

# Class 12 Agriculture Sample Question Paper 2023

## Class 12 Agriculture Sample Paper 2023 Solved

### SECTION A: OBJECTIVE TYPE QUESTIONS

*1. Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)*

**i. Which of the following qualities is not required by an entrepreneur?**

- a. Initiative
- b. Motivation
- c. Overconfidence**
- d. Willingness

**ii. How will you usually align the title of a slide?**

- a. Left
- b. Right
- c. Center**
- d. Justify

**iii. Five Factor Model (FFM) is applicable in:**

- a. Motivation
- b. Personality**
- c. Positive Attitude
- d. Stress Management

**iv. In the acronym SMART, the letter 'R' stands for:**

- a. Rational
- b. Recognize
- c. Realistic**
- d. Reassure

**v. Which of the following helps in time management?**

- a. Not giving up when there is a difficult situation
- b. Setting deadlines**
- c. Working hard to achieve the goal
- d. Analyzing failures and learning from them

**vi. PowerPoint is a presentation software belongs to:**

- a. Apple
- b. Google
- c. Microsoft Office**
- d. OpenOffice

**2. Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)**

**i. Name any two coarse cereals of India.**

**Ans:** Sorghum, Bajra (Pearl millet), maize, Ragi (finger millet).

**ii. Name any two major pests of oilseed crops.**

**Ans:** Aphids, white grub, cutworm, pod borer, jassids.

**iii. Name any two nitrogen-fixing bacteria.**

**Ans:** *Rhizobium*, *Azotobacter*

**iv. Name any two bioagents used for controlling agricultural pests in India.**

**Ans:** Bio-agents are used for controlling Agricultural pests in India. Predators like the ladybird beetle for many pests, *Aphelinus mali* for the woolly apple aphid, and *Videlia* beetle for controlling cottony cushion scale in citrus.

**v. Name any two value-added products of wheat.**

**Ans:** Cookies, Semolina, and wheat porridge.

**vi. Name any two value-added products that can be prepared from mango fruit.**

**Ans:** Amchur, pickle, panna, squash, chutney, frooty, etc.

**vii. Write scientific name of button mushroom.**

**Ans:** *Agaricus bisporus*.

**3. Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)**

**i. Name any two bio-fertilizers commercially used in India.**

**Ans:** *Rhizobium*, VAM, *Azotobacter*, PSB.

**ii. Name the food that is essential for queen bee development.**

**Ans:** Royal jelly

**iii. Name the most common used lawn grass in India.**

**Ans:** *Cynodon dactylon* or doob grass.

**iv. Name any two Potassium-containing fertilizers.**

**Ans:** Sulphate of potash (SOP) and MOP (Muriate of Potash).

**v. Name any two major pulses of India.**

**Ans:** Blackgram, chickpea, moong, pigeonpea, peas, etc.

**vi. Name any two major Kharif cereal crops of India.**

**Ans:** Paddy, maize.

**vii. Where is the CSSRI (Central Soil Salinity Research Institute) located in India?**

**Ans:** CSSRI is located at Karnal.

**4. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**

**i. Name any two pests of rice.**

**Ans:** Plant hopper, leaf folder, stem borer, etc.

**ii. Name any two major cropping systems of India.**

**Ans:** Rice-wheat, maize-wheat.

**iii. Name any two value-added products that can be prepared from Aonla fruit.**

**Ans:** Aonla Candy, Aonla Pickle.

**iv. Write scientific name of Indian honeybee.**

**Ans:** *Apis indica*

**v. Name any two micro irrigation methods.**

**Ans:** Drip irrigation, Sprinkler irrigation

**vi. Name any two major plant nutrients.**

**Ans:** N, P, K, Ca, Mg, S.

**5. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**

**i. Name two cucurbitaceous vegetables.**

**Ans:** Pumpkin, cucumber, round melon, musk melon, watermelon, karela, tori etc.

**ii. Name any two phosphorus-containing fertilizers.**

**Ans:** Single super phosphate, Double superphosphate, triple super phosphate, Diammonium Phosphate (DAP), Monoammonium Phosphate (MAP).

**iii. Name any two major oilseed crops of India.**

**Ans:** Mustard, Rapeseed, Sunflower, Soybean.

**iv. Name any two cash crops of India.**

**Ans:** Cotton, Sugarcane, Jute.

**v. Where is the Central Potato Research Institute (CPRI) located in India?**

**Ans:** Shimla (Himachal Pradesh).

**vi. Name any two micronutrients required for raising a healthy crop.**

**Ans:** are: Iron (Fe), manganese (Mn), zinc (Zn), copper (Cu).

**6. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**

**i. Name any one institute working on post-harvest management of food.**

**Ans:** ICAR-Central Institute of Post-Harvest Engineering & Technology (CIPHET), Ludhiana, National Institute of Food Technology Entrepreneurship and Management, Sonipat.

**ii. Name any two value-added products that can be prepared from tomato fruit.**

**Ans:** Tomato sauce, tomato Ketchup, chutney

**iii. Honey is produced by.....**

**Ans:** Honeybees

**iv. Name any two edible mushrooms.**

**Ans:** White Button Mushrooms, Paddy Straw Mushrooms.

**v. Where is the National Centre of Organic Farming located in India?**

**Ans:** National Centre of Organic Farming is located at Ghaziabad(U.P.)

**vi. Name any two nitrogen-containing fertilizers.**

**Ans:** Urea, Calcium Ammonium Nitrate (CAN).

## **SECTION B: SUBJECTIVE TYPE QUESTIONS**

*Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks)*

*Answer each question in 20 – 30 words.*

**7. List two steps to overcome any personality disorder.**

**Ans:** Two steps to overcome personality disorders –

- Talk to someone to share your feelings.
- Look after your physical health.

**8. Write two roles of technical entrepreneurs.**

**Ans:** Two roles of technical entrepreneurs-

- Use their technical expertise to create and offer machines, tools, and methods.
- They constantly innovate to make industrial processes seamless and efficient.

**9. Enlist any four advantages of presentation software.**

**Ans:** Four advantages of presentation software

- They are interesting as they have features like images, videos, animation, and music.
- Making changes in digital presentations is easy.
- A digital presentation can be shown to a much larger audience by projecting it on a screen.
- The presentation can be printed and distributed to the audience.

**10. Give four characteristics of entrepreneurship.**

**Ans:** Four characteristics of entrepreneurship -

- It is an economic activity done to create, develop, and maintain a profit-oriented organisation.
- It begins with identifying an opportunity as a potential to sell and make a profit in the market.
- It deals with optimisation in the utilisation of resources.
- It is the ability of an enterprise and an entrepreneur to take risks.

**11. Mention four sources of motivation and inspiration**

**Ans:** Four sources of motivation and inspiration-

- Music
- Books
- Activities
- Expansive thoughts

*Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)*

**12. Write two advantages of organic farming.**

**Ans:** Advantages of organic farming

- Farmers can reduce their production costs because they do not need to buy expensive chemicals and fertilisers.
- Improvement in the fertility status of the soil.
- Improves soil structure and structure.
- Healthier farm workers.
- In the long term, organic farms save energy and protect the environment.
- It can slow down global warming.
- Fewer residues in food.

**13. Define the term crop rotation.**

**Ans:** Crop rotation is the practice of growing a series of dissimilar or different types of crops in the same area in sequenced seasons. It is done so that the soil of farms is not used for only one set of nutrients. It helps in reducing soil erosion and increases soil fertility and crop yield.

**14. Enlist major methods of irrigation.**

**Ans:** Major methods of irrigation

- Surface irrigation. Water is distributed over and across land by gravity, no mechanical pump involved.
- Localized irrigation.
- Drip irrigation
- Sprinkler irrigation

**15. Define post-harvest technology.**

**Ans:** Post-harvest technology is an interdisciplinary "Science and Technique" applied to agricultural produce after harvest for its protection, conservation, processing, packaging, distribution, marketing, and utilization to meet the food and nutritional requirements of the people in relation to their needs.

**16. Name different bee species which produce honey.**

**Ans:** Bee species

- The rock bee (*Apis dorsata*)
- The Indian hive bee(*Apis indica*)
- The little bee (*Apis florea*)
- The European or Italian bee(*Apis mellifera*)

*Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)*

**17. Write three major functions of N in plants.**

**Ans:** Major functions of N in plants are:

- It makes the plant dark green & succulent.
- It promotes vegetative growth.
- It is a major component of chlorophyll, which helps in food making by photosynthesis.
- It is also a major component of amino acids, the building blocks of proteins.

**18. Enlist the function of sulphur nutrients.**

**Ans:** Major functions of Sulphur are

- It is an essential constituent of some amino acids, i.e., cystine, cysteine, and methionine.
- Promotion of nodulation for N fixation by legumes
- It increases oil content in oilseed crops.

**19. Discuss the role of maturity in post-harvest management of fruits.**

**Ans:** Role of maturity

- Immature fruit doesn't develop adequate size, colour, and flavor, has poor quality, and has less storage life.
- Over-ripe fruit develops several storage disorders with a very low shelf life.

*Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)*

**20. What is IPM? Discuss biological control of pests in detail.**

**Ans: Integrated pest management**

- It is also known as integrated pest control (IPC), which is a broad-based approach that integrates practices for economic control of pests. IPM aims to suppress pest populations below the economic injury level (EIL).

**Biological control of pests**

- Use of Predators: Predators catch and eat their prey. Some common predatory arthropods include ladybird beetles, carabidae (ground) beetles, big-eyed bugs, and spiders.
- Use of Parasitoids: Parasitoids (sometimes called parasites) do not usually eat their hosts directly. Adult parasitoids of caterpillars and host insects such on nectar or pollen.
- Use of Pathogens: Pathogens are disease-causing organisms. Several insect-pathogenic fungi are used as microbial control agents, and insect parasitic (entomopathogenic or insecticidal) nematodes are effective.

**21. Discuss post-harvest treatment for storage in cereal crops with necessary precautions.**

**Ans:**

- a. **Harvesting:** - There is an optimum time for harvesting cereals, depending on the maturity of the crop and the climatic conditions. This has a significant effect on the quality of the grain during storage. Harvesting often begins before the grain is ripe and continues until mould and insect damage are prevalent. Grain not fully ripened contains a higher proportion of moisture and will deteriorate more quickly than mature grains because the enzyme systems are still active.
- b. **Threshing:** - Threshing is the removal of grains from the rest of the plant. It involves three different operations: Separating the grain from the panicle, sorting the grain from the straw, and winnowing the chaff from the grain. Separation of the grain from the panicle is the most energy-demanding of the three processes.
- c. **Winnowing:** - Winnowing is the separation of the grains from the chaff or straw. It is traditionally carried out by lifting and tossing the threshed material so that the lighter chaff and straw get blown to one side while the heavier seeds fall vertically. Handheld winnowing baskets are used to shake the seeds to separate out the dirt and chaff. They are very effective, but slow. There is a range of winnowing machines that use a fan to create artificial wind. This speeds up the winnowing process. Some of these contain sieves and screens that grade the grains as well.
- d. **Drying:** - Before storage or further processing, cereal grains need to be dried. The most cost-effective method is to spread out in the sun to dry. In humid climates, it may be necessary to use an artificial dryer. Cereal grains should be dried to 10-15% moisture before storage.

**22. Explain how organic and conventional farming differ from each other.**

**Ans:** Organic farming vs conventional farming

Conventional farming	Organic farming
1. It is based on economic orientation, heavy mechanization, specialization, and misappropriates the development of enterprises with an unstable market-oriented programme.	It is based on ecological orientation, efficient input use, diversification, and balanced enterprise combination with stability.
2. Supplementing nutrients through fertilizers, weed control by herbicides, and plant protection measures by chemicals, and rarely in combination with livestock	Cycle of nutrients within the farm, weed control by crop rotation and cultural practices, plant protection by non-polluting substances, and a better combination of livestock.
3. Based on the philosophy of feeding the crop/plants	Feed the soil, not the plant, is the watchword and slogan of organic farming.
4. Production is not integrated into the environment but extracts more through technical manipulation, excessive fertilization, and no correction of nutrient imbalances.	Production is integrated into the environment, balanced conditions for plants and animals, and deficiencies need to be corrected.
5. Low input: output ratio with considerable pollution	High input: output ratio with no pollution
6. Economic motivation of natural resources without considering principles of natural upgradation	Maximum consideration of all natural resources through adopting holistic approaches

**23. Discuss types of garden.**

**Ans:** Types of garden

- 1. Formal Style
  - The gardens of Greece and Rome assured an emotional security through their Formal style.
  - The Italian Renaissance garden had intricate geometric, sheared trees, trimmed hedges, and edges to create formality.
  - The impact of formalism influenced the French and British gardens also in the form of parterre, the much-divided flower beds.

- 2. Informal Style: Hindu, Buddhist, and Japanese gardens did not emphasize formality. The Brindavan of lord Krishna was a woodland. Every temple was provided with irregularly shaped lotus tanks. The Japanese developed an intensely national and naturalistic style of its own.
- 3. Freestyle: This style combines the good points of both formal and informal styles of gardening. The Rose Garden of Ludhiana is an example of this style of gardening.

**24. What is post-harvest management? Discuss different steps involved in PHM of mango fruit.**

**Ans:** Post-harvest management

Post-harvest management comprises the various technologies and practices undergone by the farmer, farmers' groups or cooperatives, and/or agri-business companies, from the field to the plate, to handle the crop production immediately following harvest, up to its final destination, such as storing, transport, cleaning, sorting, processing, and packing.

**PHM of Mango**

- Harvesting at the right stage of maturity as per end use.
- Harvesting in the morning hours
- Harvesting with a harvesting tool
- De-sapping
- Pre-cooling
- Sorting
- Grading
- Post-Harvest treatments (HWT, VHT, Chemical treatments, etc.)
- Packing in CFB single-layer boxes
- Storage at 10-13°C
- Transportation to distant markets.

BioSmartNotes