



Sample Test Questions

Technology Education



SAMPLE TEST QUESTIONS

The sample test questions in this document are designed to give you an introduction to the nature of the questions included in the Washington Educator Skills Tests—Endorsements™ (WEST-E™). They represent the various types of questions you may expect to see on an actual test in this test field; however, they are *not* designed to provide diagnostic information to help you identify specific areas of individual strength or weakness or to predict your performance on the test as a whole.

Work through the sample questions carefully before referring to the answer key that follows. The answer key provides the correct response for each question and lists the objective within the test framework to which each question is linked. When you are finished with the sample questions, you may wish to review the test objectives and descriptive statements provided in the test framework for this test field.

In addition to reading and answering the sample questions, you should also utilize the following preparation materials available on the WEST Web site:

- Read **WEST-E Test-Taking Strategies** to understand how test questions are designed to measure specific test objectives and to learn important test-taking strategies for the day of the test.
- Review the **Test Summary and Framework** for your test field to familiarize yourself with the structure and content of the test. This document contains general testing information as well as the percentage of the total test score derived from each content domain described in the test framework.

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SAMPLE MULTIPLE-CHOICE QUESTIONS

1. Use the chart below to answer the question that follows.

Task	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Planning	■	■	■	■												
Design					■	■										
Focus Group						■				■		■				
Review							■	■								
Revise									■							
Print										■	■					
Package												■	■			
Distribute														■	■	

According to the Gantt chart above, the second meeting of the Focus Group occurs at the same time as which of the following tasks?

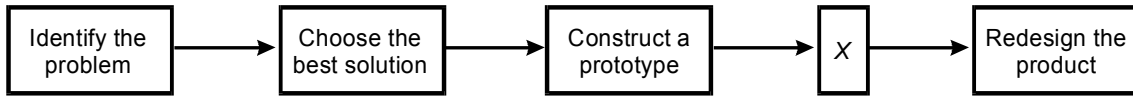
- A. Design
- B. Revise
- C. Print
- D. Package



2. A pitot tube is a device used to measure the air speed of an airplane. Air flow over the top of the tube results in lower pressure within the tube. The change in pressure in the tube is proportional to the speed of the air flowing over the tube. The principle of operation of the pitot tube is used in which of the following devices in a small gasoline engine?
- A. carburetor
 - B. choke
 - C. magneto
 - D. condenser



3. Use the diagram below to answer the question that follows.



Which of the following steps in the design process is most appropriate to place in the box labeled *X*?

- A. Gather information
- B. Evaluate the solution
- C. Gather possible solutions
- D. Brainstorm possible solutions



4. Use the spreadsheet below to answer the question that follows.

	A	B	C	D
1	1	3	4	3
2	5	84	4	6
3	5	6	7	1
4	6	3	84	22
5	25	7	3	35
6	24	8	4	45
7	3	9	5	6
8				

If the formula =SUM(B4:B7) is entered in cell B8 in the spreadsheet above, which of the following values will appear in that cell?

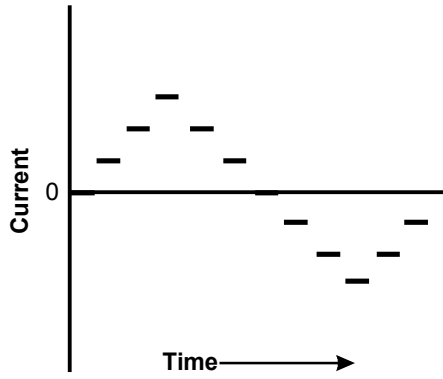
- A. 12
- B. 27
- C. 93
- D. 120



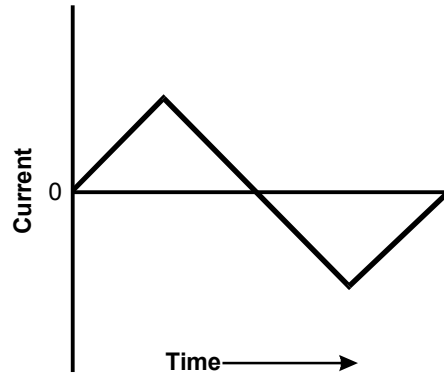
5. A worker cuts his arm deeply while working on a table saw. Which of the following steps should be taken first by a coworker who is standing nearby?
- A. Apply direct pressure to the wound.
 - B. Apply a tourniquet.
 - C. Elevate the arm.
 - D. Run to a telephone and call 9-1-1.
6. A transformer has approximately 2.0×10^2 input windings and approximately 4.0×10^2 output windings. If the input voltage is 120V, what is the output voltage?
- A. 1,200V
 - B. 240V
 - C. 60V
 - D. 12V

7. Which of the following graphs best represents the voltage of household current?

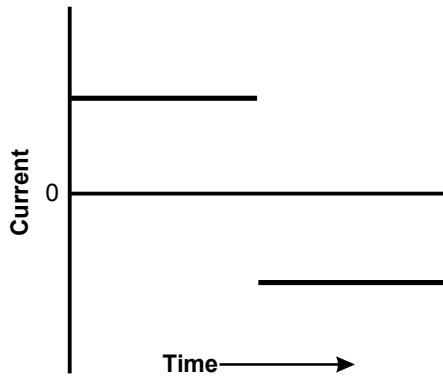
A.



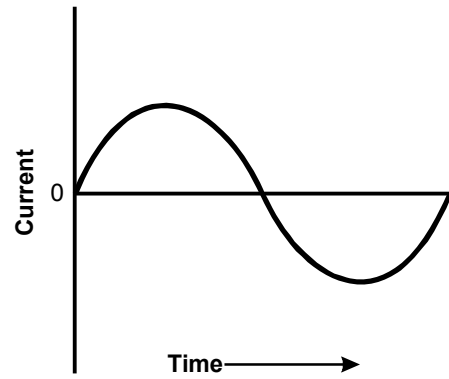
B.



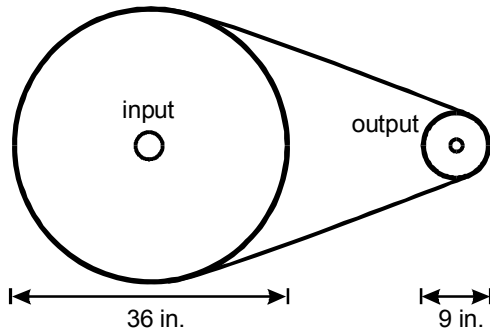
C.



D.



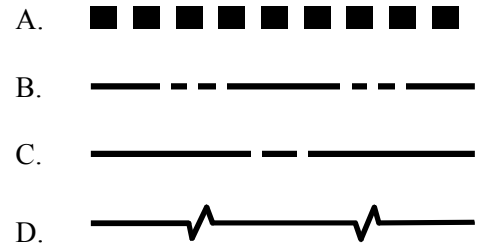
8. Use the diagram below to answer the question that follows.



A torque of 25N is applied to the input wheel. What is the resulting torque produced by the output wheel?

- A. 6.25N
 - B. 12.5N
 - C. 50N
 - D. 100N
9. Which of the following minerals is important in manufacturing integrated circuits because of its ability to act as a semiconductor?
- A. silver
 - B. silicon
 - C. magnetite
 - D. aluminum

10. In drafting, which of the following lines represents a center line?



11. In a database query, a filter is most likely to be used to:

- A. import data.
- B. link multiple databases.
- C. limit a search.
- D. convert the format of data.

12. The Automotive Service Excellence (ASE) program provides which of the following services to the automotive industry?

- A. consumer reports on service stations
- B. training programs for technicians
- C. certification programs for service stations
- D. consumer reports on technicians



13. A company that operates a fleet of delivery vehicles is considering purchasing vehicle-tracking devices. One system under consideration communicates with vehicles in real-time and allows them to be tracked on a monitor that displays a map. A less expensive system resides entirely on the vehicle, where it collects information using a GPS unit. The unit's information is downloaded when the vehicle returns to the office at the end of the day. Which of the following situations is most likely to make the first, more expensive system the better choice?
- A. The company has small delivery vans rather than large trucks.
 - B. The company has fewer than twenty vehicles in its fleet.
 - C. The company wants to increase the efficiency of its dispatching.
 - D. The company's employees are not technically literate.
14. Before inserting a handheld compression gauge into a cylinder of a truck engine, a mechanic disconnects the truck's ignition coil. Which of the following best describes the purpose of disconnecting the ignition coil before beginning the compression test?
- A. identifying the cylinder most in need of testing
 - B. avoiding electrical shock
 - C. providing a power source for the compression gauge
 - D. preventing the engine from starting
15. A company's logo is most likely to be legally protected by laws and regulations related to:
- A. trade secrets.
 - B. patents.
 - C. copyrights.
 - D. trademarks.
16. In metalworking, which of the following processes is most likely to create internal stresses in a metal and reduce the metal's toughness?
- A. hardening
 - B. normalizing
 - C. tempering
 - D. annealing
17. In masonry, a bull float is used to:
- A. smooth the surface of concrete.
 - B. remove air pockets from concrete.
 - C. spread concrete while pouring.
 - D. add decorative edges to concrete.



18. The construction of bridges and dams is usually considered to be part of which of the following construction industries?
- A. light
 - B. heavy
 - C. industrial
 - D. civil
19. A project manager for a residential construction site must schedule a rough electrical inspection. Which of the following must be completed before the inspection?
- A. All fixtures, switches, outlets, and breakers must be installed.
 - B. Sheathing and Sheetrock must be installed with evenly spaced inspection panels.
 - C. All wiring, junction boxes, subpanels, and the main panel must be in place.
 - D. An electric meter must be mounted and electrical service connected.
20. Which of the following is an effect of the increasing use of engineered wood in the construction industry?
- A. Forest farming of small-diameter trees can supply material for a wide array of spans and dimensions.
 - B. Builders can use a single type of construction lumber for all interior and exterior applications.
 - C. On-site labor costs increase due to the greater weight of engineered wood over traditional sawn lumber.
 - D. Joist and stud spacing decreases due to the diminished stiffness of engineered wood over sawn lumber.



ANSWER KEY

Question Number	Correct Response	Test Objective
1	C	0002
2	A	0003
3	B	0004
4	B	0005
5	A	0006
6	B	0007
7	D	0008
8	A	0009
9	B	0010
10	C	0011
11	C	0013
12	B	0014
13	C	0015
14	D	0016
15	D	0017
16	A	0018
17	A	0019
18	D	0020
19	C	0021
20	A	0022



REFERENCE MATERIALS

Please use the reference material on the following page as needed in responding to the sample test questions.

FORMULAS

Description	Formula
Area of a circle	$A = \pi r^2$
Area of a triangle	$A = \frac{1}{2}bh$
Volume of a rectangular solid	$V = \ell \cdot w \cdot h$
Volume of a cylinder	$V = \pi r^2 h$
Volume of a sphere	$V = \frac{4}{3}\pi r^3$
Pythagorean theorem	$a^2 + b^2 = c^2$
Board feet	$\frac{\ell \text{ in} \cdot w \text{ in} \cdot h \text{ in}}{144 \text{ in}^3}$
Ohm's law	$V = IR$
Watts	watts = volts • amps