\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***T/F Section – Reach each statement carefully and determine if it is a True (T) statement or a False (F) statement. Place a T or an F on the blank in front of the statement. If the statement is false, circle the word or words that make the statement false and then write the word or words that would make the statement true in the blank provided.***

***True*** 1. Electronic technology consists of hardware and software.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***False*** 2. Sensors take signals from a monitor, interprets changes that need to be made and then send

the signal to the meter to make the corrections. ***Monitors take signals from sensors.***

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***False*** 3. Precision Ag maps are put together in sections, starting with yield. ***Layers not sections.***

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***True*** 4. Electronic collars can track such things as feed intake and milk output in livestock.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***False*** 5. The three main types of software used in Precision Agriculture are monitors, sensors and

meters. ***Hardware not software.***

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Matching Section - Match each vocabulary word in the column on the left with its proper definition from the column on the right.***

***9.***  Inputs 6. Mechanical equipment used in Precision Agriculture.

***11.*** Precision Ag Maps 7. A complex and highly technical array of sensors used in precision

planting.

***6.*** Hardware 8. Scale, hygrometer, thermometer and laser.

***10.*** Software 9. Seed, irrigation, fertilizer, herbicide, fungicide.

***8.*** Sensors 10. Computer programs used in Precision Agriculture.

***7.*** SmartFirmer 11. Yield, subsoil moisture, organic matter, fertilizer and irrigation

application.

***Multiple Choice Section - Reach each question or statement carefully. Circle the correct answer OR answers from the choices below each question.***

12. Things specifically related to seeds that can be changed using Precision Agriculture include:

***a. Variety*** ***b. Spacing*** c. Moisture ***d. Depth***

13. An agricultural producer can minimize the risk to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by reducing nitrate

leaching and runoff.

a. himself b. livestock

c. human lungs d. ***the environment***

14. Because of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, an ag producer doesn’t have to farm a lot of acres to use

Precision Agriculture.

a. diversity b. ***scalability***

c. singulation d. flow

15. A GPS receiver gets its information from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. sensors b. the Internet

c. ***Earth-orbiting satellites*** d. drones

***Short Answer/Fill-in-the-Blank Section - Read each statement or question carefully. Fill in the blanks with the correct answers or write the correct response in the space provided below each question.***

16. Name 2 things that can be “sensed” in an animal’s body by using Precision Agriculture.

***The last time an animal ate or drank, body temperature, heart rate, etc.***

17. A moisture ***sensor*** measures the amount of moisture in grain.

18. A flow ***meter*** works with flow sensors to control the amount of fluid that is

allowed to flow through a sprayer.

19. Using the words provided as well as arrows, draw the proper flow of a “simple delivery system” in

the proper order.

*Application Device*

*Flow Meter*

*Flow Sensor*

*Pump*

*Supply Tank*

|  |
| --- |
| ***Note: Draw your “diagram” in the space below.*** |

***Supply Tank → Pump → Flow Meter → Flow Sensor → Application Device***

20. What are two things related to irrigation that can be controlled using Precision Agriculture?

***When to add water and how much water to apply.***

21. ***GPS*** allows a field to be surveyed with ease.

22. Precision Agriculture helps an ag producer make more informed ***decisions***.

23. Ag ag producer does not have to buy all new ***equipment*** in order to use Precision

Agriculture.

24. It may take a very long to gather the needed ***data*** to implement Precision

Agriculture.

25. It may be difficult for older producers to learn to ***analyze*** the information

provided by Precision Agriculture.