

SOUTH DAKOTA  
STATE FFA CDE  
AGRONOMY TEST  
2006

Multiple Choice:

SELECT THE ONE BEST ANSWER AND RECORD ON SCAN SHEET:

1. When chemicals produced by one plant affect another this is called
  - A. Allelopathy
  - B. Syngamy
  - C. Aerobic
  - D. Biotic
  
2. An example of a long-day plant is
  - A. Soybean
  - B. Strawberry
  - C. Winter wheat
  - D. Corn
  
3. A class of plant growth hormones is
  - A. Starch
  - B. Gibberellins
  - C. Mycorrhizae
  - D. Amino acids
  
4. Noxious weeds are defined as
  - A. Undesirable, troublesome, and/or difficult to control
  - B. Dandelions
  - C. Only a problem in row crops
  - D. None of the above
  
5. Scientific name for corn
  - A. Sorghum halepense
  - B. Triticum aestivum
  - C. Glycine max
  - D. Zea maize
  
6. An impervious layer in the soil that restricts root penetration as well as movement of air and water
  - A. Horizon
  - B. Hardpan
  - C. Index
  - D. Abscission layer
  
7. The Hessian fly is a problem in what crop?
  - A. Oats
  - B. Corn
  - C. Alfalfa

- D. Wheat
8. A warm-season turf grass in the United States
- A. Kentucky bluegrass
  - B. Bermudagrass
  - C. Perennial ryegrass
  - D. Creeping bentgrass
9. Vernalization is
- A. Promotion of flowering by a cold treatment given to plants or imbibed seeds
  - B. Timing of fertilizer application
  - C. Using heat to seal plant injuries
  - D. A process that produces Abscisic acid
10. What helps or promotes Nitrogen fixation in legume plants?
- A. Ribosomes
  - B. Stolons
  - C. Rhizobia
  - D. Regeneration
11. A horizontal, often fleshy stem that can root and then produce new shoots where it touches the soil is a
- A. Stolon
  - B. Rhizome
  - C. Stipule
  - D. Tendril
12. Chemical nutrient needed for the synthesis of amino acids and proteins
- A. Calcium
  - B. Potassium
  - C. Nitrogen
  - D. Boron
13. Deep chiseling (greater than 16 inches) breaking compact subsoils without inverting them
- A. Strip tillage
  - B. Subsoiling
  - C. Drilling
  - D. Chiseling
14. Released from the stamen
- A. Pistil
  - B. Pollen grain
  - C. Polar nuclei
  - D. Egg cell
15. Process by which cool-season vegetables are made to adapt to cooler temperatures by gradually exposing young transplants to stress (i.e. – cold temperatures)
- A. Dormancy
  - B. Stratification
  - C. Vernalization

- D. Hardening
16. Corn, wheat and turf grass seeds are what type of fruit?
- A. Capsule
  - B. Legume
  - C. Caryopsis
  - D. Achenes
17. Which cell structure contains the chromosomes?
- A. Protoplast
  - B. Cell walls
  - C. Nucleus
  - D. Chloroplast
18. Embryonic leaves that serve as food-storing organs are called?
- A. Cotyledons
  - B. Plumules
  - C. Coleoptiles
  - D. Coleorhizas
19. Scientific name of soybeans
- A. Sorghum halepense
  - B. Gossypium hirsutum
  - C. Triticum aestivum
  - D. Glycine max
20. Development of secondary shoots
- A. Tillering
  - B. Jointing
  - C. Tillth
  - D. Tapping
21. Having one half of the complete set of chromosomes typical for a species
- A. Diploid
  - B. Haploid
  - C. Polyploid
  - D. Triploid
22. Alfalfa seeds should be planted how deep?
- A. One inch
  - B. One-quarter inch
  - C. One-half inch
  - D. Two inches
23. A substance with a pH above 7
- A. Aleurone
  - B. Acidic
  - C. Basic
  - D. Monophasic

24. Corn seed should be planted how deep?
- A. Less than one inch
  - B. 2 – 3 inches
  - C. 1 ½ to 2 inches
  - D. 3 -4 inches
25. Cutting a portion of a plant to propagate a new plant is a form of what?
- A. Sexual reproduction
  - B. Asexual reproduction
  - C. Pollination
  - D. Fertilization
26. Union of the two male gametes with the female gamete and the polar nuclei
- A. Double fertilization
  - B. Eukaryote
  - C. Fermentation
  - D. Fixation
27. A spontaneous change in the genetic make-up of a cell
- A. Node
  - B. Mutation
  - C. Genetic shift
  - D. Mitosis
28. A halving of the chromosome number is caused by what process?
- A. Pollination
  - B. Fertilization
  - C. Mitosis
  - D. Meiosis
29. The part of the flower made up of the stigma, style and ovary
- A. Stamen
  - B. Sepal
  - C. Petal
  - D. Pistil
30. Possessing identical genes
- A. Alleles
  - B. Heterozygous
  - C. Homozygous
  - D. Homologous
31. A tiny plant as it exists in a seed
- A. Zygote
  - B. Dicot
  - C. Embryo
  - D. Monocot

32. An environment in which oxygen is absent
- A. Anaerobic
  - B. Aerobic
  - C. Antigen
  - D. Soilbed
33. Amino acids are the building blocks of?
- A. Proteins
  - B. Fats
  - C. Lipids
  - D. Stolons
34. An organelle that contains chlorophyll and is the site of photosynthesis and starch formation
- A. Chloroplast
  - B. Mitochondria
  - C. Nucleus
  - D. Vacuole
35. The application of biological and engineering techniques to manipulate the genetic code of plants
- A. Biology
  - B. Biotechnology
  - C. Biosynthesis
  - D. Biome
36. Which of the following is not an oilseed crop?
- A. Canola
  - B. Wheat
  - C. Safflower
  - D. Sunflower
37. Evaporation of water from leaf and plant surfaces
- A. Respiration
  - B. Translocation
  - C. Stomatization
  - D. Transpiration
38. The application of a herbicide after the crop and weeds are both up and growing in the field
- A. Post-emerge
  - B. Pre-emerge
  - C. Post-harvest
  - D. Pre-harvest
39. Bearing both staminate and pistillate flowers (unisexual flowers) on the same plant
- A. Perfect
  - B. Dioecious
  - C. Monoecious

- D. Gamopetalous
40. A blade, petiole, and stipule make up?  
A. A leaflet  
B. A compound leaf  
C. A terminal leaflet  
D. A complete leaf
41. Vascular system in plants is made up of?  
A. Xylem and Crowns  
B. Xylem and Phloem  
C. Phloem and Epidermis  
D. Cortex and pith
42. Plant family with the characteristic of forming nitrogen-fixing nodules on its roots.  
A. Gymnosperms  
B. Legumes  
C. Monocots  
D. Xerophytes
43. Planting with no prior tillage  
A. No-till  
B. Conservation tillage  
C. Ridge-till  
D. Chisel plowing
44. Removal of soil material by wind or water moving over the land  
A. Compaction  
B. Stripping  
C. Nitrification  
D. Erosion
45. Term designating the amount of water the soil can hold against gravity  
A. Permanent wilting point  
B. Salting point  
C. Field capacity  
D. Gravity water
46. Treatment applied to seed to protect against insects  
A. Fungicide  
B. Insecticide  
C. Fertilizer  
D. Gametocide
47. First step in germination of seed  
A. Enzyme activation  
B. Cell elongation  
C. Conversion of storage tissues  
D. Absorption of water

48. A plant that continues to grow for more than two years
- A. Perennial
  - B. Annual
  - C. Biennial
  - D. Indeterminate
49. Naturally occurring compound produced by the plant that affects plant growth
- A. Phytochrome
  - B. Desiccant
  - C. Hormone
  - D. Fertilizer
50. Leaves occurring two at a node on opposite sides of the stem
- A. Alternate
  - B. Opposite
  - C. Clasping
  - D. Petiolate