



BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Sc.(BT)-Hons-2024
Course Name – Indian Agriculture
Course Code - BBT10201
(Semester I)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Cite how mixed farming contributed to the stability of the Indus Valley agricultural system.
 - a) It decreased soil fertility.
 - b) It reduced the risk of crop failure.
 - c) It led to deforestation.
 - d) It limited food variety.
- (ii) Choose how the domestication of animals might have affected agriculture in the Indus Valley
 - a) It slowed down agricultural activities.
 - b) It had no impact on agriculture.
 - c) It provided labor and additional resources like milk and hides.
 - d) It made farming unnecessary.
- (iii) Indicate which of the following is an advantage of cross-pollination.
 - a) It eliminates diversity in genes.
 - b) It requires a smaller number of pollen grains.
 - c) It ensures that recessive traits are eliminated.
 - d) It introduces new genes into the lineage
- (iv) Explain why micropropagation is considered beneficial for large-scale planting.
 - a) It requires fewer nutrients for plant growth
 - b) It helps in producing a few plants with unique characteristics
 - c) It allows rapid production of thousands of genetically identical plants
 - d) It increases the mutation rate in plants
- (v) Name the key macronutrient required for plant tissue culture media.
 - a) Zinc
 - b) Sulfur
 - c) Nitrogen
 - d) Manganese
- (vi) Recall the year in which the first KVK was established in India.
 - a) 1965
 - b) 1974
 - c) 1982
 - d) 1990
- (vii) Judge the significance of KVKs in increasing farmers' income.

- a) KVKs help by distributing seeds only.
- b) KVKs promote awareness and demonstrate advanced farming techniques that lead to increased productivity, helping to double farmers' income.
- c) KVKs primarily engage in financial lending.
- d) KVKs do not have a direct role in income improvement.
- (viii) Predict the long-term impact of the National Social Assistance Programme (NSAP) on vulnerable groups in rural India.
- a) It will increase reliance on manual labor.
- b) It will provide financial security and enhance quality of life for vulnerable groups.
- c) It will discourage agricultural productivity.
- d) It will reduce government spending on rural areas.
- (ix) Select which scheme is associated with promoting organic farming through cluster-based methods?
- a) Paramparagat Krishi Vikas Yojana (PKVY)
- b) Pradhan Mantri Fasal Bima Yojana (PMFBY)
- c) National Bamboo Mission (NBM)
- d) Sub-Mission on Agricultural Mechanization (SMAM)
- (x) Describe the benefit provided to farmers under Pradhan Mantri Kisan Maandhan Yojana (PM-KMY).
- a) Monthly pension of Rs. 3,000 after 60 years of age
- b) Crop insurance against natural risks
- c) Subsidies on fertilizers
- d) Financial aid for irrigation projects
- (xi) Identify the pest referred to as "Gandhi" in ancient texts.
- a) Stem borer
- b) Rice bug
- c) Snail
- d) Powdery mildew
- (xii) Cite the evolution of rice in India based on archaeological evidence.
- a) Rice was first domesticated in Africa.
- b) Archaeological evidence places rice domestication in India around 7000 years ago.
- c) Rice evolved directly from wild perennial types.
- d) Rice was only introduced to India after 1500 BC.
- (xiii) Predict the period during which chili peppers were introduced to India.
- a) Before 1000 AD
- b) During the medieval period
- c) After the 16th century by the Portuguese
- d) During the Vedic period
- (xiv) Recall which ancient civilization is known for tree worship, depicted in seals and potteries?
- a) Roman
- b) Indus Valley
- c) Mesopotamian
- d) Greek
- (xv) Identify which tree was held sacred by King Ashoka, known for planting roadside avenue trees?
- a) Banyan
- b) Neem
- c) Pipal
- d) Ashoka

Group-B

(Short Answer Type Questions)

3 x 5=15

2. What is meant by biotic resistance in plant breeding? (3)
3. Discuss the importance of the monsoon rains to the Indus Valley Civilization. (3)
4. Explain how the "Law of Variable Proportions" helps in determining the optimum input use in farm management. (3)

5. Apply the principles of agricultural extension to explain how Krishi Vigyan Kendras (KVKs) could improve farm productivity in rural areas. (3)
6. Elaborate about the origin and evolution of Rice plants. (3)
- OR**
- Elaborate about the genus *Saccharum* and its originating place. (3)

Group-C
(Long Answer Type Questions)

5 x 6=30

7. Explain how restriction enzymes are utilized to create compatible ends for DNA fragments and the implications of their use in recombinant DNA technology. (5)
8. Explain the importance of applying economic principles like the Law of Diminishing Returns and Factor Substitution in farm management. How do they influence decision-making in maximizing farm profitability? (5)
9. Outline the advancements in agricultural practices during the Buddhist period, and examine the impact of these practices on rural self-sufficiency and community cooperation. (5)
10. Adapt the different farming systems in terms of their strengths and weaknesses in the context of socio-economic development.. (5)
11. Evaluate the advantages and limitations of farm budgeting. Based on your evaluation, suggest ways to improve the farm budgeting process to make it more efficient and practical for farmers facing resource constraints. (5)
12. Describe the various agricultural tools used during the Ramayana and Mahabharata periods. How did the evolution of these tools impact the efficiency of agriculture in ancient India? (5)

OR

Analyze the role of kings in agricultural activities during the Vedic and Ramayana periods. How did their actions influence the development of agriculture and irrigation systems? (5)
