

2006 STATE FFA NURSERY LANDSCAPE PROBLEM SOLVING TEST

Contestant Number: _____ Name: _____

Chapter Name: _____ Score: _____

Directions: Read each question carefully and choose the best possible answer. If provided with Scantron sheets, bubble in the answer. Otherwise, write the answer in the blank to the left of each number. Each correct answer is worth ten (10) points. The maximum score is 100.

- _____ 1. If an ounce of flower seeds has 2,000 seeds with a 90% germination rate, how many ounces of seed should be purchased and sowed to produce 25,000 seedlings?
- a. 10
 - b. 12
 - c. 14
 - d. 16
- _____ 2. A nursery operator has a Dwarf Burford Holly field that is 800 feet long and 300 feet wide. He has another field of Leyland Cypress that is 600 feet long and 200 feet wide. How many acres does the nurseryman have in operation?
- a. 5.50
 - b. 8.25
 - c. 11.25
 - d. 13.50
- _____ 3. It is recommended to sow 3 pounds of centipede grass seed per 1,000 square feet. How many pounds of seed are required if the lawn to be seeded is 85 feet x 200 feet?
- a. 17
 - b. 51
 - c. 34
 - d. 51,000
- _____ 4. A homeowner has a 150 feet by 200 feet lot. He has a 2,500 square foot house, 2,000 square feet of driveway and sidewalks and 3,000 square feet used for shrubs, trees, and bedding plants. How many square feet are left to be used for the lawn?
- a. 25,000
 - b. 20,000
 - c. 22,500
 - d. 25,500

- _____ 5. The recommended rate of nitrogen fertilization for centipede lawn is $\frac{1}{2}$ pound per 1,000 square feet. The 200 feet by 150 feet lot has a 3,000 square foot home and 1,000 square feet of driveways. How many pounds of nitrogen are needed?
- a. 13
 - b. 10
 - c. 18
 - d. 21
- _____ 6. How many cubic yards of mulch are needed to cover an area 100 feet long and 12 feet wide with 4 inches of mulch?
- a. 177.7
 - b. 30
 - c. 11.1
 - d. 13.3
- _____ 7. You are responsible for ordering potting media which is sold in 3.5 cubic foot bags. It takes 1 cubic foot of potting media for five one gallon pots. How many bags of potting media would you need to pot 8,000 one gallon pots?
- a. 426
 - b. 458
 - c. 525
 - d. 619
- _____ 8. A greenhouse operator ordered \$4,600 worth of supplies. The supply company gives a 2% discount for payment within 10 days of shipping and a 1% quantity discount. If the greenhouse operator uses both discounts, what will be the total bill, including 7.5% North Carolina sales tax?
- a. \$4,796.65
 - b. \$4,674.45
 - c. \$4,462.00
 - d. \$4,852.45

Use the information below to answer questions 9 and 10.

NATIONAL BASKETS. Strong polypropylene baskets. 6, 8 and 10-inch sizes come with 3-strand hangers. The 12-inch size has a 4-strand hanger. 6, 8 and 10-inch sizes have single-attachment, center-snap saucers, while the 12-inch has a four-post attachment saucer. The 8-inch floral (fl.) basket holds more soil than the standard 8-inch size.

Catalog Number		Size	No./Case	Weight/Case	Price/Case	
Green	White				1-19	20-50
H6757-9	H9668-3	6"	50	11 lbs	\$27.50	\$26.50
H6758-1	H9669-5	8"	50	16 lbs	\$32.50	\$31.50
H6773-3	H9670-8	8" (fl.)	50	18 lbs	\$33.75	\$32.50
H6759-3	H9671-0	10"	50	14 lbs	\$34.25	\$32.95
H6753-1	H9672-2	12"	25	25 lbs	\$48.95	\$47.25

- _____ 9. A greenhouse operator who specializes in hanging baskets needs 1200 12" baskets. How many cases should be purchased?
- a. 36
 - b. 24
 - c. 100
 - d. 48
- _____ 10. If the greenhouse operator needs 500 10" baskets, how much would they cost?
- a. \$342.50
 - b. \$329.50
 - c. \$659.00
 - d. \$337.50

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ANSWER SHEET

#	Answer
1.	c
2.	b
3.	b
4.	c
5.	a
6.	d
7.	b
8.	a
9.	d
10.	a

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CALCULATIONS

1. $2000 \times .90 = 1,800$ seeds/oz

$$\frac{25000}{1800} = 13.8 \text{ oz} = 14$$

2. $800 \times 300 = 240,000$
 $200 \times 600 = \frac{120,000}{360,000}$

$$\frac{260000}{43560} = 8.25 \text{ acres}$$

3. $85 \times 200 = \frac{17000 \text{ sq ft} = 17}{1000}$
 $17 \times 3 = 51 \text{ lb}$

4. $150 \times 200 = 30000 \text{ sq ft}$
 $\quad \quad \quad - 7500 \text{ sq ft}$
 $\quad \quad \quad \underline{22500 \text{ sq ft}}$

5. $200 \times 150 = 30000 \text{ sq ft}$
 $\quad \quad \quad - 4000 \text{ sq ft}$
 $\quad \quad \quad \underline{26000 \text{ sq ft}}$

$$\frac{26000 \text{ sq ft}}{1000} = 26 \times 5 = 13 \text{ lbs}$$

6. $\frac{100 \times 12 \times .3}{27}$

7. $3.5 \times 5 = 17.5$ pots/bag = 457.14 bags

8. $4600 \times .03 = \$138$ discount
 $\quad \quad \quad \underline{-138}$
 $\$4462 \times .075 = 334.65$ tax

$$\begin{array}{r} \$4462.00 \\ - 334.65 \\ \hline \$4796.65 \end{array}$$

9. $\frac{1200}{25} = 48$ cases

10. $\frac{500}{50} = 10$ cases @ 34.25 = \$342.50