Class 12 Agriculture Sample Question Paper 2021

Class 12 Agriculture Sample Paper 2021 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 is not a step in active listening?

a. Contact
b. Absorb
c. Confirm
d. Time

ii. Which is not a source of motivation?

a. Books
b. Dreaming big
c. Thinking of past
d. Advice of parents

iii. For printing a document, you will press which key?

Ans: Ctrl P

iv. Expand S.M.A.R.T

Ans: Specific, Measurable, Attainable, Realistic, Timely

v. Which among the following is not there in formatting bar?

a. Font
b. Alignment
c. Border
d. Print

vi. Which is a part of 4Rs of sustainable development?

a. Reproduce
b. Refuse
c. Reuse
d. Recycle

2. Answer any 7 out of the given 8 questions (1 x 7 = 7 marks)

i. Name any two coarse cereals of India.

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

ii. Name any two major Rabi cereal crops of India.
Ans: Wheat and barley

iii. Name TWO major pests of oilseed crops.
Ans: Aphids, white grub, cut worm, pod borer, jassids

iv. Name any TWO nitrogen-fixing bacteria.
Ans: Rhizobium, Azotobacter

v. 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.

vi. Name any TWO value-added products of wheat.
Ans: Cookies, Semolina, and wheat porridge.

vii Name any two value-added products that can be prepared from mango fruit.
Ans: Amchur, pickle, panna, squash, chutney, frooty, etc.

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

ii. Name the food given to honeybee queen.
Ans: Royal jelly

iii. Name one earthworm species commercially used for making vermi-compost.
Ans: Red wigglers (*Eisenia fetida*) and red worms (*Lumbricus rubellus*)

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: Black gram, chickpea, moong, pigeon pea, peas

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: Karnal

4. Answer any 6 out of the given 7 questions (1 x 6 = 6 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 of tomato.
Ans: Sauce, ketchup

iv. Name any two value-added products that can be prepared from aonla fruit.
Ans: Candy, RTS, pickle, preserve, etc.

v. Write scientific name of India honey bee.
Ans: *Apis indica*

vi. Name any two micro irrigation methods.
Ans: Drip irrigation, Sprinkler irrigation

vii. Name FOUR major plant nutrients.
Ans: N, P, K, Ca, Mg, S, etc.

5. Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)
i. Name two bio-fertilizers commercially used in India.
Ans: Rhizobium, VAM, Azotobacter, PSB

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 three major oilseed crops of India.
Ans: Mustard, Rapeseed, Sunflower, Soybean.

iv. Name any three major cereal crops of India.
Ans: Rice, wheat, maize, barley

v. Where is the Central Potato Research Institute (CPRI) located in India?
Ans: Shimla (Himachal Pradesh)

vi Name any four micronutrients required for raising a healthy crop.
Ans: Iron (Fe), manganese (Mn), zinc (Zn), copper (Cu)

vii. Name any two major cropping systems of India.
Ans: Rice–wheat, Maize–wheat

6. Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)
i. Name any three major pulse crops of India.
Ans: Chickpea, pigeon pea, mungbean, Black gram, lentil, peas

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 mushroom species.
Ans: *Agaricus bisporus* and *Volvariella volvacea*

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 two important earthworm species used in vermi-composting.
Ans: Red wigglers (*Eisenia fetida*) and red worms (*Lumbricus rubellus*)

vii. 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. Enlist parts of a speech.
Ans: Parts of a speech are:
Eight parts of speech are: Noun, pronoun, verb, adjective, adverb, preposition, conjunction, and interjection.

8. Explain why self-motivation is important.

Ans: Self-motivation is important because

- It increases an individual's energy and activity.
- It directs an individual towards specific goals.
- It results in the initiation and persistence of specific activities
- It affects cognitive processes and learning strategies used for completing similar tasks.

9. Explain why spreadsheet applications have become popular.

Ans: Spreadsheet programs have become very popular because of the following features:

- Built-in functions make calculations easier, faster, and more accurate.
- Large volumes of data can be easily handled and manipulated.
- Data can be exported to or imported from other similar software applications
- Data can be easily represented in pictorial form, like graphs or charts.
- Formula cells get automatically recalculated whenever underlying data values are changed.

10. Enlist barriers to become an entrepreneur.

Ans: Barriers to Becoming an Entrepreneur

- Lack of supportive and market
- Employee-related difficulties
- Market entry regulations:
- Governmental rules
- Shortage of funds and resources
- Lack of Entrepreneurial Capacity:
- Lack of Adequate Entrepreneurship Training:
- Lack of Appropriate Technical and Practical Skills
- Fear of Failure

11. What are the roles of green jobs?

Ans: Roles of green jobs

- In toxin-free homes
- In improving energy and raw material use
- Limiting greenhouse gas emissions
- Minimizing waste and pollution
- Protecting and restoring ecosystems
- Support adaptation to the effects of climate change

Answer any 4out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 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 is involved.
- Localized irrigation.
- Drip irrigation
- Sprinkler irrigation

15. Define Postharvest 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. Explain the term ‘plant-based bio-pesticides’ with examples.

Ans: Plant-based bio-pesticides: These are the plant-derived, naturally occurring phytochemical pesticides that control pests by various mechanisms with less or no harm to human beings and crop plants.

17. 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 florae*)
- 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)

18. 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.

19. Enlist 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.

20. 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 60– 90 words each (5 x 3 = 12 marks)

21. What is integrated pest management? 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.

22. Discuss post-harvest treatment for storage of cereal crops.

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.
  Cereals are traditionally harvested manually. There are three main types of harvesting equipment for the small-scale producer: manual, animal-powered, and engine-powered. Harvested crops are left in the field for a few days to dry before further processing.
- 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. It is the first process to have been mechanized. Sorting the grain from the straw is relatively easy, but is difficult to mechanise. Winnowing is relatively easy, both by hand and by machine.
  A range of engine-powered threshers is available.
- 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.
  Hand-held 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.

23. What is vermi-composting? Discuss its advantage.

Ans: Vermi-composting: It is a method of using earthworms to transform organic waste into nutrient-rich fertilizers. It is a healthy and clean way to eliminate waste materials, which improves the environment. Vermi-composting is inexpensive and only takes two to three months to produce results.

Advantages of vermi-composting

- Vermicompost is rich in all essential plant nutrients.
- It improves soil texture, structure, and aeration.
- It neutralizes the soil protection.
- Vermicompost is free-flowing, easy to apply, handle, and store.

- Vermi-compost is rich in beneficial micro flora such as fixers, p-solubilizer.
- Vermi-compost contains earthworms, cocoons and increases the population and activity.

24. 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 parierre, 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. 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.

25. 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^{o}C
- Transportation to distant markets.