (d) Saffron
Explanation: Saffron is rare (grown only in J&K). Black pepper, turmeric, and ginger are widely cultivated.

10.Which category of crops requires a longer duration for harvesting?
Answer: (c) Long-term crops
Explanation: Long-term crops (e.g., sugarcane, red gram) need >180 days vs. short-term (e.g., radish: 30-50 days).

ADVANCED LEVEL
MORE THAN ONE ANSWER TYPE)
11.Which crops are commonly cultivated during the Kharif season in India?
Answer: (a) Rice, (d) Jowar, (e) Cotton, (f) Turmeric

Explanation: Kharif crops (monsoon-dependent): Rice, maize, cotton, turmeric. Sugarcane is annual; wheat is Rabi.

12.Which crops are considered long-term crops?
Answer: (c) Jowar, **(d)** Black gram, (**e)** Chickpeas
Explanation: Long-term crops require >180 days (e.g., jowar: 120-180 days; pulses like black gram/chickpeas).

13.What are examples of Rabi crops?
Answer: (b) Wheat, **(d)** Barley**, (e)** Coriander
Explanation: Rabi crops (winter): Wheat, barley, mustard, coriander. Paddy and maize are Kharif.

REASON AND ASSERTION TYPE

14.Reasoning: What are the key characteristics of Kharif crops in India?
Assertion: Kharif crops are cultivated during the rainy season (June–October) and include paddy, cotton, etc.
Answer: Both correct, and Assertion justifies Reasoning.
Explanation: Kharif crops rely on monsoons; examples match the assertion.

15.Reasoning: Why are Rabi crops grown during winter?
Assertion: Rabi crops need cool weather (October–March); examples: wheat, barley.
Answer: Both correct, and Assertion justifies Reasoning.
Explanation: Rabi crops avoid monsoon rains and use residual soil moisture.

16.Reasoning: How do flowering mechanisms influence crop timing?
Assertion: Photoperiodism (e.g., long/short-day plants) dictates flowering and harvest timing.
Answer: Both correct, and Assertion justifies Reasoning.
Explanation: Crops like wheat (long-day) and rice (short-day) follow light/dark cycles.

MATRIX MATCHING TYPE

17.Match the Crop with its Cultivation Season:
Answer:
Wheat – B. Rabi Season
Paddy (rice) – A. Kharif Season (can also be C in some regions)
Cotton – A. Kharif Season
Maize – C. Both Rabi and Kharif Seasons (region-dependent)
Explanation:
Wheat is strictly Rabi.
Paddy is primarily Kharif but grown in Rabi with irrigation (e.g., Tamil Nadu).
Cotton is Kharif.
Maize is grown in both seasons.

Comprehension Type (Seasonal Fruits/Vegetables)
18.Based on the passage:

i)Which fruits are typically abundant during the summer months?

Answer: (A) Mangoes, watermelons, papayas
Explanation: Heat-loving fruits thrive in summer.

ii)What vegetables thrive during the autumn season?

Answer: (B) Carrots, potatoes, beets
Explanation: Root vegetables dominate autumn/winter.

iii)Which fruits are associated with the winter season?

Answer: (C) Oranges, lemons, grapefruits
Explanation: Citrus fruits peak in winter.

GROWING PADDY AND AGRICULTURAL PRACTICES

TEACHING TASK

NEET LEVEL QUESTIONS
MULTIPLE CHOICE QUESTIONS

1.How do farmers typically prepare the seed bed for paddy cultivation?
Answer: c) By flooding the nursery
Explanation: Paddy cultivation requires a wet environment for seed germination. Farmers typically prepare the seed bed by flooding the nursery to create ideal conditions for seedling growth, ensuring proper water management and soil consistency.

2.What is the primary purpose of levelling the soil after ploughing?
Answer: b) To facilitate even sowing of seeds
Explanation: Levelling the soil after ploughing ensures a uniform surface, which is critical for even sowing of seeds and consistent water distribution in paddy fields, enhancing crop establishment.

3.What is the traditional instrument used for ploughing in paddy cultivation?
Answer: d) Wooden plough
Explanation: In traditional paddy farming, especially in regions with small-scale farming, wooden ploughs drawn by animals are commonly used due to their affordability and suitability for wet, heavy soils.

4.How are seeds typically sowed in paddy fields?
Answer: d) All of the above
Explanation: Paddy seeds can be sown using various methods: broadcasting (scattering seeds by hand), using a seed drill for precision, or transplanting seedlings from nurseries, depending on local practices and resources.

5.What is the purpose of selecting high-quality seeds before sowing?

Answer: b) To guarantee a high yield
Explanation: High-quality seeds have better germination rates, disease resistance, and growth potential, directly contributing to higher crop yields.

6.How do farmers traditionally select good quality seeds?
Answer: b) By soaking them in water
Explanation: Farmers soak seeds in water to separate viable seeds (which sink) from non-viable or damaged seeds (which float), a simple and effective traditional method.

7.What is the significance of soaking seeds in water before sowing?
Answer: a) To soften their outer shell
Explanation: Soaking seeds softens the hard outer seed coat, promoting faster and more uniform germination by allowing water to penetrate the seed.

8.What is the purpose of removing floated seeds during seed selection?
Answer: a) They are less likely to germinate
Explanation: Seeds that float during the water test are often hollow, damaged, or immature, making them less likely to germinate successfully.

9.What is the primary advantage of using a paddy planter for planting seedlings?
Answer: a) It reduces labor costs
Explanation: Paddy planters mechanize the transplanting process, reducing the need for manual labor and increasing efficiency, which lowers labor costs significantly.

10.Which variety of paddy requires more space between plants?
Answer: a) SRI variety
Explanation: The System of Rice Intensification (SRI) method emphasizes wider spacing between plants to reduce competition, improve root growth, and enhance access to nutrients and sunlight.

ADVANCED LEVEL QUESTIONS

11.How do farmers prepare seeds for planting?
Answer: a) Soaking seeds in water, b) Sprouting seeds, c) Removing floated seeds
Explanation: Seed preparation involves soaking seeds to soften the seed coat, sprouting them to confirm viability, and removing floated seeds to eliminate non-viable ones. Washing with chemicals (d) is not a standard practice, and selecting round-shaped seeds (e) is not a criterion for paddy seed preparation.

12.Which agricultural practices are common for both Kharif and Rabi crops?
Answer: a) Preparing the soil, b) Sowing of seeds, c) Applying manure, d) Crop harvesting, e) Weeding
Explanation: These practices are essential for all crops, regardless of whether they are grown in the Kharif (monsoon) or Rabi (winter) season, as they form the core of

crop cultivation processes.

13.What are the steps involved in seed selection?
Answer: a) Soaking seeds in water, b) Removing floated seeds, c) Sprouting seeds
Explanation: Seed selection includes soaking seeds to test viability, removing floated (non-viable) seeds, and sometimes sprouting seeds to ensure germination potential. Washing with chemicals (d) or choosing round-shaped seeds (e) are not standard steps in seed selection.

REASON AND ASSERTION TYPE

14.Reasoning: Why is paddy considered a significant staple food crop globally?
Assertion: Paddy, or rice, holds global importance as a staple food crop due to its widespread consumption and role in providing sustenance for millions of people worldwide.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Explanation: Rice is a primary food source for over half the world's population, particularly in Asia, making it a critical staple crop globally.

15.Reasoning: What historical evidence supports the cultivation of paddy?
Assertion: Paddy cultivation traces back to the late Mesolithic period (9000–8000 B.C) and was prominent during the Harappan civilization (2300 B.C), indicating its long-standing significance in human agriculture.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Explanation: Archaeological findings, such as rice grains from the Mesolithic period and evidence from the Harappan civilization, confirm paddy's ancient cultivation history.

16.Reasoning: Why is India's paddy production per hectare lower compared to countries like China and Japan?
Assertion: India, despite having the largest area dedicated to paddy cultivation globally, faces challenges in achieving high production per hectare, possibly due to factors such as varied agricultural practices, limited access to modern farming techniques, and diverse climatic conditions.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Explanation: India's large paddy cultivation area is offset by challenges like inconsistent mechanization, traditional farming methods, and variable climate, leading to lower yields per hectare compared to countries with advanced agricultural systems like China and Japan.

MATRIX MATCHING TYPE

17.Match the Seed Selection Method with its Description:

Column A	**Column B**

1. Water Test C. Soaking seeds to soften their outer shell
2. Traditional Seed Preservation D. Selecting high-quality seeds based on specific criteria
3. Chemical Treatment Not matched (no corresponding description in Column B)
4. Broadcast Seeding A. Seeds are scattered by hand

Explanation:

Water Test (1) matches with **C** because soaking seeds in water softens the seed coat and helps identify viable seeds.

Traditional Seed Preservation (2) matches with **D** as it involves selecting high-quality seeds based on criteria like size, weight, or viability.

Broadcast Seeding (4) matches with **A** as it involves scattering seeds by hand.

Chemical Treatment (3) does not match any description in Column B, as none of the options directly relate to chemical use for seed selection. Note: The question appears to have an incomplete or mismatched option, as chemical treatment is not typically a seed selection method but rather a seed treatment process.

COMPREHENSION TYPE

18.Comprehension Passage Questions:

i)Where is paddy traditionally associated with cultivation?

Answer: b) Warm tropical wetlands

Explanation: The passage states that paddy is traditionally associated with warm tropical wetlands, where it thrives due to its adaptability to wet conditions.

ii)In which regions of India is paddy cultivated as both a Kharif and a Rabi crop?

Answer: c) From Rajasthan to Arunachal Pradesh and from Kerala to Jammu and Kashmir

Explanation: The passage specifies that paddy is grown across India, from northern (Rajasthan, Jammu and Kashmir) to northeastern (Arunachal Pradesh) and southern (Kerala) states, as both Kharif and Rabi crops.

iii)Apart from India, where else is paddy cultivated in cooler temperate regions?

Answer: c) China, Japan, and Australia

Explanation: The passage explicitly mentions China, Japan, and Australia as regions where paddy is cultivated in cooler temperate zones, highlighting its adaptability.

LEARNERS TASK

MULTIPLE CHOICE QUESTIONS

1.Which crop is commonly referred to as the "Global grain" due to its significance as a staple food?

Answer: b) Rice (Paddy)

Explanation: Rice, also known as paddy, is a staple food for over half the world's population, especially in Asia, earning it the title of "Global grain" due to its

widespread consumption and critical role in food security.

2.What is the historical significance of paddy cultivation?
Answer: b) Prominent during the Harappan civilization
Explanation: Paddy cultivation has ancient roots, with evidence of its practice during the Harappan civilization (around 2300 B.C.), highlighting its long-standing importance in agriculture.

3.In which regions of India can paddy be grown as both a Kharif and Rabi crop?
Answer: c) Across India, from Rajasthan to Arunachal Pradesh
Explanation: Paddy is cultivated across diverse regions of India, including northern (Rajasthan), northeastern (Arunachal Pradesh), southern, and other states, as both a Kharif (monsoon) and Rabi (winter) crop due to its adaptability.

4.Which country has the largest area of land dedicated to paddy cultivation?
Answer: b) India
Explanation: India has the largest area under paddy cultivation globally, although its yield per hectare may be lower compared to countries like China or Japan due to varying agricultural practices.

5.What is the purpose of ploughing the field before planting seeds?
Answer: d) All of the above
Explanation: Ploughing serves multiple purposes: it removes weeds, loosens and softens the soil for better root penetration, and helps level the soil for uniform planting and water distribution.

6.What is the primary function of a seed drill?
Answer: a) Loosens the soil, c) Promotes the growth of earthworms, e) Allows roots to penetrate deeply
Explanation: Ploughing loosens the soil for better aeration and water movement, promotes earthworm activity which enhances soil fertility, and allows roots to penetrate deeper for better nutrient uptake. While it may indirectly retain water (d) or kill some microorganisms (b), these are not primary purposes.

7.Why is the traditional method of seed preservation declining?
Answer: (c) Reliance on market-bought seeds
Explanation: Farmers are increasingly depending on commercially produced seeds from the market rather than saving and preserving traditional seeds, leading to a decline in traditional seed preservation methods.

8.What is the primary purpose of applying manure to the soil before ploughing?
Answer: (c) To provide nutrients to the crops
Explanation: Manure enriches the soil with essential nutrients like nitrogen, phosphorus, and potassium, which are vital for plant growth.

9.How do farmers ensure proper spacing between seedlings during transplanting?

Answer: (c) By using a paddy planter
Explanation: A paddy planter helps in maintaining uniform spacing between seedlings, ensuring optimal growth conditions.

10.What is the traditional method of seed selection in agriculture?
Answer: (b) Soaking seeds in water
Explanation: Farmers traditionally soak seeds in water to separate healthy (sinking) seeds from unhealthy (floating) ones, ensuring better germination rates.

Advanced Level (More than One Answer Type):

11.What is the purpose of ploughing the soil before sowing seeds?
Answers:(a) Loosens the soil (Improves aeration)
Explanation: Ploughing improves soil structure, enhances microbial activity, aids water retention, and allows roots to grow deeper, contributing to healthier crops.

12..What is the significance of seed selection in agriculture?
Answer: a) Ensures a healthy crop, b) Speeds up the germination process, c) Promotes uniform crop growth, e) Reduces the risk of pest infestation
Explanation: Selecting high-quality seeds ensures healthy crops, faster germination, uniform growth, and reduces pest risks due to robust plants. It does not increase dependence on seed companies (d), as traditional methods can also be used.

13.Which method is used for sowing seeds uniformly in the soil?
Answer: b) Seed drill, c) Hand planting, e) Seed planter
Explanation: Seed drills and seed planters are designed for uniform sowing, while hand planting can achieve uniformity with careful execution. Broadcasting (a) is less uniform, and sprinkler sowing (d) is not a standard method for seed sowing.

REASON AND ASSERTION TYPE

14.Reasoning: What is the significance of proper soil preparation in paddy cultivation?
Assertion: Proper soil preparation is essential in paddy cultivation as it ensures adequate air and water supply to the plants' roots, facilitates seed germination, and promotes uniform water distribution, ultimately contributing to healthy crop growth and yield.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Explanation: Soil preparation, including ploughing and levelling, ensures optimal conditions for root growth, water management, and germination, directly impacting crop yield in paddy cultivation.

15.Reasoning: How do farmers select high-quality seeds for paddy cultivation?
Assertion: Farmers select high-quality seeds for paddy cultivation based on specific criteria such as wrinkle-free, round-shaped, and heavier seeds, which are indicators of good health. This ensures the successful germination and growth of robust crops.

Answer: Both Reasoning and Assertion are true, but the Assertion does not fully explain the Reasoning.
Explanation: While the Assertion mentions criteria like wrinkle-free and heavier seeds, the primary traditional method for seed selection is the water test (soaking to separate viable seeds). Round-shaped seeds are not a universal criterion for paddy seed selection, making the explanation incomplete.

16.Reasoning: Why is the use of genetically modified (GM) seeds in paddy cultivation controversial?
Assertion: The use of genetically modified (GM) seeds in paddy cultivation raises concerns due to issues such as dependency on seed companies, reduced genetic diversity, potential environmental impacts, and the possibility of sterile seeds, which may pose risks to farmers' livelihoods and food security.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Explanation: GM seeds are controversial due to concerns about farmer dependency, loss of biodiversity, environmental risks, and issues like sterile seeds (e.g., terminator genes), which could affect farmers' ability to save seeds and impact food security.

Matrix Matching Type
17.Match the Agricultural Practice with its Description:

Column A	**Column B**
1. Ploughing and Applying Manure	A. Loosens the soil and aids in transportation of air and water
2. Levelling the Soil	Not matched (no corresponding description in Column B)
3. Seed Selection Process	B. Removes floated seeds which are less likely to germinate
4. Transplanting Seedlings	D. Bundles seedlings for replanting in the field

Explanation:
Ploughing and Applying Manure (1) matches with **A** because ploughing loosens the soil, and manure aids in nutrient, air, and water transport.
Seed Selection Process (3) matches with **B** as it involves removing floated seeds during the water test to ensure viable seeds.
Transplanting Seedlings (4) matches with **D** as it involves bundling and replanting seedlings in the field.
Levelling the Soil (2) does not have a direct match in Column B, as none of the descriptions explicitly address levelling's role in ensuring uniform sowing or water distribution. Note: The question may have an incomplete or mismatched option, as levelling is a key practice but lacks a corresponding description.

COMPREHENSION TYPE

18.COMPREHENSION PASSAGE QUESTIONS:
i)What is the primary purpose of agricultural practices?
Answer: c) To maximize yield and ensure food security

Explanation: The passage states that agricultural practices are essential for maximizing yield and ensuring food security, aligning with their core purpose.

ii)How can agricultural practices be carried out?
Answer: c) Either using traditional manpower or modern tools
Explanation: The passage mentions that agricultural practices can be executed using traditional manpower or modern tools, highlighting their flexibility.
Why are agricultural practices not exclusive to paddy but applicable to other crops as well?
Answer: c) Because agricultural practices are adaptable across different crop seasons and contexts
Explanation: The passage emphasizes that agricultural practices are adaptable across various crop seasons (e.g., Kharif, Rabi) and contexts, making them applicable to crops beyond paddy.

3. APPLYING MANURE AND PESTICIDES

TEACHING TASK

NEET LEVEL QUESTIONS

1.Which tool might farmers use for applying manure to crops?
Answer: b) Plow
Explanation: Farmers use plows to mix manure into the soil evenly. While manure spreaders exist, plows are the most common traditional tool for incorporating manure.

2.What is the purpose of supplying manure to crops?
Answer: c) To provide essential nutrients
Explanation: Manure adds crucial nutrients like nitrogen, phosphorus, and potassium to the soil while improving its organic matter content and water-holding capacity.

3.Which insect is known to carry viral infections in crops?
Answer: b) Whitefly
Explanation: Whiteflies are notorious vectors for plant viruses like Tomato Yellow Leaf Curl Virus and Cassava Mosaic Virus, transmitting them as they feed on plant sap.

4. What can excessive use of pesticides lead to?
Answer: b) Environmental damage
Explanation: Overuse can cause water contamination, harm beneficial organisms, and lead to bioaccumulation in the food chain, disrupting ecosystems.

5.Which season are Deccan wingless grasshoppers commonly seen in?
Answer: d) Kharif

Explanation: These grasshoppers thrive during India's Kharif season (June-October) when monsoon rains support their breeding in paddy fie**:**

6.What practice can help control pests in crops?
Answer: b) Removing affected leaves and burning them
Explanation: This physical removal method eliminates pest breeding sites and infected plant material, breaking the pest life cycle.

7.Which is a symptom of bacterial infection in plants?
Answer: b) Brown spots on leaves
Explanation: Bacterial infections often cause water-soaked lesions that turn brown (e.g., bacterial leaf spot in peppers), unlike fungal powdery growths.

8.What happens when pests become resistant to pesticides?
Answer: c) Need for pesticide rotation
Explanation: Resistance develops through overuse, requiring farmers to alternate pesticide classes with different modes of action.

9.What role do wasps and ladybugs play in agriculture?
Answer: c) Eating harmful insects
Explanation: Ladybugs consume aphids, while parasitic wasps lay eggs in caterpillars - both provide natural biological pest control.

10. Which manure is enriched with NPK?
Answer: b) Organic synthetic manure
Explanation: These are organically-based but fortified with additional nutrients to achieve balanced NPK ratios for crop needs.

ADVANCED LEVEL QUESTIONS

11. Which pests attack paddy crops?
Answer: a) Moth caterpillars, b) Paddy beetles, c) Paddy grasshoppers
Explanation: Stem borers (caterpillars), leaf-eating beetles, and grasshoppers are major rice pests, while aphids prefer other crops.

12.What are common symptoms of fungal infections on plant leaves?
Answer: a) White spots, b) Black spots, d) Fluffy/powdery coating
Explanation: Fungi cause diverse symptoms: powdery mildew (white), sooty mold (black), and downy mildew (fluffy growth).

13.Which agricultural practices help in controlling pests?
Answer: a) Ploughing, b) Sun exposure, c) Pesticide use
Explanation: Ploughing buries pests, solarization uses heat, and pesticides kill directly - manuring aids fertility but not pest control.

14.Reasoning : Pest control methods?
Assertion Evaluation: Correct

Explanation: Removing infected tissue is integrated pest management. Burning prevents spore spread, while burial accelerates decomposition.

15.Reasoning : Pesticide resistance?
Assertion Evaluation: Correct
Explanation: Repeated exposure selects for resistant pest strains, requiring strategic pesticide rotation to maintain effectiveness.

16.Reasoning: Pesticide environmental impact?
Assertion Evaluation: Correct
Explanation: Broad-spectrum pesticides often harm pollinators and natural predators, disrupting ecological balance beyond target pests.

17.Matrix Matching:
1-C (Pest-plant relationships are harmful)
2-D (Natural pesticides like pyrethrins)
3-B (Manure application requires tools)
4-A (NPK-enriched artificial manure)

Comprehension Answers:

18.Comprehension Type

i)Which of the following is NOT a consequence of overdosing fertilizers
Answer:c) Improved crop yields
Explanation:(Over-fertilization reduces yields)

ii)What effect does excessive fertilization have on the soil's pH balance?
Ansewr:c)
Explanation:Alters pH (Excess nitrogen acidifies, excess lime alkalizes)

iii) What is the ultimate outcome of over-fertilization according to the passage?
Answer:c) Harms farmers
Explanation:(Long-term soil degradation outweighs short-term gains)

LEARNERS TASK

NEET Level Questions: Key and Solutions
Multiple Choice Questions
1.Which pest is commonly attracted to growing paddy crops?
Answer: b) Caterpillars
Explanation: Caterpillars, such as rice stem borers or leaf folders, are common pests that damage paddy crops by feeding on stems and leaves, causing significant yield losses. Mosquitoes, ladybugs, and ants are not primary pests of paddy.
2.What is a common symptom of fungal infection in plants?
Answer: b) Powdery spots on leaves
Explanation: Fungal infections, like powdery mildew, often manifest as powdery

white or grayish spots on leaves. Small holes are typically caused by insects, crumpled leaves by aphids, and warts on stems are not a common fungal symptom.

3.Which is a natural pesticide derived from plants?
Answer: c) Neem
Explanation: Neem oil, extracted from the neem plant, is a natural pesticide with insect-repellent properties. DDT, BHC, and chlordane are synthetic chemical pesticides.

4.What is the consequence of overdosing manure on crops?
Answer: b) Water pollution
Explanation: Excessive manure application leads to nutrient runoff, particularly nitrogen and phosphorus, causing water pollution through eutrophication. While reduced plant growth and altered soil pH can occur, water pollution is a primary environmental consequence.

5.Which type of manure is formed by decomposing plant and animal wastes?
Answer: c) Natural manure
Explanation: Natural manure, such as farmyard manure or compost, is produced by decomposing organic matter like plant and animal wastes. Artificial and synthetic manures are chemical-based, and inorganic manure refers to mineral fertilizers.

6.How can farmers control pests through ploughing and sun exposure?
Answer: c) By exposing pest eggs and larvae to sunlight
Explanation: Ploughing turns the soil, exposing pest eggs and larvae to sunlight, heat, and predators, which kills them or disrupts their life cycle, reducing pest populations.

7.Which is a symptom of aphid infestation in plants?
Answer: b) Crumpled leaves
Explanation: Aphids suck sap from plants, causing leaves to curl or crumple. Powdery spots indicate fungal infections, small holes suggest beetle or caterpillar damage, and warts on stems are not typical of aphid infestations.

8.What type of fertilizer is derived from plants like neem and chrysanthemum?
Answer: b) Natural fertilizer
Explanation: Fertilizers derived from neem and chrysanthemum are organic and classified as natural fertilizers, as they are plant-based and not chemically synthesized.

9.Which insect is commonly attracted to wheat, paddy, and sugarcane crops?
Answer: b) Caterpillar
Explanation: Caterpillars, such as stem borers or armyworms, are common pests affecting wheat, paddy, and sugarcane. Ladybugs are beneficial insects, ants are not major crop pests, and “Beer” is likely a typo for “Beetle,” which is less specific to these crops compared to caterpillars.

10.What is the primary purpose of using pesticides on crops?
Answer: b) To control pest populations
Explanation: Pesticides are primarily used to manage and reduce pest populations that damage crops, protecting yield and quality. They do not improve soil fertility, promote weeds, or reduce water usage.

ADVANCED LEVEL

More than One Answer Type
11.Which tools are commonly used for the application of manure on crops?
Answer: a) Tractor, c) Spade, d) Manure spreader
Explanation: Tractors and manure spreaders are used for efficient, large-scale manure application, while spades are used for manual or small-scale spreading. Plows are primarily for soil tillage, not manure application.

12.What are types of manure commonly used in agriculture?
Answer: a) Natural manure (Bio fertilizers), c) Compost, d) Vermicompost
Explanation: Natural manure (e.g., farmyard manure), compost (decomposed organic matter), and vermicompost (produced by worms) are organic manures widely used in agriculture. Artificial manure refers to chemical fertilizers, which are not organic.

13.What are consequences of overdosing manure?
Answer: a) Soil pollution, b) Water pollution, c) Altered pH balance of the soil, d) Reduced soil fertility
Explanation: Overdosing manure causes nutrient overload, leading to soil pollution (excess salts), water pollution (nutrient runoff), altered soil pH (e.g., acidification), and reduced soil fertility due to imbalances and toxicity.

REASON AND ASSERTION TYPE
14.Reasoning: Why is proper manuring crucial in agriculture?
Assertion: Proper manuring ensures healthy plant growth by replenishing essential nutrients in the soil, preventing nutrient depletion and soil infertility.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Explanation: Proper manuring supplies essential nutrients like nitrogen, phosphorus, and potassium, promoting healthy plant growth and maintaining soil fertility by preventing nutrient depletion.

15.Reasoning: What are the consequences of overdosing manure?
Assertion: Overdosing manure can lead to soil and water pollution, alter soil pH balance, and ultimately reduce overall soil fertility, bringing more harm than benefit to farmers.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Explanation: Excessive manure application causes nutrient runoff (water pollution), salt accumulation (soil pollution), pH imbalance, and reduced fertility due to toxicity,

harming crops and the environment.

16.Reasoning: Why do farmers use various pesticides and insecticides to control pests for different crops?
Assertion: Different crops attract different pests, and employing various pesticides helps farmers effectively manage pest infestations and maintain healthy crops.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Explanation: Different crops (e.g., paddy, wheat) attract specific pests (e.g., stem borers, aphids), requiring targeted pesticides to control infestations and protect crop health.

MATRIX MATCHING TYPE
17.Match Column A with Column B

Column A	**Column B**
1. Common Agricultural Pests	B. Desert Locusts
2. Environmental Impact of Pesticides	A. Extensive Environmental Damage
3. Natural Manure	D. Formed by decomposing plant and animal wastes
4. Artificial Manure	C. Manufactured in factories and enriched with Nitrogen, Phosphorus, and Potassium

Explanation:
Desert locusts are notorious agricultural pests causing widespread crop damage.
Pesticides cause extensive environmental damage, including soil and water contamination.
Natural manure is formed by decomposing organic matter like plant and animal wastes.
Artificial manure refers to chemical fertilizers manufactured with nutrients like NPK.

COMPREHENSION TYPE
18.Passage-Based Questions
i. Which statement is true regarding the environmental impact of pesticides?
Answer: c) Some pesticides target specific pests, while others harm beneficial insects.
Explanation: The passage states that some pesticides are designed to target specific pests, but many harm beneficial insects, disrupting ecosystem balance.
ii. What is one potential consequence of using pesticides extensively?
Answer: c) Disruption of natural habitats
Explanation: The passage highlights that extensive pesticide
iii. How can farmers minimize environmental damage caused by pesticides?
Answer: c) By adopting sustainable pest management practices
Explanation: The passage emphasizes that adopting sustainable pest management practices mitigates the adverse environmental effects of pesticide use.

4. IRRIGATION PRACTICES
TEACHING TASK

Multiple Choice Questions (MCQs)

1.Which ancient method involved lifting water from wells using human labor?

Answer: b) Chain pumps

Solution: Chain pumps were an ancient method used to lift water from wells or other water sources using human or animal labor. They consist of a series of containers attached to a chain or rope that is manually operated to draw water. Drip irrigation, sprinkler irrigation, and furrow irrigation are modern methods, not reliant on human labor in the same way.

2.What is the primary aim of modern irrigation methods?

Answer: a) To conserve water

Solution: Modern irrigation methods, such as drip and sprinkler systems, are designed to deliver water efficiently to crops, minimizing wastage and ensuring optimal water use. They do not aim to increase wastage, promote weed growth, or reduce crop productivity.

3.Which modern irrigation method delivers water drop by drop directly to the roots of plants?

Answer: d) Drip irrigation

Solution: Drip irrigation involves delivering water directly to the root zone of plants in small, controlled amounts (drop by drop), ensuring efficient water use and minimizing evaporation. Furrow, basin, and sprinkler irrigation do not target the roots as precisely.

4.Weeds compete with primary crops for:

Answer: b) Water and nutrients

Solution: Weeds are unwanted plants that grow alongside crops and compete for essential resources like water, nutrients, and sometimes sunlight. They do not compete for air or pesticides.

5.What is the purpose of weeding?

Answer: b) To increase crop yield

Solution: Weeding removes unwanted plants that compete with crops for resources, thereby improving crop growth and yield. While weeding may indirectly help prevent pest spread or conserve water, its primary purpose is to enhance crop productivity.

6.What are some common methods of weeding mentioned in the text?

Answer: c) Uprooting and using weedicides

Solution: Common weeding methods include physically uprooting weeds and applying weedicides (chemicals) to kill them. Mulching is a weed control method but

not always a direct weeding method. Fertilization and pruning are not weeding techniques.

7.Which weed control method involves using chemicals to selectively kill weeds?
Answer: d) Weedicides
Solution: Weedicides are chemical substances designed to selectively target and kill weeds without significantly harming crops. Mulching and uprooting are physical methods, and "weeding" is a general term, not a specific method.

8.What is the primary purpose of harvesting?Answer: b) To collect matured crops
Solution: Harvesting involves gathering mature crops from the fields for consumption, sale, or storage. It does not involve planting seeds, applying pesticides, or preparing soil.

9.What is the process of separating grains from the dry plant stalks called?
Answer: c) Threshing
Solution: Threshing is the process of separating grains from the stalks or chaff of harvested crops. Weeding removes unwanted plants, harvesting is the collection of crops, and winnowing separates grains from lighter chaff after threshing.

10.What method is commonly used for paddy harvesting?
Answer: b) Manual harvesting using sickles
Solution: Paddy (rice) is commonly harvested manually using sickles, especially in traditional farming systems, due to the delicate nature of the crop and the need for precision. Harvesters are used for larger-scale crops, while winnowing machines and weedicides are unrelated to harvesting.

MORE THAN ONE ANSWER TYPE QUESTIONS

11.What is the purpose of threshing in crop harvesting?
Answer: A) Separating grains from chaff, C) Collecting grains for storage
Solution: Threshing is the process of separating grains from the chaff (the inedible part of the plant). After threshing, grains are collected for storage or further processing. Drying crops (B) and removing weeds (D) are not purposes of threshing.

12.Which storage containers are mentioned in the text?
Answer: C) Jute bags, D) Metallic bins
Solution: The text likely mentions jute bags and metallic bins as common storage

containers for grains, as these are widely used in agriculture. Tins and generic "containers" are less specific and not typically highlighted in agricultural texts.

13.What are the purposes of drying grains before storage?

Answer: A) To reduce moisture content, B) To prevent mold formation

Solution: Drying grains reduces their moisture content, which prevents mold formation and spoilage during storage. Drying does not aim to increase weight (C) or improve taste (D), as these are not relevant to storage preservation.

14.**Reason and Assertion Type Questions**

Reasoning: Why is proper grain storage crucial for farmers?

Assertion: Proper grain storage helps protect harvested crops from damage caused by pests, fungi, and moisture, ensuring their quality and preserving them for consumption or sale.

Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.

Solution: Proper grain storage is critical to protect crops from pests, fungi, and moisture, which can degrade quality and lead to losses. The assertion accurately explains why storage is crucial, as it ensures grains remain suitable for consumption or sale.

15.Reasoning: What role do modern irrigation methods play in water conservation?

Assertion: Modern irrigation techniques like sprinklers and drip systems aim to conserve water by delivering it precisely where needed, reducing wastage and promoting efficient water usage in agriculture.

Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.

Solution: Modern irrigation methods, such as drip and sprinkler systems, are designed to deliver water efficiently to crops, minimizing wastage. The assertion correctly explains how these methods conserve water by targeting specific areas and reducing runoff or evaporation.

16.Reasoning: How does weeding contribute to pest and disease management in crops?

Assertion: Weeding practices not only eliminate competition for resources but also remove potential hosts for pests and diseases, thereby reducing the risk of their spread and infestation in crop fields.

Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.

Solution: Weeding removes weeds that compete for resources and can serve as hosts for pests and diseases. By eliminating these weeds, the risk of pest and disease

spread is reduced, as explained by the assertion.

MATRIX MATCHING TYPE QUESTION

17.MATCH THE WEEDICIDES WITH THEIR USAGE:
Answer: Glyphosate – B. Broad-spectrum weed control
Atrazine – C. Selective control of broadleaf weeds
Paraquat – B. Broad-spectrum weed control
Pendimethalin – D. Pre-emergent weed control
Solution:Glyphosate: A non-selective, broad-spectrum herbicide that controls a wide range of weeds.
Atrazine: A selective herbicide used primarily for controlling broadleaf weeds in crops like maize and sugarcane.
Paraquat: A non-selective, broad-spectrum herbicide used for quick weed control.
Pendimethalin: A pre-emergent herbicide that prevents weed seed germination by inhibiting root and shoot development.

COMPREHENSION TYPE QUESTIONS

18.Passage: Farmers employ various storage practices to safeguard their grain produce from the detrimental effects of fungi, pests, rodents, and bacteria. The preservation of grains is essential as they are highly susceptible to damage when exposed to moisture. Moist conditions promote the growth of molds, which can contaminate the grains and render them unsuitable for consumption. Therefore, farmers meticulously follow storage protocols to maintain the quality of their grain stock.
i)What are farmers aiming to protect their grain produce from?
Answer: b) Fungi, pests, rodents, and bacteria
Solution: The passage explicitly states that farmers aim to protect grains from fungi, pests, rodents, and bacteria, which can damage stored grains.

ii)Why is exposure to moisture particularly harmful to grains?
Answer: b) It promotes the growth of molds
Solution: The passage explains that moisture promotes mold growth, which can contaminate grains and make them unsuitable for consumption.

iii)What is the primary consequence of mold contamination in grains?
Answer: c) Rendering them unsuitable for consumption
Solution: The passage specifies that mold contamination renders grains unsuitable for consumption, as it affects their quality and safety.

LEARNERS TASK
Multiple Choice Questions

1.What is the primary purpose of irrigation?
Answer: c) To water crop plants in the field
Solution: Irrigation is primarily used to provide water to crops in the field, especially in areas with insufficient rainfall, to ensure proper growth and yield.

2.Which of the following is NOT a common water source for irrigation?
Answer: d) Ponds
Solution: Wells, canals, and rivers are commonly used as water sources for irrigation due to their larger and more reliable water supply. Ponds are less commonly used as primary irrigation sources.

3.Which irrigation method involves flooding fields with water, suitable for crops like paddy?
Answer: b) Basin irrigation
Solution: Basin irrigation involves flooding a flat area of land surrounded by bunds, making it ideal for crops like paddy that require standing water.

4.What is a significant task in irrigation mentioned in the text?
Answer: b) Clearing water flow barriers
Solution: Clearing water flow barriers ensures efficient water distribution in irrigation systems, preventing blockages and wastage.

5.Excess water in irrigation may lead to:
Answer: c) Waterlogging
Solution: Excessive irrigation can cause waterlogging, where water accumulates in the soil, leading to reduced oxygen availability for plant roots and potential crop damage.

6.How are grains separated from chaff and dust during winnowing?
Answer: c) By pouring grains from a height
Solution: Winnowing involves pouring grains from a height, allowing the wind to blow away lighter chaff and dust while heavier grains fall to the ground.

7.What is a common method of household grain storage?
Answer: b) Storing grains in jute bags
Solution: Jute bags are commonly used for household grain storage due to their breathability, affordability, and ability to protect grains from moisture.

8.What is the primary purpose of drying grains before storage?
Answer: c) To reduce moisture content
Solution: Drying grains reduces moisture content, preventing mold growth and spoilage during storage.

9..What is NOT a storage container mentioned in the text?
Answer: c) Plastic bags

Solution: Metallic bins, bamboo bins, and jute bags are commonly mentioned as storage containers in agricultural texts, while plastic bags are less frequently used for grain storage.

10.Cold storage units are commonly used for storing:
Answer: b) Vegetables and fruits
Solution: Cold storage units are primarily used to store perishable items like vegetables and fruits to extend their shelf life.

ADVANCED LEVEL: MORE THAN ONE ANSWER TYPE

11.What are the methods of weed removal mentioned in the text?
Answer: A) Manual uprooting, B) Use of weedicides
Solution: Weed removal is commonly done by manually uprooting weeds or using chemical weedicides. Drip and sprinkler irrigation are not weed removal methods.

12.Which weeds are commonly found in paddy fields?
Answer: A) Garika, C) Varipilla Gaddi
Solution: Garika and Varipilla Gaddi are weeds commonly associated with paddy fields, competing with rice crops for resources. Wanza and Tridax are less specific to paddy fields.

13.What are the methods of crop harvesting mentioned in the text?
Answer: A) Manual harvesting, B) Mechanized harvesting, C) Harvesting with sickles
Solution: Manual harvesting (using tools like sickles) and mechanized harvesting (using machines like harvesters) are common methods. Harvesting with chainsaws is not typically used for crops.

REASON AND ASSERTION TYPE

14.Reasoning: Why is irrigation essential in agriculture?
Assertion: Irrigation ensures adequate water supply to crop plants, facilitating their growth and productivity.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Solution: Irrigation provides crops with the necessary water for growth, especially in regions with inadequate rainfall, directly supporting higher productivity.

15.Reasoning: What is the significance of weeding in crop cultivation?
Assertion: Weeding practices help eliminate unwanted plants (weeds) that compete with primary crops for essential resources like nutrients and water, thus promoting healthier crop growth.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Solution: Weeding removes weeds that compete with crops for nutrients, water, and

sunlight, ensuring better crop health and yield.

16.Reasoning: How does manual harvesting differ from mechanized harvesting?
Assertion: Manual harvesting involves the use of handheld tools like sickles, whereas mechanized harvesting utilizes machines such as harvesters for efficient and rapid crop collection.
Answer: Both Reasoning and Assertion are true, and the Assertion correctly explains the Reasoning.
Solution: Manual harvesting relies on labor-intensive tools like sickles, while mechanized harvesting uses machines for faster and more efficient crop collection.

MATRIX MATCHING TYPE

17.Match the irrigation method with the suitable crops:
Answer: Furrow Irrigation – B. Wheat and Maize
Basin Irrigation – D. Paddy
Sprinkler Irrigation – C. Vegetables and Flowers
Drip Irrigation – A. Vineyards and Orchards
Solution:Furrow Irrigation: Suitable for row crops like wheat and maize, where water flows between ridges.
Basin Irrigation: Ideal for paddy, which requires flooding.
Sprinkler Irrigation: Effective for vegetables and flowers, providing uniform water distribution.
Drip Irrigation: Best for vineyards and orchards, delivering precise water to plant roots.

COMPREHENSION TYPE

18.Passage Summary: Governments provide subsidies to promote sprinkler and drip irrigation systems, which help farmers conserve water, reduce wastage, and improve crop yields and sustainability.
i)What is the primary aim of government subsidies for sprinklers and drip irrigation systems?
Answer: c) To promote water conservation and efficient irrigation
Solution: Subsidies incentivize farmers to adopt sprinkler and drip irrigation systems to conserve water and enhance irrigation efficiency.
ii)How do sprinklers and drip irrigation systems contribute to water conservation?
Answer: b) By minimizing water usage and ensuring precise watering
Solution: These systems deliver water directly to plants, reducing wastage and ensuring efficient use of water resources.

iii)What potential benefits do farmers gain from adopting sprinklers and drip systems?

Answer: c) Improved crop yields and sustainability in agriculture

Solution: These systems optimize water use, leading to healthier crops, higher yields, and sustainable farming practices.