**A sample of asparagus, *Asparagus officinalis,* was received in the laboratory for testing. Answer the following questions pertaining to the sample.**

1. Prior to receiving the sample, the customer asked you to take the sample for them. There are 49 bags in the lot. How many primary samples should be taken to obtain the working sample?

1. 5
2. 14
3. 10
4. 22

2. How many decimal places should the working sample be weighed out to?

1. 0
2. 1
3. 2
4. 3
5. 4

3. What is the minimum weight needed for a purity test? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. What is the minimum weight needed for a noxious exam? \_\_\_\_\_\_\_\_\_\_\_\_

5. What Pure Seed Unit is used for asaparagus?

1. 1
2. 9
3. 2
4. 3

6. True False A seed with the seed coat entirely removed is considered inert matter.

7. True False On top of creped cellulose paper without a blotter is an approved substrate for
 asparagus.

8. What is the approved temperature for an asparagus germ test?

1. 20 C
2. 25 C
3. 20-30 C
4. 15 C

9. If the germ test is planted on October 5th, what day will the first count occur?

1. October 19
2. October 12
3. October 10
4. October 26

10. How many days from planting will the final count occur?

1. 7
2. 14
3. 10
4. 21

**A sample of oats, *Avena sativa*¸ was received in the laboratory for testing. Answer the following questions pertaining to the sample.**

11. What is the recommended minimum weight that should be submitted for the oat sample?

1. 60
2. 150
3. 500
4. 1000

12. True False The weight of the purity working sample can not be considered part of the minimum weight specified for the noxious weed seed exam.

13. What is the minimum weight needed for a purity test?

14. What is the minimum weight needed for a noxious test?

15. True False Two oat seeds adhered together must be separated and classified appropriately as pure seed or inert matter.

16. True False To be considered a pure seed unit, there must be some degree of endosperm

development present.

17. What test can be used to distinguish off types of oats from other oats?

1. cupric sulfate test
2. fluorescence test
3. peroxidase test
4. phenol test

18. What part of the seed structure fluoresces?

1. Lemma and palea
2. Caryopsis and rachilla
3. Lemma and caryopsis
4. Caryopsis and palea

19. When a purity, germination, and noxious test are requested, where are the pure seed units for planting the germ obtained from?

1. Noxious working weight
2. Submitted sample
3. Bulk exam working weight
4. Pure seed from the purity

20. Predry requires you to place the seeds in a shallow layer at a temperature of to C.

21. When using the predry method how many days does the sample need to stay exposed to the high temperatures?

1. 3-5
2. 2-3
3. 4-5
4. 5-7

22. True False The number of prechill days is a recommended number of days and not a required

number of days.

23. Which of the following are approved temperatures for an oat germ?

1. 20-30 C
2. 25 C
3. 15 C
4. 20 C

24. If the predry method is used for breaking dormancy, how many days is the final count?

1. 10
2. 15
3. 17
4. 7

25. If the prechill method is used for breaking dormancy, how many days is the final count?

1. 7
2. 10
3. 5
4. 12

26. Which of the following are approved media options for oat germination? (Select all that apply)

1. Between blotters
2. Pleated paper
3. Towels
4. Creped cellulose
5. Sand

27. True False The number of days of the prechill are to be included in the total number of days tested.

**A sample of Jeffrey pine, *Pinus jeffreyi,* was received in the laboratory for testing. Answer the following questions pertaining to the sample.**

28. What is the recommended minimum weight that should be submitted for this crop?

1. 600 seeds
2. 500 g
3. 300 g
4. 1000 g

29. True False The same weight is used for both the Purity and Noxious exams on Jeffrey pine.

30. What is the minimum weight needed for a noxious exam? \_\_\_\_\_\_\_\_\_\_\_\_

31. What Pure Seed Unit is used for Jeffrey pine?

1. 2
2. 4
3. 5
4. 3

32. True False When present in a purity sample, wings must be removed and considered inert matter.

33. Prescribed substrata for germination of Jeffrey pine are (select all that apply):

1. Top of blotter
2. Sand
3. Top of creped cellulose paper without a blotter
4. Pleated filter paper
5. Rigid transparent container with a mixture of 50 percent sand and vermiculite
6. Paper toweling

34. What is the approved temperature for a germ test?

1. 30
2. 15-25
3. 20-30
4. 22

35. If the prechill method is used for breaking dormancy, at how many days germination will the final count occur?

1. 21
2. 28
3. 14
4. 49

36. Which of the following methods is used to check the viability of ungerminated seeds after the prescribed germination period?

1. Germination promoting chemicals, such as GA3
2. Cutting test
3. Tetrazolium test
4. Embryo excision test
5. Report hard seed percentage

37. True False The percent viable seed from post germination testing is required to be listed on the

Report of Analysis.

**A sample of smooth brome, *Bromus inermis* subsp. *inermis,* was received in the laboratory for testing. Answer the following questions pertaining to the sample.**

38. True False Centrifugal dividers are not suitable for use when dividing smooth brome.

39. How many decimal places should the working sample be weighed out to?

1. 0
2. 1
3. 2
4. 3
5. 4

40. What is the minimum weight needed for a purity test? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

41. What is the minimum weight needed for a noxious exam? \_\_\_\_\_\_\_\_\_\_\_\_

42. What Pure Seed Unit is used for smooth brome?

1. 24
2. 22
3. 21
4. 23

43. True False The amount of inert matter attached to the multiple units shall be determined by the

method described in section 3.7 of the AOSA Rules.

44. A multiple unit is a seed unit that includes one or more structures as follows (select all that apply):

1. A fertile floret with basally attached glume, glumes, or basally attached sterile floret of any length.
2. A fertile floret with two or more attached sterile and/or fertile florets of any length.
3. Any seed unit without attached structures.
4. An attached sterile or fertile floret that extends to or beyond the tip of a fertile floret.

45. True False If no multiple unit factor is available in Table 3B, all multiple units are considered pure

seed.

46. The working weight of this sample is 7.868g, you determine there is 6.324g single units and 1.224g multiple units. What factor will be used to find the weight of pure seed from multiple units?

1. 0.83
2. 0.85
3. 0.72
4. 0.82

47. Using the following component weights, what will be the reported Pure Seed percent?

Single Units 6.324 g

Multiple Units 1.224 g

Other Crop 0.171 g

Inert Matter 0.144 g

Weed Seed 0.005 g

1. 93.14%
2. 83.78%
3. 90.06%
4. 95.82%

48. How many days after the first count is the final count?

1. 7
2. 21
3. 14
4. 8

49. How are dormant samples of smooth brome handled?

1. Prechill at 5 or 10°C 7 days
2. KNO3
3. Prechill at 5 or 10°C for 5 days, then test at 30°C for 9 additional days
4. Test in soil at 15°C

**A sample of centipedegrass, *Eremochloa ophiuroides,* was received in the laboratory for testing. Answer the following questions pertaining to the sample.**

50. After the appropriate number of primary samples are taken, they should be combined to create the

 sample to submit to the laboratory.

51. True False It is required that the submitted sample be retained by the laboratory for a minimum of

one year.

52. What is the approximate number of seeds per gram?

53. Which of the following would be considered inert matter?

1. Caryopsis with no endosperm development present
2. Caryopsis two thirds the size of the original seed
3. Spikelet with awn attached
4. Spikelet without attached rachis segment

54. A relative humidity of % should be maintained in the germination chamber to ensure adequate moisture level.

1. 100%
2. 95%
3. 90%
4. 75%

55. True False Centipedegrass requires light for germination.

56. What is the temperature for a germination test?

1. 15
2. 20-30
3. 25
4. 20-35

57. Variation from the required temperature should not exceed how many degrees?

1. +/- 5
2. +/- 1
3. +/- 3
4. +/- 2

58. If there are firm seeds remaining at the final count what is the appropriate procedure?

1. Report the firm seeds as dormant
2. Clip the distal end and extend for 7 days
3. Report the firm seeds as hard
4. Clip the distal end and extend for 5 days

59. What germination promoting chemical should be used when extending germ test?

1. Ethephon
2. Potassium nitrate
3. Calcium nitrate
4. Gibberellic acid

**A sample of side-oats grama, *Bouteloua curtipendula,* was received in the laboratory for testing. Answer the following questions pertaining to the sample.**

60. The sub-sample taken either from the pure seed portion of the purity analysis or directly from the submitted sample on which the germination test is performed is referred to as:

1. Noxious working sample
2. Germination working sample
3. Purity working sample
4. Seed moisture working sample

61. The pure seed unit for multiple seed units is?

1. 21
2. 23
3. 19
4. 25

62. The pure seed unit for a sample of caryopsis is?

1. 19
2. 21
3. 23
4. 25

63. True False Side-oats grama has a uniform blowing procedure

64. Prior to using the uniform blower the sample needs to be divided into how many equal parts?

1. 5
2. 2
3. 3
4. 4

65. Caryopsis at least one third the length of the floret found in the light portion shall be classified as:

1. Pure seed
2. Weed seed
3. Other crop seed
4. Inert matter

66. True False The seed units remaining in the heavy portion need to be checked to determine if there

is at least one caryopsis one third the length of the floret.

67. Which of the following are special treatments for the germination test? (Select all that apply)?

1. Dark
2. Light
3. Kno3
4. GA3

68. Which temperature is acceptable for the germination test?

1. 15
2. 15-30
3. 15-25
4. 20-30

69. True False When the multiple floret is planted each seedling is to be counted as a normal seedling.

70. True False An analyst can terminate a test prior to the final count days if they are positive that

maximum germination has been achieved.

71. True False All ungerminated seeds at the end of the testing period shall be reported as dead

 seeds.