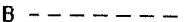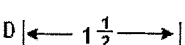## Sample Questions

Below are some sample questions to help give you an idea of the types of questions you will see on the written assessment. These exact questions will **NOT** appear on the test, and how well you do on these questions is not necessarily a sign of how you will do on the test. However, they **WILL** help give you an idea of what types of questions are asked on the test and how they are generally written. For each item below, circle the answer you think is correct. Then check your work with the answer key at the back!

1. On a drawing with a scale of 1 inch equals 15 feet, a line _____ inches represents 40 feet.

    A. 1.27
    B. 1.45
    C. 2.67
    D. 2.85

2. Which of the lines below represents a center line?

    A ————
    B - - - - - - -
    C - —— - —— -
    D |←— $1\frac{1}{2}$ —→|

    A. A
    B. B
    C. C
    D. D

3. An ANSI B sheet of drawing paper is

    A. 8.5 inches by 11 inches
    B. 11 inches by 17 inches
    C. 17 inches by 22 inches
    D. 22 inches by 34 inches

4. The device shown below is a

    A. protractor
    B. caliper
    C. compass
    D. straight edge

5. What is connected to a drawing by a leader line?

    A. the drafter's name
   B. a note
    C. the date
    D. an equation

6. Which of the following is the proper name of the tool used to measure length in drafting?

    A. compass
    B. straight edge
    C. ruler
    D. scale

7. Working drawings normally include assembly and _____ drawings.

    A. perspective
    B. detail
    C. oblique
    D. isometric

8. The shape shown below is known as a/an _____ polygon.
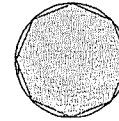
    A. inscribed
    B. circumscribed
    C. isolated
    D. completed

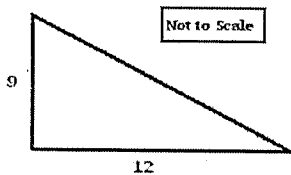9. The volume for the object shown below is
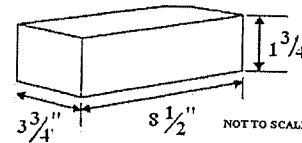
    A. 51.42 cubic inches
    B. 55.78 cubic inches
    C. 62.35 cubic inches
    D. 64.61 cubic inches

10. What is the value of Z in the equation 4Z-2Z=11?

    A. 4.2
    B. 5.5
    C. 6.1
    D. 7.0

11. Given the triangle below, calculate the length of the third side.

    A. 15
    B. 18
    C. 42
    D. 54

12. Solve the problem for "x" and choose the correct answer.

    -7x-3=-52
    A. -5
    B. -4
    C. 6
    D. 7

13. Which of the following is equal to the circumference of a circle?

    A. diameter times two
    B. diameter squared
    C. length of the radius squared
    D. distance around the circle
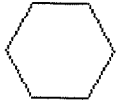
14. How many millimeters equals four inches?

    A. 10.4
    B. 10.16
    C. 100.4
    D. 101.6

15. How many millimeters are in 4.3 centimeters?

    A. 0.430
    B. 4.300
    C. 43.00
   D. 430.0

16. The figure below is a/an

   A. octagon
   B. hexagon
   C. heptagon
   D. pentagon

17. A line that is tangent to a circle will touch the circle at _____ point(s).

   A. zero
   B. one
   C. two
   D. three

18. Which of the following lines creates a perpendicular line?

   A. angling
   B. circular
   C. connecting
   D. bisecting

19. How many sides does an octagon have?

   A. six
   B. seven
   C. eight
   D. ten

20. The most common types of drawings are oblique, perspective, and

   A. obtuse
   B. acute
   C. isometric
   D. ellipse

21. When drawing an isometric, the axes are approximately _____ apart.

   A. 60 degrees
   B. 90 degrees
   C. 120 degrees
   D. 180 degrees

22. A bill of materials is similar to which type of drawing?

   A. assembly
   B. detail
   C. finished
   D. exploded

23. A drawing made according to the axes shown in the figure below would be
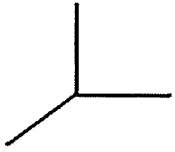
    A.   isometric
    B.   oblique
    C.   orthographic
    D.   perspective

24. A line is _____ in length if it is parallel to the projection plane in the previous view.

    A.   skewed
    B.   true
    C.   false
    D.   offset

25. A solid _____ will have three surfaces.

    A.   cone
    B.   cylinder
    C.   cube
    D.   sphere

26. In a half section view, _____ of the object is imagined to be cut away.

    A.   one sixteenth
    B.   one eighth
    C.   one quarter
    D.   one half

27. When cutting an object, use _____ lines to identify the surface that has been cut.

    A.   center
    B.   guide
    C.   section
    D.   leader

28. In the figure below, view "A" is a/an _____ view.

    View A
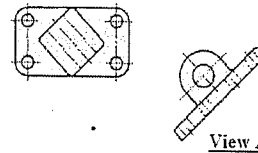
    A.   oblique
    B.   resolved
    C.   auxiliary
    D.   aligned

29. Auxiliary views are always projected from an edge of a surface that is _____ to the viewing plane.

    A. hidden
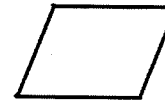   B. perpendicular
    C. parallel
    D. nonparallel

30. In the dimension .82 ± .03, the total tolerance range is

    A. .015
    B. .03
    C. .06
    D. .82

31. When specifying and identifying threads, what does the underlined number in 1/2-13UNC-2A represent?

    A. nominal diameter
    B. class of fit
    C. threads per inch
    D. type of thread

32. The characteristic tolerance for the symbol below is

    A. straightness
    B. parallelism
    C. flatness
    D. angularity

33. Dimensioning that combines both English and metric units is known as _____ dimensioning.

    A. international
    B. dual
    C. complete
    D. bilingual

34. Which of the following lines has arrowheads drawn on it?

    A. extension
    B. witness
    C. center
    D. dimension

35. Which of the following methods should be used to letter notes on a drawing?

A.   parallel to dimensions
B.   perpendicular to dimensions
C.   vertically
D.   horizontally

Answer Key

Item	Answer	Linkage	Got it Right?
1	C	Preparing to Draw: Basic Drawing and Dimensioning Skills	
2	C	Preparing to Draw: Basic Drawing and Dimensioning Skills	
3	B	Preparing to Draw: Basic Drawing and Dimensioning Skills	
4	C	Preparing to Draw: Basic Drawing and Dimensioning Skills	
5	B	Preparing to Draw: Basic Drawing and Dimensioning Skills	
6	D	Preparing to Draw: Basic Drawing and Dimensioning Skills	
7	B	Preparing to Draw: Basic Drawing and Dimensioning Skills	
8	A	Applied Mathematics	
9	B	Applied Mathematics	
10	B	Applied Mathematics	
11	A	Applied Mathematics	
12	D	Applied Mathematics	
13	D	Applied Mathematics	
14	D	Identify Measurements	
15	C	Identify Measurements	
16	B	Geometric Construction	
17	B	Geometric Construction	
18	D	Geometric Construction	

Answer Key

Item	Answer	Linkage	Got it Right?
19	C	Geometric Construction	
20	C	Engineering Drawings	
21	C	Engineering Drawings	
22	A	Engineering Drawings	
23	B	Multiview Drawings	
24	B	Multiview Drawings	
25	B	Multiview Drawings	
26	C	Section Views	
27	C	Section Views	
28	C	Auxiliary Views	
29	B	Auxiliary Views	
30	C	Dimensioning Skills	
31	B	Dimensioning Skills	
32	C	Dimensioning Skills	
33	B	Dimensioning Skills	
34	D	Dimensioning Skills	
35	D	Dimensioning Skills	

Where Can I Get More Information?

In addition to your class work and textbook, the following sources may also help you in preparing for the NOCTI test (and for a career in Mechanical Drafting and Design!).

Giesecke, Mitchell, Spencer, Hill, Dygdon, and Novak, . (2000). *Technical drawing* (11th ed.). Boston, MA: Prentice Hall.

Helper, D., Wallach, P. R., and Helper, D. (2010). *Mechanical drawing, board and CAD techniques.* Columbus, OH: McGraw Hill.

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Kicklighter, C. E., and Brown, W. C. (2008). *Drafting and design* (7th ed.). Tinley Park, IL: Goodheart Wilcox.

Saufley, T., and Schreiner, P. B. (2008). *Auto CAD fundamentals: Drafting and design applications* (8th ed.). Tinley Park, IL: Goodheart Wilcox.

Wright, L. S. (1968). *Drafting technical communication.* Bloomington, IL: McKnight and McKnight.