

AGRICULTURAL BOOKLET EXAM
2006 OHIO STATE LAND AND SOIL JUDGING CONTEST

(Note: Place an "X" in the blank space beside the correct answer)

NAME:

(Last)

(First)

(Middle)

SCHOOL:

_____ COUNTY: _____

NUMBER: _____ CONTESTANT NO. _____

T___ F___

1) The "A" Horizon contains the surface and subsurface layers

T___ F___

2) A slope of five percent is equal to a rise of five feet over a distance of 50 feet.

T___ F___

3) Rill erosion is caused by water in a slightly concentrated flow running across the landscape

T___ F___

4) Severe erosion has 25-75% subsoil material mixed in the plow layer or the upper seven inches of original topsoil.

T___ F___

5) Soil structure has the largest influence on the water and plant nutrient holding capacity.

T___ F___

6) Clayey soil textures contain 30% or more clay.

T___ F___

7) Soils that are sandy throughout the profile are always well drained.

T___ F___

8) Coarse sand or gravel is a root restrictive layer

T___ F___

9) Soil particles are grouped into three primary mineral or soil particle sizes.

T___ F___

10) Fragipans commonly have gray vertical seams and iron and manganese oxide stains.

T___ F___

11) A shallow soil has 20 to 40 inches to a root restricting layer.

T___ F___

12) A uniform brown, yellowish brown, or reddish brown color in the subsoil indicates that the subsoil has had sufficient oxygen to highly oxidize the iron.

T___ F___

13) A high water table can affect the drainage of a soil.

T___ F___

14) The steep slope class has a slope range of 18 to 35%.

T___ F___

15) Using a soil probe is a suitable method to observe soil properties.

Key

- 1-T
- 2-F
- 3-T
- 4-F
- 5-F
- 6-F
- 7-F
- 8-T
- 9-T
- 10-T
- 11-F
- 12-T
- 13-T
- 14-F
- 15-T

Pit #1	Pit #2	Pit #3	Pit #4
2	2	1	1
8	9	8	8
14	14	15	14
22	22	24	23
27	27	28	27
35	35	36	35
41	41	41	41
42	42	42	42
44	44	46	46
46	46	47	47

2008-09 Ohio Rural Soils Exam
October 11, 2008

WRITTEN TEST- 15 questions-60 points- test reference-1990 Judging Land and Soil For Agricultural Use

1. Texture of the surface soil that is very sticky when wet is called _____.
a) loamy b) clayey c) sandy d) gravelly
2. Depth of soil that is 10-20 inches to a root-restrictive layer is _____.
a) deep b) moderately deep c) shallow d) very shallow
3. One of the best indicators of air and water movement in the subsoil is its _____ when moist.
a) texture b) depth c) color d) erosion
4. Soils with Class _____ land capability have severe limitations and need careful use and management.
a) I b) II c) III d) IV
5. Land use for Class _____ land is for grassland or woodland.
a) II b) IV c) VI d) VIII
6. Slope can be defined as the inclination of the land surface from the _____.
a) horizontal b) vertical c) air d) ground
7. _____ erosion results when the energy of concentrated flow is sufficient to cut channels larger than rills.
a) rill b) gully c) sheet d) wind
8. Conservation practices where the land should be planted with adapted trees is Class _____ land.
a) I b) III c) V d) VII
9. _____ is/are rock fragments larger than two feet (60 centimeters) in diameter.
a) channers b) cobble c) bedrock d) boulders
10. Removal of fairly uniform layer of soil from the land surface by action of rainfall and surface runoff is _____ erosion.
a) sheet b) rill c) gully d) glacial
11. _____ is sedimentary rock formed by hardening of clay deposits.
a) stones b) pan c) bedrock d) shale
12. An area that drains all its ground water into a particular body of water is called a _____.
a) matrix b) watershed c) diversion channel d) fragipan
13. The master layer of a soil profile in Ohio where parent matter or substratum is found would be called the _____ horizon.
a) A b) B c) C d) D
14. In Ohio fields with _____ or more inches of topsoil are usually not considered seriously affected by erosion.
a) 4 b) 5 c) 6 d) 7
15. _____ is the largest soil particle (.002" to .08" diameter) and feels gritty when rubbed between the fingers.
a) silt b) sand c) clay d) loam

SOIL SURVEY- 15 questions- 40 points – test reference- Soil Survey of Hardin County 1994

1. The Blount-Pewamo association makes up about ____ percent of Hardin County.
a) 50 b) 60 c) 70 d) 80
2. The symbol for Blount silt loam, 2-6 percent slope is _____.
a) BoA b) BoB c) BpAd d) BcD
3. _____ is the symbol for Fox silt loam, 0-2% slopes.
a) FoA b) FoB c) FpC2 d) FoXy
4. The map symbol for deep, level, very poorly drained Olentangy silt loam soil is _____.
a) OIEn b) OcB c) Ot d) OcA
5. For the typical Carlisle Series soil, the ____ horizon is at 24-36” and has few fine roots and common ¼”–3” woody fragments.
a) OaL b) Oa2 c) Oa3 d) Oa4
6. Blount silt loam, 2-6% slopes, consists of 84,355 acres or ____ percent of the land in Hardin County.
a) 19.7 b) 28.0 c) 24.5 d) 60
7. Using table 6, for (OcA) Ockley soils with 105 corn bushel per acre yield potential, the listed land capability classification would be _____.
a) I b) II c) III d) IV
8. Table 7, capability classes and subclasses, shows the largest acreage in Hardin County is in Class _____ land.
a) I b) II c) III d) IV
9. The map unit symbol for Linwood muck soil is _____.
a) Ca b) Ln c) Mc d) Ro
10. Shinrock silt loam (ShB) soils have a slope of _____.
a) 0-2% b) 2-6% c) 6-12% d) 12-18%
11. Latty silty clay soils are found on what landscape position?
a) uplands b) glacial outwash terraces c) lake plains d) stream terraces
12. What is the natural drainage class of (FoB) Fox silt loam, 2-6% slopes?
a) very poorly drained b) somewhat poorly drained c) moderately well drained d) well drained
13. For (Ca) Carlisle muck soils, the typical thickness of the surface layer of black, friable muck is _____.
a) 6” b) 8” c) 10” d) 12”
14. The typical thickness of the subsoil for (Ro) Roundhead muck is _____.
a) 7” b) 10” c) 16” d) 27”
15. (KaB) Kendalville silt loam, 2-6% slopes, has a land capability classification of _____ and woodland orientation symbol of 5A.
a) IIe b) IIs c) IIIe d) IIIs

END OF EXAM

10-11-08 OHIO RURAL SOILS EXAM KEY

WRITTEN TEST

1. B- clayey- pg 12
2. C- shallow- pg 14
3. C- color- pg 15
4. D- class IV- pg 18
5. C- class VI- pg 19
6. A- horizontal- pg 6
7. B-gully- pg 8
8. D- class VII- pg 21
9. D- boulders- pg 30
10. A- sheet- pg 8, 31
11. D- shale- pg 33
12. B- watershed- pg 34
13. C- "C" horizon- pg 2
14. D- 7"- pg 9
15. B- sand- pg 10

SOIL SURVEY

1. B- 60%- pg 7
2. B- BoB- pg 14
3. A- FoA- pg 20
4. C- Ot- pg 45
5. C-Oa3- pg 81
6. B-28%- pg 124
7. A- I- pg 127
8. B-II- pg 129
9. B- Ln- pg 124
10. B- 2-6%- pg 51
11. C- lake plains- pg 89
12. D- well drained- pg 20
13. C- 10"- pg 16
14. D- 27"- pg 49
15. A- IIe- pg 30

Pit 1	Pit 2	Pit 3	Pit 4
Part 1	Part 1	Part 1	Part 1
2	3	4	1
8	9	9	8
14	14	14	14
18	19	19	18
22	22	22	22
Part 2	Part 2	Part 2	Part 2
27	28	29	26
Part 3	Part 3	Part 3	Part 3
35	36	37	34
Part 4	Part 4	Part 4	Part 4
41	41	41	41
42	42	42	42
44	43	45	46
46	45	46	49
	46		