

New Mexico State Agronomy CDE General Knowledge Exam 2014

Please use the "Exam" portion of your Scantron to answer the following 30 questions.

Questions 1-15 General knowledge exam test bank.

Questions 16-30 Extension publication references

Notice: It is very likely that questions 1 through 15 have been reworded! Please do not assume that the correct answer is exactly the same as the questions you have been studying. It is recommended that you carefully read and assess what each question is asking. Additionally, it is recommended that you work through any math problems to ensure that you have identified the correct answer.

1. Your soil test recommends 150 pounds of nitrogen per acre applied to your 25 acre field. How much 46-0-0 do you need to apply to meet the recommendation for this field?
 - A. 429lbs./acre
 - B. 150 lbs./acre
 - C. 326 lbs./acre
 - D. 245 lbs/acre

2. Robert owns a farm in eastern New Mexico. The soil tests show he needs to apply 120 lbs. of nitrogen per acre to meet his yield goal for sweet corn. He has decided to apply urea which contains approximately 46% nitrogen to his half section (320 acres) which will be in crop. If urea costs \$0.39 per pound, what will be his cost per acre for fertilizer? (round to two decimal points)
 - A. \$46.80/acre
 - B. \$21.53/acre
 - C. \$38.15/acre
 - D. \$101.74/acre

3. Weeds such as ground cherry are hard to control in crops like chile peppers because:
 - A. They are herbicide resistant
 - B. They are in the same family.
 - C. Chile peppers grow faster.
 - D. Ground cherry grows faster

4. If a farmer uses a chisel in a tillage system, this would be considered:
 - A. no-till
 - B. primary tillage
 - C. secondary tillage
 - D. residue enhancers

5. Which of the following insects would most likely be the cause of small holes in your stored grain?
 - A. sawtooth grain beetle
 - B. white grubs
 - C. leafcutter bees
 - D. corn earworm

6. What is the purpose of adding a surfactant to a pesticide spray mixture?
 - A. to enhance adsorption of the pesticide
 - B. to aid in spreading and sticking of the pesticide
 - C. to enhance the pesticide's rain-fastness
 - D. all of the above

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7. Powdery mildew can be controlled by applying which of the following to the crop?
 - A. insecticide
 - B. nematicide
 - C. fungicide
 - D. herbicide

8. Which of the following best define secondary nutrients?
 - A. Sulfur, Manganese, and Calcium
 - B. Sulfur, Calcium, and Phosphorus
 - C. Magnesium, Sodium, and Copper
 - D. Sulfur, Magnesium, and Calcium

9. Which of the following crops is a dicot?
 - A. Oats
 - B. Cabbage
 - C. Wheat
 - D. Rice

10. On a grass plant, which part is a clasp-like structure located where the blade attaches to the stem?
 - A. Ligule
 - B. Apical meristem
 - C. Auricle
 - D. Sheath

11. You are planting a field of pinto beans 1000' X 697'. The seed you purchase is 98% pure and has a germination rate of 93%. You want to plant 60 pounds of viable seed per acre. How many actual bags of seed should you buy? The seed comes in 50 pound bags. (*Hint: you need to know how much pure live seed you have*).
 - A. 19
 - B. 18
 - C. 21
 - D. 17

12. Which nutrient deficiency can cause corn, oats, or wheat leaves to have yellow margins?
 - A. potassium
 - B. phosphorus
 - C. iron
 - D. sulfur

13. A recognizable compaction layer in a field is often called:
 - A. Caliche layer
 - B. Hard pan
 - C. Drill pan
 - D. Cultivation pan

14. Phosphorus will not move a great deal in soil because:
 - A. it is a cation and reacts with organic matter
 - B. it is a cation and reacts with sand
 - C. it is an anion and reacts with calcium, iron, aluminum and clay surfaces
 - D. it is always applied at low rates

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15. The label directs you to add a spreader-sticker (surfactant) to your herbicide tank mix. The application rate for the surfactant is 96 ounces per 100 gallons of water. You need to mix 115 gallons of spray. How much surfactant do you need?
- A. 34.5 oz
 - B. 110 oz
 - C. 55 oz
 - D. 441 oz
16. Which of the following best defines pure live seed?
- A. Total percentage of seed, in a one pound seed sample, that has the potential to germinate.
 - B. Total percentage of seed that germinates in a bulk seed lot.
 - C. Total percent of seed that is pure seed.
 - D. Total percentage of seed that germinates in a one pound seed sample.
17. Dodder has tiny sucker-like appendages which it uses to attach to other plants. These are called?
- A. Anchors
 - B. Haustoria
 - C. Tendrils
 - D. None of the above
18. When you purchase a bag of seed, the seeds are often treated with chemicals that keep them safe during germination. What is the most common kind of seed treatment that would be listed on the "treat tag"?
- A. Insecticide
 - B. Herbicide
 - C. Fertilizer
 - D. Fungicide
19. The adult life stage of the Variegated cutworm is a:
- A. Beetle
 - B. Moth
 - C. Butterfly
 - D. Weevil
20. Which of the following organizations sets the minimum seed standards for seed certification for each crop?
- A. United States Department of Agriculture
 - B. Association of Official Seed Certifying Agencies
 - C. New Mexico State University
 - D. New Mexico Department of Agriculture
21. In dicot plants, what flower structures collectively form the corolla?
- A. Sepals
 - B. Petals
 - C. Calyx
 - D. Tepals
22. What is the allowable percentage of noxious weed seeds in a bag of certified seed?
- A. 1%
 - B. 0.5%
 - C. 0%
 - D. 2%
23. A soil analysis provides information about:
- A. Soil fertility and nutrient availability.
 - B. Specific yield increases associated with fertilizer applications.
 - C. Fertilizer recommendations for proper plant health.
 - D. Both A and C.

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24. In the Dodder extension publication it was reported that dodder seeds can live up to _____ years.
- A. 5
 - B. 12
 - C. 20
 - D. 18

25. Which of the following plant characteristics can be used for identifying a dicot plant?
- A. Flower structure
 - B. Leaf arrangement on the stem
 - C. Shape of the leaf, leaflets, and leaf margins
 - D. All of the above

26. Where are sawtoothed grain beetles most problematic?
- A. In grain fields
 - B. In dense leafy vegetation
 - C. In granaries, food distributors, warehouses, and house pantries
 - D. All of the above

27. What information is needed to calculate pure live seed?
- A. % dormant seed and % inert matter
 - B. % total germination and % dormant seed
 - C. % germination, % dormant seed, and % pure seed
 - D. % germination

28. Why are N, P, and K called macronutrients?
- A. They are required by all plants in large quantities.
 - B. They are too large for plants to utilize.
 - C. These elements are the largest of all the nutrient elements.
 - D. They are larger in size than secondary nutrients Calcium, Magnesium, and Sulfur.

29. You have purchased a bag of certified alfalfa seed to plant on your farm. It is recommended that you plant 20 pounds of pure live seed per acre to establish a good alfalfa stand. Your seed analysis tag gives you the following information.

Pure seed	99%
Inert matter	0.5%
Other crop seed	0.5%
Germination	89%
Dormant seed	7%
Total germination	96%

Use this information to calculate the percentage of pure live seed in your 50 pound bag of alfalfa seed.

- A. 88%
 - B. 95%
 - C. 96%
 - D. 99%
30. Leaves which are long narrow and have parallel sides are best described by the term:
- A. Elliptic
 - B. Spatulate
 - C. Ovate
 - D. Linear