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**Atomic Energy Education Society**

**Session: 2024 – 25**

**Class: 9** **Subject: Science**

**WORKSHEET**

**Lesson No. & Name of the Chapter: L-12, IMPROVEMENT IN FOOD RESOURCES**

**SECTION-A [1X10=10]**

1. What is aquaculture?
a) Cultivation of crops in water b) Cultivation of fish and other aquatic organisms
c) Organic farming d) Cultivation of crops in arid regions

2. Which of the following is an example of biological control in agriculture?
a) Use of chemical fertilizers b) Use of pesticides
c) Introduction of natural predators d) Irrigation techniques

3. What is the primary purpose of green manure in agriculture?
a) Enhancing soil fertility b) Controlling pests
c) Improving water conservation d) Increasing crop yield

4. What is the process of providing water to crops at specific intervals called?
a) Drip irrigation b) Rainfed agriculture
c) Flood irrigation d) Subsistence farming

5. Which of the following is a genetically modified crop?
a) Wheat b) Rice c) Bt cotton d) Barley

6. What is the term for the method of breeding crops with desirable traits to produce the next generation of crops?
a) Hybridization b) Irrigation c) Crop rotation d) Photosynthesis

7. Which of the following is a sustainable agricultural practice?
a) Monoculture b) Agroforestry
c) Excessive use of chemical fertilizers d) Overgrazing

8. What is the primary purpose of crop rotation in agriculture?
a) Controlling weeds b) Preventing soil erosion
c) Diversifying crops and improving soil fertility d) Reducing water usage

9. Which of the following is a method of organic farming?
a) Use of synthetic pesticides b) Crop rotation
c) Genetically modified organisms (GMOs) d) Excessive tilling

10. What is the primary goal of integrated pest management (IPM)?
a) Elimination of all pests
b) Biological control and minimal use of chemical pesticides
c) Maximum use of chemical pesticides
d) Promoting the growth of weeds for pest control

**SECTION B [2X5=10]**

11. Explain the concept of genetic modification in crops. Provide one example of a genetically modified crop and its benefits.

12. Describe the importance of water management in agriculture. Highlight one modern irrigation technique and its advantages.

13. Discuss the role of biofertilizers in sustainable agriculture. Provide an example of a biofertilizer and explain how it enhances soil fertility.

14. Explain the term 'integrated pest management' (IPM) and discuss its significance in modern agriculture. Provide two strategies used in IPM.

15. What is agroforestry, and how does it contribute to the improvement of food resources? Provide two benefits of incorporating agroforestry practices in agriculture.

**SECTION C [3X5=15]**

16. Explain the concept of sustainable agriculture. Provide three examples of sustainable agricultural practices and discuss their benefits.

17. Discuss the challenges associated with monoculture in agriculture. Propose three alternative approaches to overcome these challenges and promote crop diversity.

18. Elaborate on the significance of organic farming in improving food resources. Highlight three key principles of organic farming and their positive impacts on the environment and human health.

19. Examine the impact of climate change on global food security. Identify three adaptive measures that can be implemented in agriculture to mitigate the effects of climate change on food production.

20. Explain the concept of food security and its components. Discuss three strategies or interventions that can be implemented at the national level to enhance food security in a developing country.

**SECTION D [5X3=15]**

21. Explain the importance of irrigation in agriculture. Describe different methods of irrigation and their advantages. Provide examples of regions where specific irrigation methods are commonly used.

22. Discuss the concept of organic farming and its benefits. Highlight the principles of organic farming, and explain how it contributes to environmental sustainability and human health. Provide examples of organic farming practices.

23. Explore the role of crop rotation in enhancing soil fertility and preventing pests. Explain the benefits of practicing crop rotation and provide examples of crops that are commonly rotated. How does crop rotation contribute to sustainable agriculture?