

Pre-test Checklist- Verbal Instructions: HDLC

- Verify the examinee signed a consent form.
- If applicable, verify the examinee completed all pre-test documents.
- Have examinee wash their hands in warm water prior to the test.
- Inform the examinee the duration of the test is 20-25 minutes.
- Ensure the examinee does not require a restroom break.
- Ensure the examinee does not have eye obstructions or interfering jewelry. If so, please remove.
For example:
 - Baseball cap or hat with a rim that shadows the eyes
 - Hair that covers any part of the eyes
 - Thick, dark makeup
 - Long, fake eyelashes
 - Face mask positioned high on the cheeks
 - Rings, bracelets, watch
- Ask the examinee to turn off all electronic devices to avoid distractions such as notifications or vibrations.
- Briefly describe the test setup process: (1) finish verbal instructions, (2) attach polygraph sensors, (3) load the test, (4) properly position the examinee, (5) calibrate eyes, and (6) run any optional diagnostic pre-tests.
- Describe the testing process: (1) Pre-test instructions, (2) Practice test, and (3) Lie detection tests. During the lie detection test, there are sequences of test questions followed by short breaks or rest periods.
- Explain pacing of test questions: 22 second interval in between each which is not a break. It is for physiological recovery.
- Explain all questions are YES/NO and question types include relevant, directed lie and math.
- Emphasize and explain directed lie questions. Rehearse and give examples.
- Describe how to answer with the mouse: YES (green button) and NO (red button). Physically show the examinee the red and green mouse buttons.
- Tell the examinee to be still except during breaks and emphasize that movement can affect test results. Also, mention to blink and breathe normally.
- Explain that breaks occur periodically and last 15 seconds; there is a countdown on the screen.
- Notify the examinee they will be monitored to ensure they are alert and cooperative. Both conditions are required to take the test.
- Verify the examinee has no questions or concerns.
- Do test set up process: attach sensors, have them sit, load the test, properly position examinee, calibrate eyes (verbally explain), run any optional diagnostics (verbally explain), and start the test.

Sample pretest script:

This test will take about 20 to 25 minutes and should be uninterrupted. If interrupted, we may have to start over. If you need to visit the restroom, please do so now. Also, please power off any electronic devices to avoid distractions.

The test starts with pre-test instructions, then you will take a practice test to get used to answering the questions, and then you will take the lie detection test. In the test, you will be asked a series of YES or NO questions. You respond "yes" by clicking the green button on the mouse and "no" by clicking the red. There is an interval of about 22 seconds between questions where you should sit still and wait until the next question appears. First, you will be asked if you... (introduce R1 topic). Second you will be asked very simple, basic math addition questions like does $1 + 1 = 2$ which would be YES or does $3 + 5 = 7$ which would be NO.

And third, you will be asked directed lie questions, which are questions that you should lie to. These will all start with the phrase "In your entire life (or whatever phrase is in the test. Could be: In your entire lifetime, In your entire life as an adult, etc.)" so indicate that you should lie to that question. An example of a directed lie question is "In your entire life, have you ever told a lie?" If you are going to lie to that question, the correct response is "no." [Give another example but ask the examinee to answer. Correct them if they get it wrong and give another example until they get it right]. A good way to think of the directed lie is to pretend that you are perfect and never do anything wrong. You will always be lying if you respond this way. It is very important to answer these directed lie questions correctly, which is to lie. If your body does not respond as if it is lying to these questions, you will most likely fail the test. To ensure a good response, you should think of a time when you did something should show not have done. Example, when it asks, "In your entire life, have you ever told a lie," you should click NO but think of a time when you told a big lie.

It is also important for the entire test that you are still as possible in your chair with your feet flat on the ground. It is ok to breathe and blink normally, as well as to click the mouse to answer questions, but any movement besides that can be read as reactions to the questions which WILL cause you to fail the test. So, you need to be like a statue in your chair. I will be monitoring you to ensure this. We know that is hard to do for a full 25 minutes so there are periodic breaks throughout the test where you can move if you need to. It will prompt you on the screen to relax and then it will count down from 15 seconds. You can move during the count down. Any other time you are being instructed to stare at the screen and wait, you need to be still. Only when you see a countdown is it ok to move. Any questions?

Example of attach sensors script:

- 1. Applying Respiration Belt or Strain Gauge:** *First, we will attach a respiration belt, which measures your breathing. This little box is the sensor. It needs to be in the center of your abdomen just below your chest or near your sternum. I'm going to have you put it in place for me [let them take it and put on stomach, instructing them to move it until it is in the correct position]. Now I'm going to take these straps and buckle them behind you [do so, then tighten]. This should be tight but not uncomfortable, so it captures the up and down motion of your*

breathing. [Adjust if they indicate it is too tight. Once at desired adjustment, ask the examinee to sit down - don't let it be too loose or won't get good results.]

- 2. Applying ECG gel pads and attaching sensors:** *These next two sensors will be attached to the tops of both wrists. Before applying them, we need to lightly exfoliate those areas. I'm going to give you some tape and have you gently rub away the top layer of dead skin in this area here on each wrist [indicate 2-inch square area on your wrist where watch would sit]. Please rub it a few different directions [observe them do so]. Ok, that looks good. You can discard the tape. Now I'm going to place the sensors on and have you press down so they're secure. [Apply sensors and ensure they press down firmly on both]. Now I will attach the cables [snap white on right wrist and black on left wrist].*
- 3. Applying EDA gel pads and sensors:** *The rest of the sensors will go on your non-dominant hand, which I presume is your left hand. (If not, use the right hand.) Raise up your hand like you're going to give me a high five. [Apply EDA gel pads on ring and index finger pads, only smoothing the edges down. If it is not secure or feels loose, apply medical tape, making sure not to cover the metal snap]. OK, put your hand down and rest it on the table for a moment. [Apply cables to both sensors so that they flow away from fingers, color doesn't matter]*
- 4. Applying PPG clamp:** *This last sensor clamps onto your middle finger like this [clamp onto tip of middle finger, making sure the cable runs along the top of their hand].*

During the test, your hand needs to be relaxed and dangle off the arm rest like this [show with your own hand. Observe them do so and instruct them to adjust until entire hand is dangling and relaxed]. Please keep your hand like that during the entire test, even during breaks. Make sure the sensors don't become dislodged. Make sure your fingers don't brush your leg, chair or desk and keep them relaxed and still. The sensors are very sensitive. Now get your in a comfortable position, with feet flat on the ground and we will begin.

Example of test setup script:

At Telemetry: *These white dots here represent your eyes. They need to be in the middle of this green box for the entire test, except breaks. You will see this box appear after each break, where you will need to get your eyes back to the middle before the test will continue. Get your posture and head to a position you think you can maintain for the next 20 minutes, and I will adjust the screen so that your eyes will be in the right place. [Once they settle, move screen so that eyes are in right place. Evaluate 4 screens for EDA, PPG, RSP and ECG to see if you have good placement for your sensors. Adjust them now if needed. Once you have them in a good position, continue]*

Before Calibration: *Please look at the dot and follow it as it moves along the screen.*

Before Pupil Light Reflex Diagnostic: *Please stare at the screen as it changes from light to dark.*

Before Digit Span Sequence Diagnostic: *You will be presented with a series of numbers. Memorize them. A keypad will appear on the screen, and you will use the mouse to enter the numbers you memorized. You will gradually be presented with longer series of numbers. Please do your best to accurately repeat the numbers.*