

# Class 12 Agriculture Question Paper 2025 Solved

## SECTION A

(Objective Type Questions) (30 marks)

1. Answer any 4 out of the given 6 questions on Employability Skills. 4x1=4

(i) Select the shortcut key to paste a text or a picture.

- (A) Ctrl + R
- (B) Ctrl + X
- (C) **Ctrl + V**
- (D) Ctrl + B

(ii) Green collar workers in agriculture include professionals such as :

- (A) Green building architects
- (B) Solar lighting technicians
- (C) **Organic farmers**
- (D) Solar photovoltaic installers

(iii) The ability to continue to do something, even when it is difficult is called

- (A) Organisational skill
- (B) **Perseverance**
- (C) Interpersonal skills
- (D) Taking initiative

(iv) Recognize the personality disorder in which the person lacks empathy for others and tends to exaggerate his/her own achievements.

- (A) Paranoid personality disorder
- (B) Antisocial personality disorder
- (C) Avoidant personality disorder
- (D) **Narcissistic personality disorder**

(v) Which of the following statements is incorrect?

- (A) All sentences begin with a capital letter.
- (B) First letter in the names of people, places, days, etc. is with capital letter.
- (C) **First letter in the names of all months is with small letter.**
- (D) Capitalise the letter 'I' when used as a word.

(vi) How many text boxes does LibreOffice Impress have by default?

- (A) 2
- (B) 3
- (C) 1
- (D) 4

**2. Answer any 5 out of the given 7 questions. 5x1=5**

**(i) Name the horticultural crop also known as 'Apple of Paradise'.**

**Ans:** Banana

**(ii) According to FPO specifications, what is the minimum percentage of prepared fruit in fruit jam?**

**Ans:** 45%

**(iii) Which vitamin deficiency causes night blindness?**

**Ans:** Vitamin A

**(iv) Name one dry fruit which contains more than 15% protein content.**

**Ans:** Cashewnut, Almond or Walnut

**(v) What is the life span of honey bees (*Apis sp.*)?**

**Ans:** Queen bee: 3 - 4 years, Worker bee: 35-40 days, Drone bee: 60 days

**(vi) Give one example of a tree suitable for avenue planting.**

**Ans:** Any flowering or foliage tree

**(vii) Why is use of low temperature not considered a permanent method of preservation?**

**Ans:** Use of low temperature is not a permanent method because some microorganisms can also grow at low temperatures.

**3. Answer any 6 out of the given 7 questions. 6x1=6**

**(i) Name the scientists who gave the criteria of essentiality of plant nutrients.**

**Ans:** Arnon and Stout

**(ii) Write the scientific name of rock honey bee.**

**Ans:** *Apis dorsata*

**(iii) What is a lawn?**

**Ans:** Lawn is an area where grass is grown as a green carpet for a landscape and is the basic feature of any garden

**(iv) Give one famous example of free-style of gardening in India.**

**Ans:** Rose garden of Ludhiana

**(v) Name the post-harvest treatment process where there is rapid removal of the field heat from the freshly harvested horticultural produce.**

**Ans:** Pre-cooling

**(vi) Which fertilizer contains 46% of available nitrogen?**

**Ans:** Urea

**(vii) Who is known as the Father of Canning?**

**Ans:** Nicholas Appert

**4. Answer any 5 out of the given 6 questions. 5x1=5**

**(i) Name the scientist who first used Autoclave.**

**Ans:** Autoclave was first used by Shriver

**(ii) Write one example of botanical biopesticide.**

**Ans:** Biopesticides may be derived from animals (e.g., nematodes), plants (Chrysanthemum, Azadirachta) and micro-organisms (e.g., *Bacillus thuringiensis*, *Trichoderma*, *nucleopolyhedrosis virus*) (Any one)

**(iii) What are the objectives of Soil testing?**

**Ans:** Evaluating the fertility and nutrition content of the soil to offer an index of nutrient availability in the soil. Determining any salinity, acidity, and alkalinity problems.

**(iv) \_\_\_\_\_ is the number of essential plant nutrients.**

**Ans:** 17

**(v) Define Sericulture.**

**Ans:** Sericulture or silk production is the breeding and management of silk worms for the commercial production of silk.

**(vi) What is the meaning of asepsis?**

**Ans:** Asepsis: It means preventing the entry of microorganisms by maintaining general cleanliness while picking, grading, packing, and transporting of fruits and vegetables, increases their keeping quality and the product prepared from them will be of superior quality.

**5. Answer any 5 out of the given 6 questions. 5x1=5**

**(i) What is organic farming?**

**Ans:** Organic farming is a method of crop and livestock production that involves much more than choosing not to use pesticides, weedicides, fertilizers, genetically modified organisms, antibiotics, and growth hormones.

**(ii) Sheet test is used to find the endpoint of which value-added product?**

**Ans:** Fruit jam

**(iii) Name two plant nutrients whose deficiency is first seen in young growing parts of plants.**

**Ans:** Plant nutrients whose deficiency is first seen in the young growing parts of a plant (Any two)

- Fe-Iron
- Cu- Copper
- Cl- Chlorine
- S- Sulfur
- Mn- Manganese

**(iv) Among Class II preservatives, how many chemical preservatives are used in fruit and vegetable preservation?**

**Ans:** In most of the preserved products two Class II chemical preservatives are used viz. Sodium benzoate, Potassium metabisulphite (KMS)

**(v) Name the organism which is directly associated with N<sub>2</sub> fixing in pulses.**

**Ans:** *Rhizobium*

**(vi) Write one example for Disaccharides.**

**Ans:** Any One: Sucrose, Lactose, or Maltose

**6. Answer any 5 out of the given 6 questions. 5x1=5**

**(i) Mention one challenge faced during soil sampling.**

**Ans:** Problems in sampling due to soil variation across a field/sampling in problematic soil

**(ii) What is the production capacity of the home-scale unit?**

**Ans:** 10t/yr

**(iii) Which month is most suitable for planting deciduous fruit seedlings in a fruit nursery?**

**Ans:** Feb-March

**(iv) Where is the National Centre for Organic Farming (NCOF) located in India?**

**Ans:** Ghaziabad, UP

**(v) What percentage of horticultural produce is processed in India?**

**Ans:**  $\leq 2\%$

**(vi) What is the percentage of phosphorus available in FYM?**

**Ans:** 0.25% P205

## **SECTION B**

**(Subjective Type Questions) (30 marks)**

*Answer any 3 out of the given 5 questions on Employability Skills in 20-30 words each.  $3 \times 2 = 6$*

**7. What are the advantages of managing stress?**

**Ans:** By managing stress effectively and maintaining a positive attitude, one can overcome any challenge and achieve heights in career. Managing stress effectively helps one maintain a healthy work-life balance.

**8. Explain the different steps of active listening.**

**Ans:** The five stages of active listening are as follows.

- 1. Receiving: It involves listening attentively.
- 2. Understanding: It is an informed agreement about something or someone.
- 3. Remembering: It refers to the retrieval or recall of some information from the past.
- 4. Evaluating: It is about judging the value, quantity, importance and amount of something or someone.
- 5. Responding: It is about saying or doing something as a response to something that has been said or done.

**9. Write the steps to insert a new slide in a presentation.**

**Ans:** Any one method can be used to add a new slide in any presentation.

Step 1: Click on Slide.

Step 2: Select New Slide from the drop-down

OR

Step 1: You can also press Ctrl + M on the keyboard.

Step 2: This will add a blank New Slide to the presentation.

**10. Describe the green jobs in eco-tourism.**

**Ans:** Green jobs in the eco-tourism sector

Eco-tourism is intended to provide an experience to visitors to understand the importance of conserving resources, reducing waste, enhancing the natural environment, and reducing pollution. This helps improve public image as the visitors feel good about being in an environmentally friendly place. Green jobs in eco-tourism include eco-tour guides and eco-tourism operators.

**11. Write any two qualities of a successful entrepreneur.**

**Ans:** Qualities of a successful entrepreneur (Any two)

- 1. Taking initiative
- 2. Willingness to take risks
- 3. Ability to learn from experience
- 4. Motivated
- 5. Self-confidence
- 6. Hard working
- 7. Decision-making ability

*Answer any 3 out of the given 5 questions in 20 -30 words each. 3x2=6*

**12. Write two disadvantages of broadcasting method of fertilizer application.**

**Ans:** The main disadvantages of the application of fertilizers through broadcasting are (Any two)

- 1. Nutrients cannot be fully utilized by plant roots as they move laterally over long distances.
- 2. The weed growth is stimulated all over the field.
- 3. Nutrients are fixed in the soil as they come in contact with a large mass of soil.
- 4. A large amount of fertilizer is used as compared to other methods.

**13. Name the various methods to judge the endpoint during jelly preparation.**

**Ans:** Various methods to judge the endpoint during Jelly preparation (Any two)

- i. Drop test:- A drop of the concentrated mass is poured into a glass containing water. The settling down of the drop without disintegration denotes the end-point
- ii. Temperature:- 105.5°C
- iii. TSS:- 65 %
- iv. Weight Test:- If the total weight of the jam is 1.5 times more than the sugar weight, the jam is prepared.

**14. Write two advantages of sprinkler irrigation.**

**Ans:** Advantages of sprinkler irrigation. (Any two)

- i. In the method, approximately 80 percent of the water is consumed by plants, whereas in the conventional method, only 30 percent of the water is used.
- ii. In this method, save 30-50% of water.
- iii. Saving on fertilizer
- iv. Suitable for any topography
- v. No soil erosion
- vi. Better seed germination, free aeration of the root zone.
- vii. Uniform application of water.

**15. Briefly explain about degreening in fruits.**

**Ans:** Degreening in fruits :

- Is the process of decomposing the green pigments by applying ethylene or other metabolic inducers to give fruits their colour preferred by consumers.
- Followed for citrus fruits, banana, and mango.

**16. List out any two constraints faced by farmers in organic farming.**

**Ans:** Various problems and constraints in organic farming (Any Two)

- a) Organic food is more expensive because farmers do not get as much out of their land as conventional farmers do.
- b) Production costs are higher because farmers need more workers.
- c) Marketing and distribution is not efficient because organic food is produced in smaller amounts.
- d) Production as productivity is low.
- e) Problem with the authenticity of organic produce

*Answer any 2 out of the given 3 questions in 30 -50 words each. 2x3=6*

**17. Briefly explain any three ways to evaluate the fertility of the soil.**

**Ans:** Soil fertility evaluation can be performed using various methods :

- 1. Soil testing: Soil testing involves analyzing soil samples for various soil nutrients, including macronutrients and micronutrients. Soil testing can be done using various techniques, such as chemical extraction, biological assays, and spectroscopy.
- 2. Plant tissue analysis: Plant tissue analysis involves analyzing plant tissues for nutrient concentrations, which can help identify nutrient deficiencies or excesses.
- 3. Visual observation: Visual observation involves assessing plant growth and development, leaf color, and other indicators of plant health to identify potential nutrient deficiencies or excesses.

**18. Why is there a need to preserve fruits and vegetables?**

**Ans:** Various reasons for preserving the food

- To increase the shelf life of the food to increase the supply.
- To make the seasonal fruits available throughout the year.
- To add variety to the diet.
- To save time by reducing preparation, time, and energy.
- To stabilize the prices of food in the market.
- To improve the health of the population/ nutritional quality.
- The Income of the farmers is increased.

**19. Explain the various types of wheat flour and their use(s).**

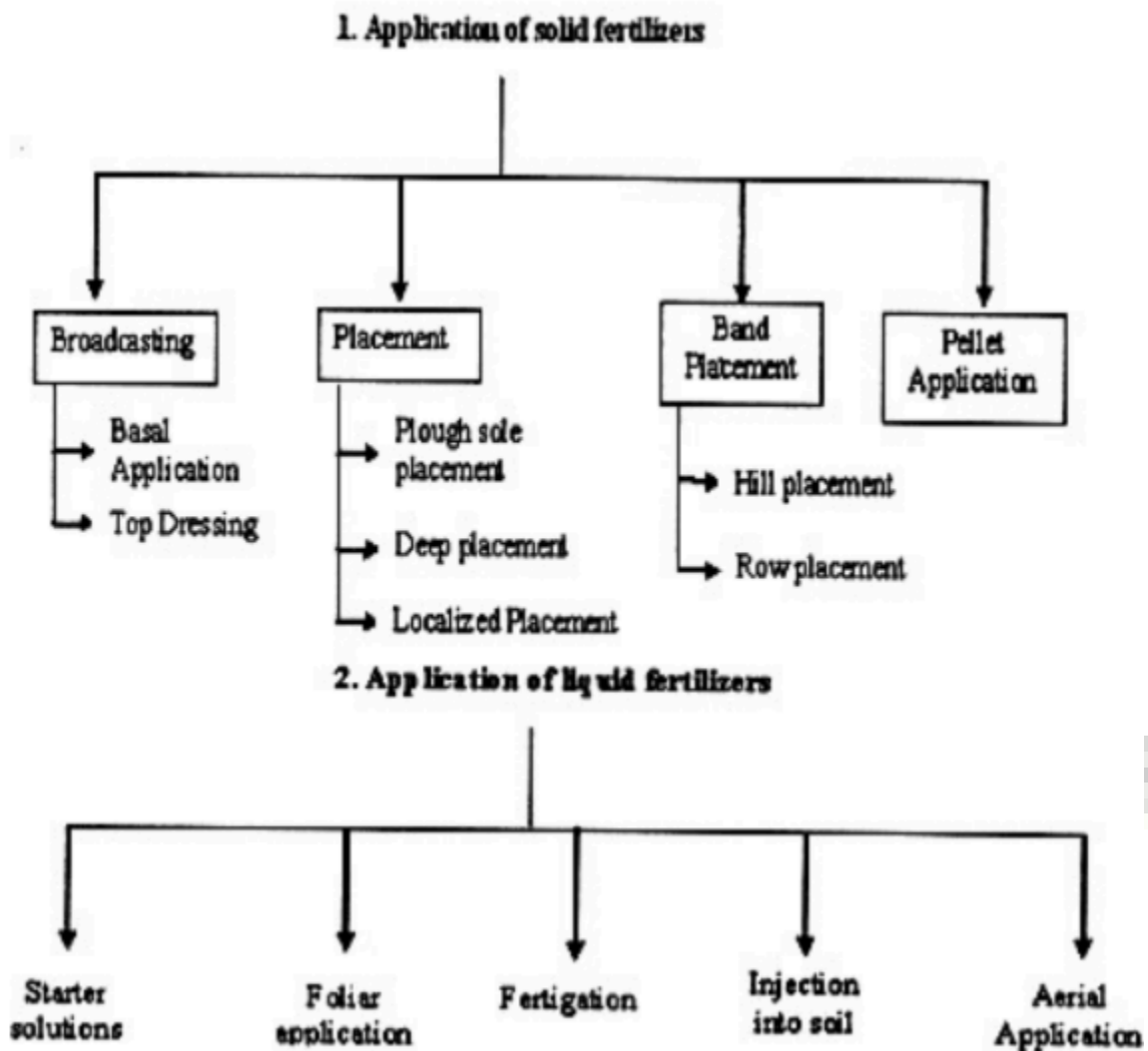
**Ans:** Various types of wheat flour and their uses

- 1. Atta: Is a wheat flour, suitable for making chappatis
- 2. Special bakers' flour: There are two types:-
  - [A] Strong flour
  - [B] Light flour (Bakers flour)
- 3. Biscuit flour: a special bread made of flour, used for mechanical biscuit planes.
- 4. Salt-raising flour: Is a soft flour fortified with chemical creative additive similar to baking powder, used for cake making

*Answer any 3 out of the given 5 questions in 50-80 words each. 3x4=12*

**20. Explain the different methods of fertilizer application.**

**Ans:**



**21. List out the main principles of organic farming.**

**Ans:** Main principles of organic farming (Any four)



- To work as when as possible in a closed system to draw upon local resources.
- To maintain the long-term fertility of soils
- To avoid all forms of pollution resulting from agricultural technologies
- To produce food products with high nutritional quality and sufficient quantity.
- To reduce the use of fossil energy to a minimum
- To give livestock conditions of life that conform to their physiological need
- To enable agricultural producers to earn a living through their work and develop their potential

**22. What is biopesticide? Classify the various bio-pesticides with examples. 1+3=4**

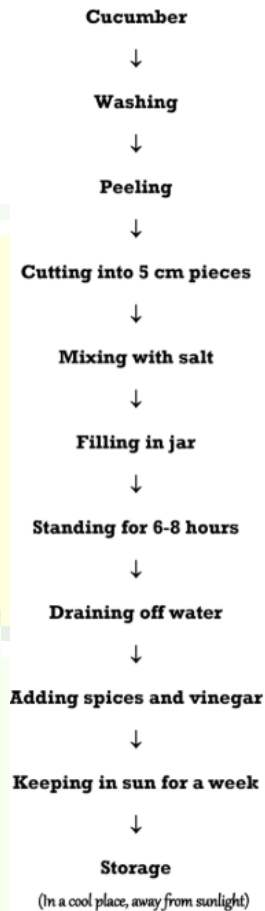
**Ans:** Bio pesticide is a formulation made from naturally occurring substances that controls pests by nontoxic mechanisms and in an eco-friendly manner. Bio pesticides are generally less toxic to the user and are non-target organisms, making them desirable and sustainable tools for disease management.

Classification of biopesticides with an example

- 1. Microbial pesticides: Composed of microscopic living organisms (viruses, bacteria, fungi, protozoa, or nematodes) or toxins produced by these organisms. Example *Bacillus thuringiensis* (Bt), *Agrobacterium radiobacter*, *Pseudomonas fluorescens* (Phenazine), *Trichoderma*, *Metarhizium anisopliae*, *Beauveria bassiana*, *Nomuraea riley*, *Baculoviruses*(Bvs)
- 2. Plant-incorporated protectants (PIPs): Cry genes
- 3. Biochemical pesticides: Semiochemicals (chemical signals) include pheromones, ecdysteroids, and the juvenile hormones
- 4. Botanical pesticides: Several plant-based insecticides as nicotinoids, natural pyrethrins, carotenoids, neem products, etc
- 5. Biotic agents (parasitoids and predators): Lady beetles, rove beetles, many ground beetles, lacewings, true bugs such as Podisus and Orius, syrphid fly larvae, mantids, spiders, and mites such as *Phytoseiulus* and *Amblyseius*.

**23. With the help of a flowchart, describe a method of cucumber pickle preparation.**

**Ans:** Flowchart the preparation of cucumber pickle.



**24. What is cold sterilization? List out the irradiation requirements for onions, potatoes, garlic, and shallots, along with the purpose.**

**Ans:** Cold sterilization and irradiation require subjecting the produce to ionizing radiation is referred as radiation, also known as radurization, and cold sterilization, as it works without raising the temperature of the produce.

Commodity	Irradiation Dose		
	Minimum	Maximum	Purpose
Onion	0.03	0.09	Sprout Inhibition
Potatoes	0.05	0.15	
Garlic	0.03	0.15	
Shallots	0.03	0.15	