

Electrical Shock Victim Exercise

Problem Booklet

Instructions

Read the problem described on the next page. Then answer the ten questions. Do them one at a time. Don't jump ahead, but you may look back to earlier questions. The first question tells you to choose only one answer unless you are told to "Try again!" Other questions may tell you to select as many answers as you think are correct. Follow the directions for each question.

After you have selected your choice to a question, look up the number for that choice on the answer sheet. Rub the developing pen between the brackets for that choice. A hidden message will appear that tells you if the choice is correct and provides you with additional information. When you finish you will learn how to score your performance.

Lynwood Puckett Exercise

Background

You and Lynwood are maintenance mechanics. You are replacing a coupling on an acid mixer.

The mixer is located on the 5th level of the float plant. The plant is operating and it is very noisy.

The mixer you're working on has been properly locked out. It is 10:15 P. M. and you and Lynwood are alone.

Six other plant workers are gathered on the ground floor awaiting shift change.

The main electrical power supply shut-off to the area in which you are working is four levels below you.

Neither of you is an electrician.

You are not trained in CPR.

You are trained in basic first aid and artificial respiration.

Problem

An acid mixer on the 5th level of the plant has broken down. You and Lynwood have been called to repair it. When you arrive you find the lighting to be very poor. It is dark and difficult to see. The steel grate floor and hand rails are dripping wet. You decide to use an electric impact wrench to break a coupling on the mixer. Lynwood complains that this is the last time he will work under these bad conditions. Then he approaches a wall mounted 110V receptacle with the electrical cord and the wrench in his hand. Suddenly you notice water dripping from the receptacle. Turn the page and answer the first question.

Question A

Because it is dark, Lynwood doesn't notice the water dripping from the receptacle. He starts to plug the wrench cord into the socket. You are about 10 feet from him. (See Figure 1 on the next page.) What should you do now? (Choose only ONE unless you are told to "Try again!")

1. Leave and call an electrician.
2. Yell to Lynwood to stop and warn him about the water.
3. Tell Lynwood to dry the receptacle with rags.
4. Tell Lynwood he'd better put on his dry gloves.
5. Run to Lynwood and pull his hand away from the socket.

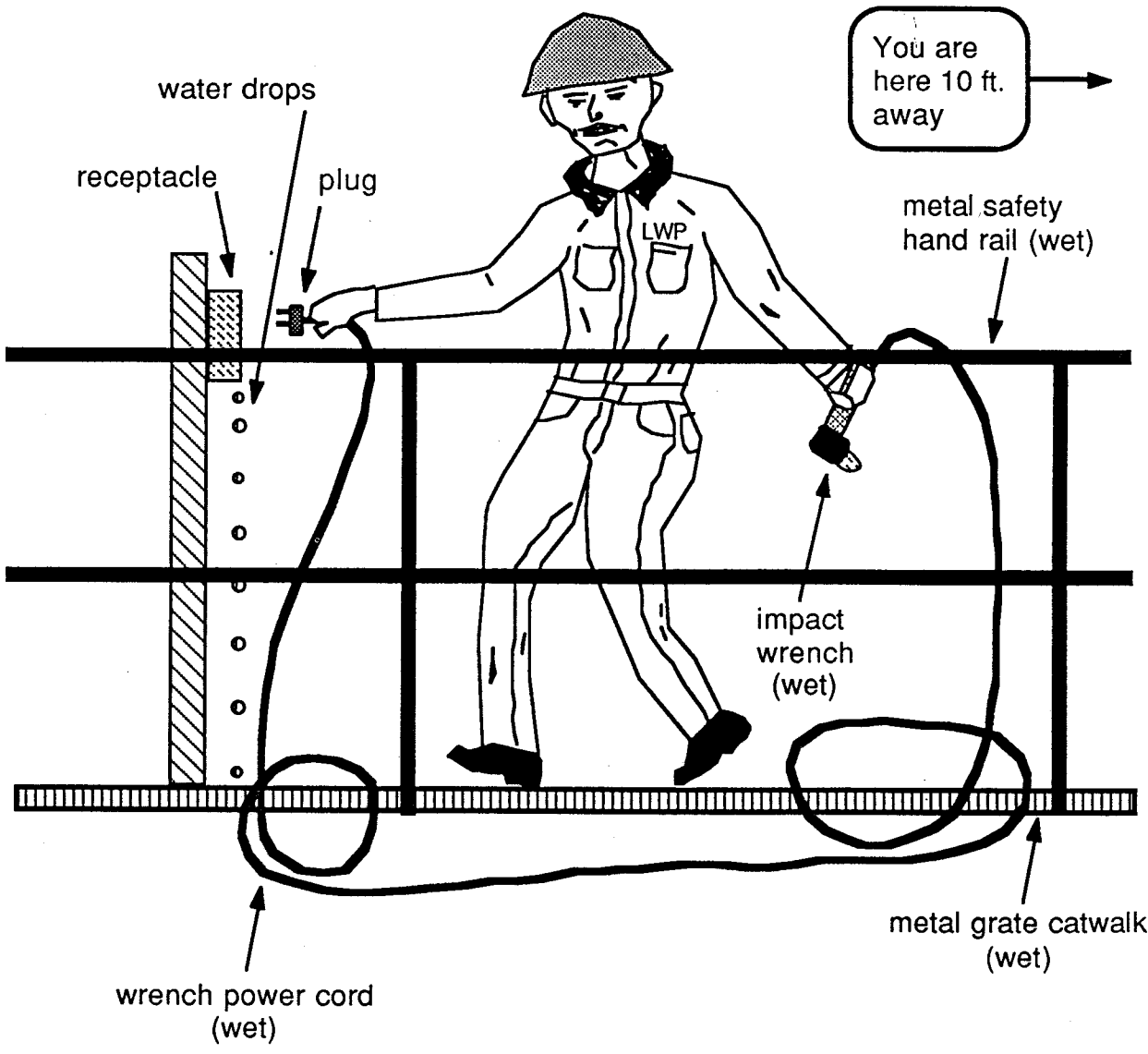


Figure 1: Lynwood starts to plug power cord into the wet receptacle

Question B

Your warning is too late. Lynwood plugs the wrench cord into the socket. Immediately his whole body stiffens and begins to twitch. (See Figure 2 on the next page.) Now what should you do? (Choose only ONE unless directed to "Try again!")

6. Run to the motor control center and shut off the power to the motor on the mixer.
7. Go find the nearest electrician or foreman.
8. Pull the wrench from Lynwood's hand.
9. Take Lynwood's pulse at the wrist.
10. Tackle Lynwood and pull him away from the cord and socket.
11. Keep clear of Lynwood, wrap your dry jacket around the power cord, and yank the cord from the socket.
12. Run to the main power switch four levels down and cut the power.

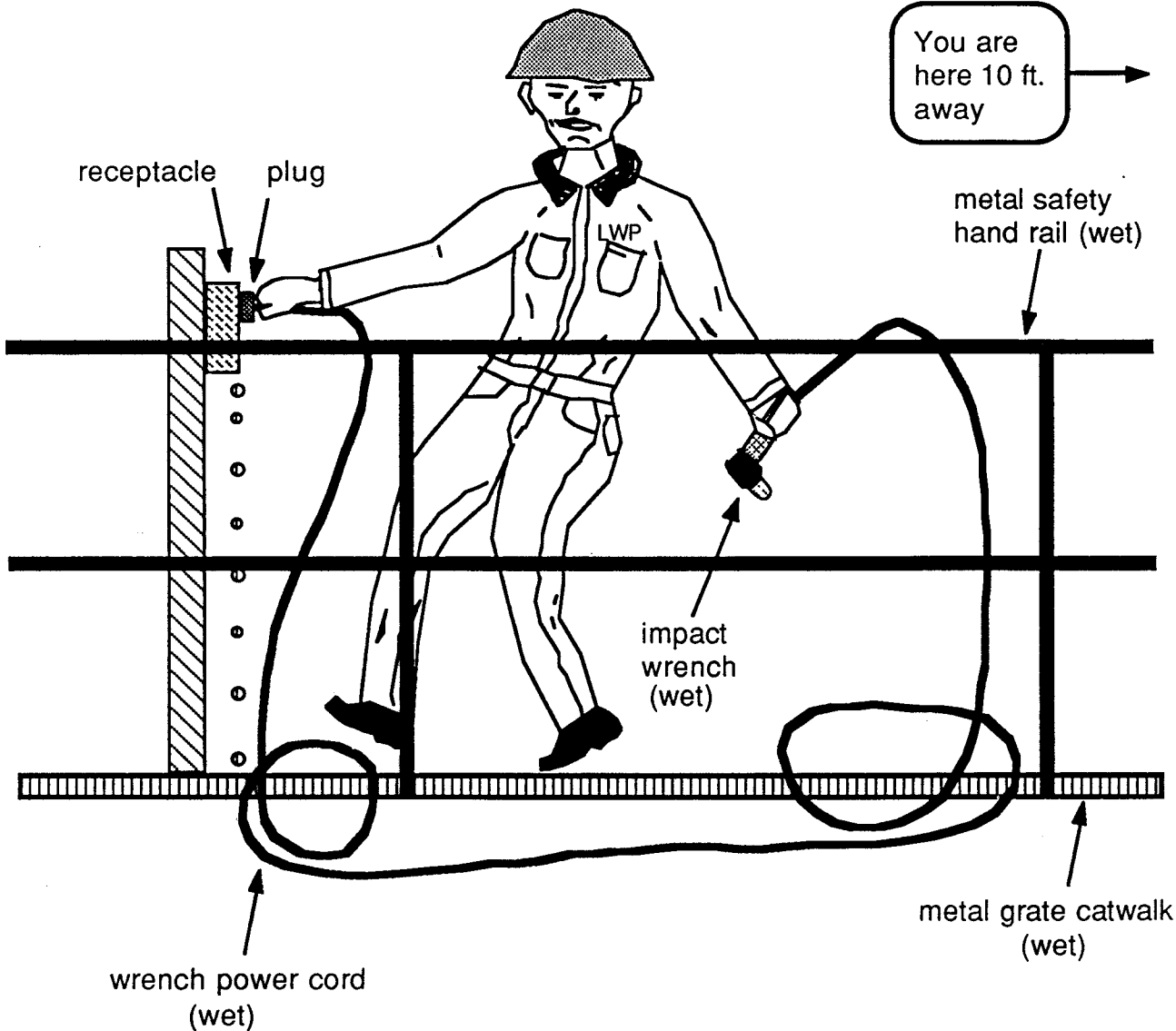


Figure 2: Lynwood's body stiffens and twitches after he inserts the plug

Question C

Lynwood is now lying on the metal grate floor near the mixer. He doesn't respond to voice or shaking. You shout for help, position Lynwood on his back, and open his airway. You should now check for the presence of: (Choose only ONE unless you are told to "Try again!")

- 13. Abnormal skin color
- 14. Breathing
- 15. Medical alert bracelet
- 16. Pupil dilation
- 17. "Swallowed" tongue

Question D

After checking Lynwood and finding no breathing the first thing you should do is:
(Choose only ONE unless you are told to "Try again!")

- 18. Begin cardiac compressions.
- 19. Go get help.
- 20. Give two breaths mouth-to-mouth.
- 21. Slap Lynwood's face several times.

Question E

You are attempting to give Lynwood a breath using the mouth-to-mouth method but even though you generate high pressure his chest does not rise. The first thing you should do now is: (Choose only ONE unless you are told to "Try again!")

22. Clear Lynwood's mouth using a finger sweep maneuver.
23. Reposition Lynwood's head by lifting his chin and tilting his forehead back.
24. Perform 6 to 10 "abdominal thrusts."
25. Turn Lynwood on his side and hit him on the back 4 times.
26. Gently compress his upper abdomen.

Question F

After repositioning Lynwood's head you are able to give him two deep breaths. You check his pulse and find that it is present. You continue rescue breathing but you notice that his abdomen is becoming distended. You should now: (Select as MANY as you think are correct.)

- 27. Apply continuous pressure to his abdomen with one hand while continuing rescue breathing.
- 28. Decrease the force of your breaths slightly.
- 29. Gently compress his upper abdomen, then continue rescue breathing.
- 30. Perform a "tongue-jaw lift" and finger-sweep his mouth.
- 31. Reposition his head and elevate his chin.

When you have made your selection(s), do the next question.

Question G

You and Lynwood are still alone. After a few minutes of mouth-to-mouth, Lynwood starts breathing on his own, and he comes to. He says, "What happened to me?" What would you tell him? (Choose only ONE unless you are told to "Try again!")

- 32. Tell him you don't know, so he won't worry.
- 33. Tell him you think he got a shock that stopped his breathing, but that he is OK now.
- 34. Tell him that he passed out but he is OK now.
- 35. Tell him his heart stopped and he is lucky to be alive.

Question H

You and Lynwood are still alone. No one has responded to your shouts for help. Lynwood is weak and confused, but talking to you. He says his chest feels funny and he is cold. You take his pulse and find it to be fast, weak, and irregular. You know the other miners are gathered on the ground floor awaiting shift change. What would you do now? (Choose only ONE unless you are told to "Try again!")

- 36. Get Lynwood up and walk him down to the ground floor.
- 37. Stay with him and wait until help comes.
- 38. Help make him comfortable, cover him with your jacket, and tell him to rest while you go for help.
- 39. Ask him to get up slowly. Tell him to take deep breaths, and to take a few steps.

Question I

Think about this problem. Pretend you were Lynwood's buddy. What things could Lynwood and you have done to prevent the accident? (Select as MANY as you think are correct!)

- 40. You could have used something dry to plug the cord into the receptacle.
- 41. You could have inspected the work area more carefully.
- 42. You could have reported the poor working conditions to the foreman and asked for assistance before proceeding.
- 43. You could have made the repairs to the electrical receptacle and conduit and then worked on the acid mixer.
- 44. You could have tested the electric impact wrench to make sure it was properly grounded and insulated, and then proceeded to fix the mixer.

When you have made your selection(s), do the next question.

Question J

It is a few days later. Lynwood was taken to the hospital. He recovered in two days and returned to work. Your prompt action may have saved his life.

At the next weekly safety meeting your foreman compliments you on your first aid. Later in the meeting he asks the following question. "Suppose that while you were eating lunch a miner stands up grasping her throat. You hear a high pitched crowing sound when she attempts to take a breath and she is not coughing. What should you do now? (Choose only ONE unless you are told to "Try again!")

- 45. Begin mouth-to-mouth rescue breathing.
- 46. Clear her throat with a finger sweep.
- 47. Do abdominal thrusts until the obstruction is expelled.
- 48. Do nothing until she begins to lose consciousness.
- 49. Strike her between the shoulder blades with the heel of your hand.

Scoring your performance

1. Count the total number of responses you colored in that were marked "correct." Write this number in the first blank on the answer sheet.
2. Count the total number of incorrect responses you colored in. Subtract this number from 37 . Write the difference in the second blank on the answer sheet.
3. Add the numbers on the first and second blanks. This is your score.

The best possible score of 49 results from selecting all the correct answers and no wrong answers.

The worst possible score of zero results from selecting all the wrong answers and no correct answers.