



## **Operations and Maintenance Testing Preparation Guide**

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## General Test Preparation

The purpose of this Guide is to assist you in preparing for the Operations and Maintenance tests you might see as an applicant (note that not all applicants will see all of these tests). This Guide provides examples of the types of items that are included in the test battery and tips for helping you prepare for the testing process.

The ExxonMobil test battery is designed to measure skills and abilities that are important to performing Operations jobs. The test battery may include:

- **Mechanical Comprehension Assessment** — measures the ability to apply general mechanical principles to understand and solve problem situations.
- **Technical Checking Tests** — measures the ability to apply a set of rules to specific situations in a quick and accurate manner.
- **Use of Industrial Information Test** — measures the ability to read, understand, and use information in graphs, charts, tables, and written passages to solve problems.
- **Behavioral Tests** — measures personal characteristics (such as Teamwork, Safety Orientation, Learning Orientation, and Conscientiousness) that are important to success in Operations and Maintenance job.

On the following pages, you will find an overview and sample items for the various types of tests in the test battery.

## Mechanical Comprehension Assessment

The Mechanical Comprehension Assessment is designed to measure basic mechanical aptitude needed in Operations and Maintenance jobs. Items in this test present you with a picture and a question that involves a basic mechanical principle.

- This is a timed test that is **fifteen minutes** long once you start with the actual test items. It is important to respond quickly while maintaining your ability to answer correctly, although most people do complete the assessment in this time.
- The test items are presented in a multiple-choice format.
- The items have four possible answers, and you need to select the best answer based on the information provided in the item.
- To mark your answer, just click on the answer with your mouse and cursor.
- You can only mark one answer. If you want to change your answer, just click on your new answer, and your first answer will be changed.

The Mechanical Comprehension Assessment is timed, but there is enough time for you to complete the test. However, do not spend too much time on any one item. Work as quickly and as accurately as possible, and then you can review your answers if there is time remaining.

### **Mechanical Comprehension Assessment Practice Items**

Presented on the following pages are practice items for the Mechanical Aptitude Assessment. Carefully examine the items and attempt to answer the sample items.

After the pair of items, the correct answer for each is explained. It is best if you attempt to answer the question on your own before looking to see what the correct answer is.

Practice Items #1 and #2

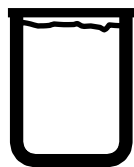
Practice Item #1



**Practice Item #1: If the larger gear turns clockwise, which direction will the smaller gear turn?**

<b>a</b>	<input type="checkbox"/>	Clockwise
<b>b</b>	<input type="checkbox"/>	Counter-Clockwise
<b>c</b>	<input type="checkbox"/>	Either clockwise or counter-clockwise

Practice Item #2



**A**



**B**

**Practice Item #2: Which gallon of water would evaporate more quickly?**

<b>a</b>	<input type="checkbox"/>	A
<b>b</b>	<input type="checkbox"/>	B
<b>c</b>	<input type="checkbox"/>	There will be no difference.

## Explanation for Practice Items #1 and #2

### **Practice Item #1:**

The correct answer is “**b**”. When two gears are connected like shown in the picture, the gears will turn in opposite directions. It is sometimes helpful to actually place your finger on the picture (do not use your pencil because you cannot write on the test) to trace the direction the gears are turning. With the gears in the picture, if one gear is turning one way, the other gear must turn the other.

### **Practice Item #2:**

The correct answer is “**b**”. Even though there is one gallon of water in each container, Container B is wider, and the water in Container B has a greater surface area. The greater the surface area of water, the faster it will evaporate.

## Technical Checking Test

The Technical Checking Test measures the ability to apply a set of rules to specific situations in a quick and accurate manner.

- This is a timed test that is only **five minutes** long once you start with the actual test items. Remember that an important factor being measured in this test is the ability to respond quickly and accurately. Therefore, it is very important to respond as fast as you can while maintaining your ability to answer correctly.
- Note that most applicants do not complete all of the items in the allotted time; even though you might not finish, you could score very well on this test.
- The test items are presented in a multiple-choice format.
- The items have four possible answers, and you need to select the best answer based on the information provided in the item and the Command Card.
- To mark your answer, just click on the answer with your mouse and cursor.
- You can only mark one answer. If you want to change your answer, just click on your new answer, and your first answer will be changed.

## Technical Checking Test Practice Items

The items in this test are designed to measure the ability to apply a set of rules to specific situations both quickly and accurately. You will be asked to read a Command Card that presents a set of rules.

The Command Card looks like this.

Command Card				
Slot	Signal	Switch	Signal	Switch
1	○	⊘	△	⊘
2	■	⊘	△	⊘
3	△	⊘	○	⊘
4	■	⊘	○	⊘
5	△	⊘	■	⊘

It shows how each stitch should be positioned, depend on signal type.

There are up to five slots in each Command Card. The rules change for each slot.

In this set of rules, Slot 1 can have a circle or triangle signal. If the signal is a circle, the switch should be set to the lower right position. If the signal is a triangle, the stich should be set to the supper right position.

Questions look like this:

1	2	3	4	
○	■	△	○	
⊘	⊘	⊘	⊘	a
⊘	⊘	⊘	⊘	b
⊘	⊘	⊘	⊘	c
⊘	⊘	⊘	⊘	d

Four signal combinations are provided in rows for responses a through d.

In this example question, the signal for Slot 1 is a circle, for Slot 2 it is a square, for Slot 3 it is a triangle, and for Slot 4 it is a circle. To answer the question, you must use the Command Card to match the Slot and signal types to the switch positions in the response options.

Choose the response options where all of the switches are set correctly, according to the rules on the Command Card.



## Practice Items #3 and #4

### Practice Item #3

Command Card						
Slot	Signal	Switch	Signal	Switch	Signal	Switch
<b>1</b>	○	⊗	■	⊙	△	⊖
<b>2</b>	■	⊙	△	⊖	⬡	⊙
<b>3</b>	■	⊗	○	⊖	△	⊙
<b>4</b>	⬡	⊖	■	⊗	○	⊙

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
○	■	△	⬡	
⊗	⊙	⊖	⊙	a
⊗	⊙	⊙	⊗	b
⊙	⊙	⊗	⊖	c
⊗	⊙	⊙	⊖	d

### Practice Item #4

Command Card						
Slot	Signal	Switch	Signal	Switch	Signal	Switch
<b>1</b>	○	⊗	■	⊙	△	⊖
<b>2</b>	■	⊙	△	⊖	⬡	⊙
<b>3</b>	■	⊗	○	⊖	△	⊙
<b>4</b>	⬡	⊖	■	⊗	○	⊙

<b>1</b>	<b>2</b>	<b>3</b>	
○	⬡	○	
⊗	⊙	⊖	a
⊗	⊙	⊙	b
⊗	⊖	⊗	c
⊙	⊙	⊖	d

## Explanation for Practice Items #3 and #4

**Practice Item #3:**

The correct answer is “d”. In practice item #3, the signal for Slot 1 is a circle. Looking at the Command Card, this shape corresponds to a lower right switch. The signal for Slot 2 is a Square which corresponds to an upper right switch in the Command Card. In Slot 3, the signal is a triangle. In the Command card for Slot 3, a triangle corresponds to an upper right switch. Finally in Slot 4, the signal is an octagon. The octagon corresponds to a central left switch in the Command Card. By putting all of these switches together, the response “d” is the correct answer.

**Practice Item #4:**

The correct answer is “a”. In practice item #4, the signal for Slot 1 is a circle. Looking at the Command Card, this shape corresponds to a lower right switch. The signal for Slot 2 is an octagon which corresponds to an upper right switch in the Command Card. The signal for Slot 3 is a circle which corresponds to a horizontal left switch. Note that there is no Slot 4 in this question. By putting all of these switches together, the response “a” is the correct answer.

## Use of Industrial Information Test

The Use of Industrial Information Test is designed to measure the ability to use information contained in graphs, tables, forms, and written passages to answer questions and solve problems.

- This is a timed test that is **forty minutes** long once you start with the actual test items. It is important to respond quickly while maintaining your ability to answer correctly, although most people do complete the assessment in this time.
- The test items are presented in a multiple-choice format. The items have four possible answers, and you need to select the best answer based on the information provided in the item.
- To mark your answer, just click on the answer with your mouse and cursor.
- You can only mark one answer. If you want to change your answer, just click on your new answer, and your first answer will be changed.
- The Use of Industrial Information Test is timed, but there should be enough time for you to complete the test if you move relatively quickly. Do not spend too much time on any one item, but focus on working as quickly and as accurately as possible.

## Use of Industrial information Test Practice Items

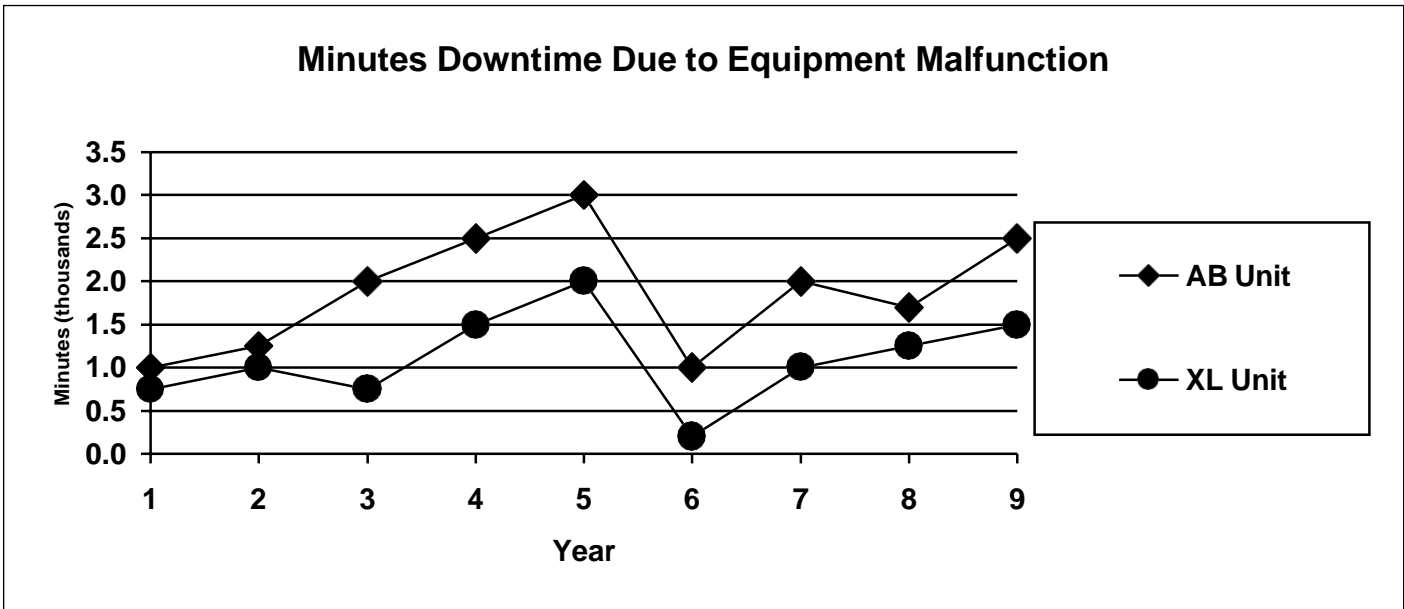
The items in this test are designed to measure the ability to use information contained in graphs, tables, forms, and written passages to answer questions and solve problems. Read each passage, graph, form, or table and then answer the questions that follow.

Presented on the following pages are practice items for the Use of Industrial Information Test. Carefully examine the items and attempt to answer the sample questions.

You will be provided with scratch paper during the actual test so that you can work through your answers to the questions. You will not be allowed to use a calculator. All of the items are written so that the correct answer can be found without a calculator.

After the example questions on the following pages, the correct answer is explained. It is best if you attempt to answer the question on your own before looking to see what the correct answer is.

Practice Items #5 and #6



**Practice item #5: What was the downtime for the XL Unit in Year 5?**

<b>a</b>	<input type="checkbox"/>	2 minutes
<b>b</b>	<input type="checkbox"/>	2,000 minutes
<b>c</b>	<input type="checkbox"/>	3,000 minutes
<b>d</b>	<input type="checkbox"/>	5,000 minutes

**Practice item #6: In which year was the downtime for the XL Unit exactly one-half of the downtime for the AB Unit?**

<b>a</b>	<input type="checkbox"/>	Year 3
<b>b</b>	<input type="checkbox"/>	Year 4
<b>c</b>	<input type="checkbox"/>	Year 6
<b>d</b>	<input type="checkbox"/>	Year 7

## Explanation for Practice Items #5 and #6

**Practice Item #5:**

The correct answer is “b”. The box to the right of the graph shows which symbol represents the graph line for the XL Unit. A circle represents the XL Unit, and a diamond represents the downtime for the AB Unit. If you are not paying close attention, you may get the lines confused and answer the item incorrectly.

After finding the line for the XL Unit, locate the point for year 5 along the bottom of the graph. You will see that the circle representing the XL Unit falls on the 2.0 in Year 5. If you look to the left of the graph, you will see that each number on the graph represents 1,000 minutes. So, the 2 must be multiplied by 1,000, which equals 2,000 minutes, and answer “b” is the correct answer.

Some people may not pay close attention to the entire graph and all the information. If you were not paying close attention, you may not notice that each number on the graph represents 1,000 minutes, and you would have thought answer “A” to be correct since it was 2 minutes. Other people may have looked at the line of the AB Unit, which would have been 3,000 minutes, and marked “C” as their answer. Again, this would have been incorrect. There are no “trick” questions on this test, but you do have to pay attention to the details.

**Practice Item #6:**

The correct answer is “d”. You need to compare the line for the XL Unit with the line for the AB Unit to find the year in which the XL Unit’s downtime was exactly one-half of the AB Unit’s. You also can think of it as the year in which the AB Unit’s downtime was twice as much as the XL Unit’s downtime.

There are nine years marked along the bottom of the graph. You do not have to look at all the years because there are only four possible answers to the item, Years 3, 4, 6, and 7.

In Year 3, the XL Unit had less than 1,000 minutes of downtime, but the AB Unit had 2,000 minutes (less than 1.0 for Unit XL on the graph compared to exactly 2.0 for Unit AB). So, the downtime for the XL Unit in Year 3 was less than half that of Unit AB, so Year 3 is incorrect. In Year 4, the line for the XL Unit is on 1.5, and the line for the AB Unit is on 2.5. The 1.5 for Unit XL is more than half of the 2.5 for Unit AB, so Year 4 is not the correct answer. In Year 6, the line for the XL Unit is less than 0.5, but the line for the AB Unit is on 1.0. Since 0.5 is exactly one-half of 1.0, and the XL Unit is lower than 0.5, Year 6 is not correct.

If Years 3, 4, and 6 are not the correct answers, then Year 7 should be the correct answer. However, you should work out the answer to make sure you are working through the problem correctly. In Year 7, the line for the XL Unit is on 1, and the line for the AB Unit is on 2. Since 1.0 is exactly half of 2.0, Year 7 is the correct answer. You should have answered “d.”

It is usually a good idea to look at all the possible answers rather than just the first one you think is correct. You may find that you made a mistake in your first answer.

Practice Items #7 and #8

*Truck Rental Services*

	Trucks R Us	Equip Rent	Field Rental
<b>Weekdays (Monday- Thursday)</b>	\$50/day	\$40/day	\$60/day
<b>Weekends (Friday - Sunday)</b>	\$40/day	\$50/day	\$30/day

**Practice Item #7: If a truck is needed from Tuesday through Thursday, which rental service offers the lowest overall rate?**

<b>a</b>	<input type="radio"/>	Trucks R Us
<b>b</b>	<input type="radio"/>	Equip Rent
<b>c</b>	<input type="radio"/>	Field Rental
<b>d</b>	<input type="radio"/>	Truck's-R-Us and Equip Rent are equal, and lower than Field Rental

**Practice Item #8: If a truck is needed from Thursday through Sunday, which rental service will offer the lowest overall rate?**

<b>a</b>	<input type="radio"/>	Trucks R Us
<b>b</b>	<input type="radio"/>	Equip Rent
<b>c</b>	<input type="radio"/>	Field Rental
<b>d</b>	<input type="radio"/>	There is insufficient information to answer the question.

## Explanation for Practice Items #7 and #8

### Practice Item #7:

The correct answer is “b”. There are different rates for weekdays compared to weekends. For this question, the truck is needed for three days, Tuesday, Wednesday, and Thursday, and these days are weekdays. You do not need to use the weekend rates to answer this question.

For three weekdays, all you need to do is determine which rental service has the lowest weekday rate. You could multiply that rate by three days since the truck is needed for three days, but you really do not even need to do that. Since the rate is the same for all three days, all you need to do is find the company with the lowest rate for a weekday.

Trucks-R-U's has a weekday rate of \$50 per day, Equip Rent is \$40 per day, and Field Rental is \$60 per day.

Equip Rent is cheaper, so answer “b” is correct.

### Practice Item #8:

The correct answer is “c”. This item is a little more complicated because the rental period goes from weekday to weekend rates, and the rates change. The truck is needed for four days, Thursday, Friday, Saturday, and Sunday. Thursday will have a weekday rate, but Friday, Saturday, and Sunday will have the weekend rate. It might be helpful to make a little table like the one below in order to keep your numbers organized and to make calculations easier. You will have scratch paper to use during the test.

The first day for which you must calculate rental rates is Thursday, and this is a weekday. You can see that Trucks R Us charges \$50, Equip Rent charges \$40 and Field Rental charges \$60 for the weekday rental.

Looking again at the item, this time on the row for weekends, you will see that for Friday, Saturday, and Sunday, Trucks R Us charges \$40 a day, Equip Rent charges \$50 a day, and Field Rental charges \$30 a day.

	<u>Thurs</u>	<u>Fri</u>	<u>Sat</u>	<u>Sun</u>	
For Trucks R Us:	\$50	\$40	\$40	\$40	= \$170
For Equip Rent:	\$40	\$50	\$50	\$50	= \$190
FOR FIELD RENTAL:	\$60	\$30	\$30	\$30	= \$150

After adding up the amounts charged for each of the four days for each of the three rental companies, you see that Field Rental is the cheapest option. The correct answer is “c.”

Practice Items #9 and #10

Product Grade	Number of Defects	Price per carton
AA	0 – 20	\$3.50
A	21 – 50	\$2.50
B	51 – 150	\$2.00
C	151 – 300	\$1.50
D	301 – 500	\$1.00
X	over 500	\$0.50

**Practice Item #9: As the number of defects increases, the price per carton:**

<b>a</b>	<input type="checkbox"/>	increases
<b>b</b>	<input type="checkbox"/>	decreases
<b>c</b>	<input type="checkbox"/>	does not change
<b>d</b>	<input type="checkbox"/>	There is not enough information to answer the question.

**Practice Item #10: If a customer has a budget of \$2,000 and needs 1,000 cartons, what is the highest quality product available?**

<b>a</b>	<input type="checkbox"/>	Grade AA
<b>b</b>	<input type="checkbox"/>	Grade B
<b>c</b>	<input type="checkbox"/>	Grade D
<b>d</b>	<input type="checkbox"/>	Grade X



## Explanation for Practice Items #9 and #10

### **Practice Item #9:**

The correct answer is “b”. In the table for this item, you will notice that the number of defects is smaller at the top of the table and gets larger as you move down the table. The products with the fewer defects have higher quality, and cost more. According to the table, the price of the carton increases as the number of defects gets smaller.

For example, with 0 to 20 defects, the price is \$3.50. With 21 to 50 defects, the price decreases to \$2.50. This trend continues down the table. The correct answer would be “b.” As the number of defects increases, the price per carton decreases.

### **Practice Item #10:**

The correct answer is “b”. If the customer needs 1,000 cartons and has only \$2,000, the most that can be spent per carton is \$2.00 (divide 2,000 by 1,000 = 2). Looking at the table, you can see that \$2.00 per carton corresponds to Product Grade B.

The next highest grade, Product Grade A costs \$2.50, which is too expensive. The customer would not be able to buy 1,000 cartons of Product Grade A with a \$2,000. Thus, the answer is “b.” Product Grade B costs \$2.00 per carton; therefore the customer can buy 1,000 cartons for \$2,000.

## Behavioral Tests

These behavioral tests measures personal characteristics (such as Teamwork, Safety Orientation, Learning Orientation, and Conscientiousness) that important to success in Operations and Maintenance jobs.

- The behavioral test items are presented in a multiple-choice format, although there are no right or wrong answers.
- The items have four or five possible responses, and you need to select the best response based on your own preferences or tendencies.
- To mark your answer, just click on answer with your mouse and cursor.
- You can only mark one answer. If you want to change your answer, just click on your new answer, and your first answer will be changed.
- All of these behavioral tests are not timed, although you should try to move relatively quickly through the tests. Try not to spend too much time on any one item, but focus on working quickly but thoughtfully.
- These tests are designed to look for multiple personal characteristics that are important on the job, including honesty. As a result, please be truthful when responding and do not try to guess which characteristics are being measured by each item.

Practice Items #11 through #15

**Practice Item #11: When you ask them, those who know me best will say that I am:**

<b>a</b>	<input type="radio"/>	Much more cautious than anyone else they know
<b>b</b>	<input type="radio"/>	Much more cautious than most others
<b>c</b>	<input type="radio"/>	Somewhat more cautious than most others
<b>d</b>	<input type="radio"/>	About as cautious as most others
<b>e</b>	<input type="radio"/>	Somewhat less cautious than most others

**Practice Item #12: When we ask your most recent manager, how often will he or she say that you were late in completing assignments?**

<b>a</b>	<input type="radio"/>	Much less often than others
<b>b</b>	<input type="radio"/>	Somewhat less often than others
<b>c</b>	<input type="radio"/>	About as often than others
<b>d</b>	<input type="radio"/>	Somewhat more often than others
<b>e</b>	<input type="radio"/>	This would be my first job

**Practice Item #13: When I think about my career, I...**

<b>a</b>	<input type="radio"/>	Have a clear idea of my goals but do not know how to reach them yet
<b>b</b>	<input type="radio"/>	Am uncertain because there are so many options
<b>c</b>	<input type="radio"/>	Know exactly what I want to do and how I am going to do it
<b>d</b>	<input type="radio"/>	Am not sure what I want to do, but I know that I want to be successful
<b>e</b>	<input type="radio"/>	Am focused on my current job but have not decided what I want to do in the future

**Practice Item #14: Which of the following would you MOST prefer in a job?**

<b>a</b>	<input type="checkbox"/>	Being able to help others
<b>b</b>	<input type="checkbox"/>	Being able to work at my own pace
<b>c</b>	<input type="checkbox"/>	Working in a competitive environment
<b>d</b>	<input type="checkbox"/>	Having flexibility in how I complete my job

**Practice Item #15: When it comes to making an important decision, I...**

<b>a</b>	<input type="checkbox"/>	Worry about not considering all options
<b>b</b>	<input type="checkbox"/>	Am concerned about it afterwards
<b>c</b>	<input type="checkbox"/>	Am not nervous because things always turn out well
<b>d</b>	<input type="checkbox"/>	Like to consider advice from others
<b>e</b>	<input type="checkbox"/>	Decide quickly and move on

## Explanation for Practice Items #11 through #15

In the items on the behavioral tests, there are not any correct / incorrect responses. However, items are scored along various relevant dimensions, although you should note that the dimension being evaluated is not always obvious. For instance, an item that initially appears to address teamwork might actually be addressing your tendency to follow rules. As a result, we strongly recommend simply being honest and not trying to guess which response is the “best”.

### **Practice Item #11**

Clearly, this item is getting at how cautious you are, and the tendency for some people is going to be to rate themselves as highly cautious – not matter what the truth is. However, note that being highly cautious might not always be a good thing – especially if a task has to be done quickly. In such cases, it is best to simply be honest about how others view your cautiousness and let the test score it best.

### **Practice Item #12**

This item is addressing the level of responsibility that you typically have, and it specifically asks about the perceptions of your manager. Note that this question is something that is specifically verifiable, as this information could also be obtained directly from the manager. If this is the case, again, honesty is the best policy because you do not want to be viewed as a liar in case your manager provides a different description of you than you provide of yourself. Also, note that the last response option is available for individuals who have no work experience and therefore could not legitimately answer the question; such responses will neither help nor hurt your score.

### **Practice Item #13**

This item is addressing your general career thoughts, goals, or aspirations and how clear you are about them. Some people have a very good grasp of their future goals and have plans to attain them. However if you are highly focused on the present and not about the future, that is not necessarily wrong, and it might indicate your likelihood of staying in a job. Again, it is important to note that honesty is the best policy because this is also the type of information that will likely be verified in a career interview.

### **Practice Item #14**

This item is actually addressing multiple traits in the same question, and you should select the best answer that fits you. There might be multiple responses to this item that describe you equally well, so you should just go with the best or most appropriate one. Also, note that each response option to this item has at least a somewhat positive description, so trying to find the one that is the best option for the purposes of trying to fake these responses could be a futile endeavor.

### **Practice Item #15**

This item is addressing your tendencies when it comes to addressing problems. Some of the response options ask about nervous tendencies, which can indicate that you take your responsibilities and decisions very seriously. Another response option indicates the tendency to work closely and rely on others. The last response option could indicate confidence in your decision making, although there is also the concern that very decisive people are not taking the time to fully consider the options and the implications of the decision. Again, it is best if you just respond in a way that best represents you.