

## UNIT 1—MECHANICS IN THE WORLD OF AGRICULTURE

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### MULTIPLE CHOICE

1. How many people does each American farmer feed?
- |        |              |
|--------|--------------|
| a. 79  | c. 254       |
| b. 144 | d. 2 million |

ANS: B  
144

PTS: 1

2. Renewable natural resources are provided by \_\_\_\_\_.
- |                |                    |
|----------------|--------------------|
| a. agriculture | c. nature          |
| b. technology  | d. nonfarm workers |

ANS: C  
nature

PTS: 1

### COMPLETION

1. \_\_\_\_\_ has played a major role in the rise of agricultural production efficiency.

ANS: Mechanization

PTS: 1

2. Agriculture is a(n) \_\_\_\_\_ industry upon which all people depend.

ANS: basic

PTS: 1

3. Two inventions that had a profound influence on the settling of this country were the \_\_\_\_\_ and the \_\_\_\_\_.

ANS:  
steel plow, cotton gin  
cotton gin, steel plow

PTS: 1

### MATCHING

*Match the following term with the correct definition below.*

- |                |                |
|----------------|----------------|
| a. agriculture | d. agriscience |
|----------------|----------------|

- b. renewable natural resources
- c. efficiency
- e. agricultural mechanics

1. ability to produce with minimum waste of materials, energy, and time
2. activities concerned with plants and animals and the related supplies, services, products, and marketing related to plants, animals, and the environment
3. the selection, maintenance, operation, selling, and use of power units, machinery, structures, and utilities used in agriculture
4. the science involved with the industry of agriculture
5. resources provided by nature that can be replaced or renewed

1. ANS: C                      PTS: 1
2. ANS: A                      PTS: 1
3. ANS: E                      PTS: 1
4. ANS: D                      PTS: 1
5. ANS: B                      PTS: 1

*Match the following inventors with their machines.*

- a. Cyrus McCormick
- b. Eli Whitney
- c. Thomas Jefferson
- d. John Deere

6. reaper
7. iron plow
8. steel plow
9. cotton gin

6. ANS: A                      PTS: 1
7. ANS: C                      PTS: 1
8. ANS: D                      PTS: 1
9. ANS: B                      PTS: 1

### **SHORT ANSWER**

1. Why are renewable natural resources considered to be part of agriculture?

ANS:

Without management, renewable resources would be consumed at a faster rate than they are replenished by nature. Agriculture has expanded to involve the management of these resources.

PTS: 1

2. What are some of the uses for basic agricultural products? List at least five.

ANS:

food, oil, lumber, feed, seed (more than five available)

PTS: 1

3. What are some examples of renewable resources? Name at least two.

ANS:

forests, fish in streams, lakes, and oceans, and wildlife such as game animals

PTS: 1

4. Why was the invention of the steel plow so important?

ANS:

It allowed early farmers to break up the tough sod that had previously prevented pioneers from cultivating the rich prairie soil.

PTS: 1

5. What opportunity did the invention of the cotton gin open up for America?

ANS:

It opened up the entire southern portion of the nation for cultivation of upland cotton.

PTS: 1

6. What is most of today's agricultural production machinery based on?

ANS:

The internal combustion engine

PTS: 1

7. How is agricultural mechanics different in undeveloped countries and why?

ANS:

Agricultural mechanics is different in undeveloped countries because they must utilize simple, tough, reliable small machines to improve agriculture. This is because they have limited resources such as capital, fuel for internal combustion engines, and a limited amount of trained farmers.

PTS: 1

8. What will increase the efficiency of American agriculture in the future?

ANS:

Computer-controlled machines and robotics will increase efficiency.

PTS: 1

9. Define agricultural mechanics.

ANS:

Agricultural mechanics is the selection, operation, maintenance, service, selling, and use of power units, machines, equipment, structures, and utilities used in agriculture.

PTS: 1

10. Why was the invention of refrigeration so important to the development of agriculture?

ANS:

It allowed food to be stored for a longer time. Produce could be shipped all across the country.

PTS: 1

11. List three careers that are applications of agricultural mechanics.

ANS:

Any three of the following: An engineer designs tractors and other farm and ranch machines; a forester keeps chain saws and other equipment going; a construction engineer builds processing plants, farm buildings, and agriculture facilities; an electrician installs climate controls, silo unloaders, and milling equipment; a soil conservationist works to control soil erosion; a hardware store employee locates repair parts for agricultural tools and machines; a welder performs repairs on farm machines; and a mechanic repairs farm equipment and machines.

PTS: 1