IMPROVEMENT IN FOOD RESOURCES

1. Which of the following is not a rabi crop?
   a) Wheat
   b) Gram
   c) Paddy
   d) Mustard
   Ans: c) Paddy
2. The practice of growing two or more crops simultaneously on the same field is called:
   a) Crop rotation
   b) Mixed cropping
   c) Intercropping
   d) Monoculture
   Ans: b) Mixed cropping
3. The main source of food for honeybees is:
   a) Pollen and nectar
   b) Leaves
   c) Seeds
   d) Fruits
   Ans: a) Pollen and nectar
4. Which nutrient promotes vegetative growth in plants?
   a) Nitrogen
   b) Phosphorus
   c) Potassium
   d) Calcium
   Ans: a) Nitrogen
5. Inland fisheries deal with:
   a) Marine fishes
   b) Fishes from rivers, lakes, ponds
   c) Ocean farming
   d) None of these
   Ans: b) Fishes from rivers, lakes, ponds
6. Poultry farming is mainly for obtaining:
   a) Meat and eggs
   b) Milk
   c) Wool
   d) Honey
   Ans: a) Meat and eggs
7. Green manure is obtained from:
   a) Leguminous plants
   b) Cereal crops
   c) Cash crops
   d) Tubers
   Ans: a) Leguminous plants
8. Which disease is caused in cattle by deficiency of calcium?
   a) Anthrax
   b) Foot and mouth disease
   c) Milk fever
   d) Rinderpest
   Ans: c) Milk fever

9. Which is a marine fish?
   a) Rohu
   b) Catla
   c) Hilsa
   d) Mrigal
   Ans: c) Hilsa
10. Composite fish culture means:
    a) Rearing only one type of fish
    b) Rearing both local and foreign species together
    c) Growing fish with crops
    d) Rearing poultry with fish
    Ans: b) Rearing both local and foreign species together

Section B

1. Apiculture is related to rearing of silkworms.
   Ans: False (It is rearing of honeybees)
2. Potassium improves disease resistance in plants.
   Ans: True
3. Vermicompost is prepared using cow dung and earthworms.
   Ans: True
4. Cross breeding in animals improves only milk yield but not disease resistance.
   Ans: False
5. Rabi crops are sown in rainy season.
   Ans: False (They are sown in winter)

Section C

Define manure.
Ans: Manure is an organic substance obtained from decomposition of plant and animal waste. It enriches the soil with organic matter and nutrients.

1. Name two exotic breeds of milch cattle.
   Ans: Jersey and Brown Swiss.
2. What is apiculture?
   Ans: The scientific method of rearing honeybees for honey and wax production is called apiculture.
3. State two disadvantages of chemical fertilizers.
   Ans:
   - They make the soil acidic and less fertile in long run.
   - They cause water pollution by leaching into rivers and ponds.
4. Write two methods of weed control.
   Ans:
   - Mechanical removal (weeding by hand or machine).
   - Using weedicides like 2,4-D.

Section D

Differentiate between compost and vermicompost.
Ans:

- Compost: Formed by decomposition of organic matter naturally.
- Vermicompost: Formed with the help of earthworms.
- Vermicompost is richer in nutrients than compost.

2. Write three advantages of intercropping.
   Ans:
   - Better utilization of nutrients.
   - Reduced spread of pests and diseases.
   - Ensures high productivity and soil fertility.
3. Why is crop rotation important?
   Ans:
   - Prevents soil depletion of specific nutrients.
   - Reduces chances of pest infestation.
   - Maintains soil fertility.
4. Give three differences between manure and fertilizers.
   Ans:

Manure	Fertilizer
Organic, from plant/animal waste	Chemical or natural salts
Improves soil texture and fertility	Provides specific nutrients only
Nutrient content low	Nutrient content high

5. Explain composite fish culture with an example.
   Ans: In composite fish culture, both local and exotic fish species are reared together in the same pond. Example: Catla, Rohu, Mrigal (local) with Grass carp and Silver carp (exotic). This ensures efficient use of food resources.
6. State three management practices in dairy farming.
   Ans:
   - Proper shelter and hygiene.
   - Balanced diet with fodder, grains, and supplements.
   - Regular veterinary care and vaccination.
7. Differentiate between capture and culture fisheries.
   Ans:
   - Capture fishery: Obtaining fish from natural resources like rivers, lakes, seas.
   - Culture fishery: Raising fish in controlled conditions like ponds, tanks (aquaculture).
8. Why is poultry farming important? (Any three points)
   Ans:
   - Provides eggs and meat at low cost.
   - Source of employment and income.
   - Poultry droppings act as organic manure.

9. Write short notes on biotic and abiotic factors in crop production.
   Ans:
   - Biotic factors: Pests, pathogens, weeds which harm crops.
   - Abiotic factors: Temperature, rainfall, nutrients, irrigation affecting crop growth.
10. What are the advantages of organic farming?
    Ans:
    - Environment-friendly, no pollution.
    - Improves soil fertility and structure.
    - Produces safe, chemical-free food.

Section E –

Describe the methods of irrigation used in agriculture.
Ans:

- **Traditional methods**: Moat (well), chain pump, dhekli, rahat.
- **Modern methods**: Sprinkler system, drip irrigation.
- Modern methods save water, provide uniform distribution, and are suitable for water-scarce areas.

2. Explain animal husbandry. Mention its various components.
   Ans: Animal husbandry is the scientific management of farm animals for food and other products. Components:
   - Cattle farming (milk, draught animals).
   - Poultry farming (eggs, meat).
   - Apiculture (honey, wax).
   - Fish farming (food).
   - Sheep and goat rearing (wool, meat).
3. Discuss the role of fertilizers in crop production. Mention their advantages and disadvantages.
   Ans: Fertilizers supply essential nutrients (NPK).
   - **Advantages**: Improve yield, provide quick nutrients, easy transport.
   - **Disadvantages**: Cause soil and water pollution, reduce soil fertility, costly.
4. What is cattle farming? Explain the two main aspects of cattle farming.
   Ans: Cattle farming involves managing cattle for milk and draught purposes.
   - Milch animals (cows, buffaloes) – for milk yield.
   - Draught animals (bullocks, oxen) – for ploughing and transport.
5. Explain bee-keeping. Mention its importance.
   Ans: Bee-keeping (apiculture) involves rearing honeybees for honey and wax.
   - Importance: Source of honey (food & medicine), wax (industry), pollination (crop yield), employment.
6. What are the different types of crop improvement?
   Ans:
   - **Hybridization**: Crossing of two different varieties.
   - **Selection**: Choosing plants with desirable traits.
   - **Mutation breeding**: Using radiation/chemicals to induce variations.
   - **Genetic engineering**: Introducing new traits by modifying genes.

7. Write the differences between Kharif and Rabi crops with examples.
   Ans:

Kharif crops	Rabi crops
Sown in rainy season (June–Oct)	Sown in winter (Nov–April)
Need more water	Need less water
Examples: Paddy, maize, cotton	Wheat, gram, mustard

8. What are weeds? How can they be controlled?
   Ans: Weeds are unwanted plants that compete with crops for nutrients, water, and light.
   Control methods:
   - Manual removal (hand-pulling, ploughing).
   - Chemical control (weedicides like 2,4-D).
   - Biological control (using insects or pathogens).
9. Explain the importance and methods of crop protection management.
   Ans:
   - Importance: Protects crops from pests, weeds, and diseases to ensure better yield.
   - Methods:
     - Mechanical removal of weeds/pests.
     - Use of pesticides, fungicides, insecticides.
     - Biological control (ladybird beetle, dragonfly).
     - Resistant crop varieties.

Section F

1. Growing different crops alternately in the same field is called:
   a) Intercropping
   b) Crop rotation
   c) Mixed cropping
   d) Fertilization
   Ans: b) Crop rotation
2. The removal of weeds is known as:
   a) Harvesting
   b) Irrigation
   c) Weeding
   d) Ploughing
   Ans: c) Weeding
3. Which implement is used to sow seeds mechanically?
   a) Plough
   b) Seed drill
   c) Hoe
   d) Sprayer
   Ans: b) Seed drill
4. Kharif crops are sown in:
   a) Winter
   b) Rainy season
   c) Summer

d) Spring
Ans: b) Rainy season

5. Which of the following is not a rabi crop?
   a) Wheat
   b) Mustard
   c) Paddy
   d) Gram
   Ans: c) Paddy
6. The cutting and gathering of mature crops is called:
   a) Weeding
   b) Threshing
   c) Harvesting
   d) Winnowing
   Ans: c) Harvesting
7. Excessive irrigation causes:
   a) Increased fertility
   b) Waterlogging
   c) Better crop yield
   d) None of these
   Ans: b) Waterlogging
8. Which fertilizer mainly supplies nitrogen?
   a) Potash
   b) Superphosphate
   c) Urea
   d) Compost
   Ans: c) Urea
9. Rhizobium bacteria help in:
   a) Water absorption
   b) Nitrogen fixation
   c) Decomposition
   d) Pollination
   Ans: b) Nitrogen fixation
10. The process of separating grains from the chaff is:
    a) Sowing
    b) Harvesting
    c) Threshing
    d) Irrigation
    Ans: c) Threshing

Section G

Drip irrigation saves water.
Ans: True

1. Manure is richer in nutrients than fertilizers.
   Ans: False
2. Weeds increase crop yield.
   Ans: False
3. Crop rotation helps to maintain soil fertility.
   Ans: True
4. Farmers use seed drill for irrigation.
   Ans: False

Section H

Define agriculture.
Ans: Agriculture is the practice of growing crops and rearing animals for food and other useful products.

1. Give two advantages of using fertilizers.
   Ans:
   - Provide nutrients quickly to crops.
   - Increase crop yield.
2. Name two implements used for tilling the soil.
   Ans: Plough and hoe.
3. Write two advantages of crop rotation.
   Ans:
   - Prevents soil exhaustion.
   - Controls pests and weeds.
4. Give two traditional methods of irrigation.
   Ans: Moat (pulley system) and chain pump.

Section I

Differentiate between kharif and rabi crops with examples.
Ans:

   - **Kharif crops**: Grown in rainy season, e.g., Paddy, Maize.
   - **Rabi crops**: Grown in winter, e.g., Wheat, Gram.
2. State three advantages of manure over fertilizers.
   Ans:
   - Improves soil texture.
   - Increases water retention capacity.

- Adds organic matter to the soil.

3. What is irrigation? Mention two modern methods of irrigation.
   Ans: Supplying water to crops in the fields at proper intervals is called irrigation. Modern methods: Sprinkler and drip system.
4. Why is proper storage of grains necessary?
   Ans:
   - To protect from pests, rodents, insects, and fungi.
   - To prevent loss of quality and quantity.
   - To ensure availability throughout the year.
5. What is threshing? How is it done?
   Ans: Threshing is the process of separating grains from harvested stalks. It is done manually using a stick, by animals (treading), or with a machine called combine harvester.
6. Explain the use of plough in agriculture.
   Ans: Plough is a traditional implement used for tilling the soil, turning the soil, adding manure, and uprooting weeds.
7. What are weeds? Why is it important to remove them?
   Ans: Weeds are unwanted plants growing in crop fields. They compete with crops for nutrients, water, and sunlight, reducing yield, hence must be removed.
8. Write short notes on winnowing.
   Ans: Winnowing is the process of separating grains from the lighter husk using wind or blowing air. The husk flies away while the heavier grains fall down.
9. Explain any three precautions while sowing seeds.
   Ans:
   - Use healthy and clean seeds.
   - Seeds should be sown at proper depth.
   - Maintain proper spacing between seeds.
10. Why is fertilizer use sometimes discouraged?
    Ans:
    - Excess use damages soil fertility.
    - Causes water pollution.
    - Expensive for poor farmers.

Section J

Explain the agricultural practices involved in crop production.
Ans: The main practices are:

- Preparation of soil (ploughing, leveling).
- Sowing seeds.
- Adding manure and fertilizers.
- Irrigation.
- Weeding.
- Harvesting.
- Storage.

2. Describe the advantages and disadvantages of fertilizers.
   Ans:
   Advantages:

- Provide quick nutrients.
- Increase crop yield.
- Easy to transport and store.

Disadvantages:

- Reduce soil fertility in long run.
- Cause soil and water pollution.
- Costly.

3. What is crop rotation? Explain with an example.
   Ans: Crop rotation is the practice of growing different crops alternately on the same field to maintain soil fertility. Example: Growing wheat followed by leguminous crops like gram enriches the soil with nitrogen.
4. Explain traditional and modern methods of irrigation.
   Ans:
   - **Traditional:** Moat, chain pump, rahat, dhekli (low cost, less efficient).
   - **Modern:** Sprinkler (suitable for sandy soil, uneven land), Drip system (water reaches roots drop by drop, saves water).
5. Write about storage of grains. How is it done?
   Ans: Storage prevents loss from pests, insects, rodents, and moisture. Done by:
   - Cleaning and drying grains before storage.
   - Using jute bags, silos, and granaries.
   - Using pesticides and fumigation.
6. What are manures? Mention types and importance.
   Ans: Manure is organic matter obtained from decomposition of plant and animal waste.
   - Types: Compost, green manure, farmyard manure.
   - Importance: Improves soil fertility, increases water retention, eco-friendly.
7. Differentiate between traditional farming methods and modern farming methods.
   Ans:

Traditional methods	Modern methods
Low yield	High yield
Use of manures	Use of fertilizers
Animal-driven implements	Tractors and machinery
Traditional irrigation	Sprinkler/drip system

8. Describe the process of sowing. Mention traditional and modern methods.
   Ans: Sowing is placing seeds in the soil for germination.
   - Traditional: By hand (broadcasting).
   - Modern: Using seed drill (ensures uniform depth and spacing).
9. Write the differences between manure and fertilizers.
   Ans:

Manure	Fertilizer
Organic, from waste	Inorganic, chemical salts
Low nutrient content	High nutrient content
Improves soil structure	May harm soil long term
Cheap	Costly