

LTV Ventilator Test – Nursing Personnel

Name: _____ Date: ____ / ____ / ____

Location: _____

Instructions: Of the choices of answers given for each question, choose the best possible answer:

- 1. While monitoring the LTV ventilator you notice that occasionally the display indicates “LPPS OFF.” What might the reason be?**
 - a. The low peak pressure monitor is malfunctioning.
 - b. The low peak pressure alarm has been turned off for spontaneous breaths.
 - c. The low peak pressure alarm has been turned on for spontaneous breaths.
 - d. The ventilator is operation on external power.

- 2. Over the past several days the low minute volume alarm and the low peak pressure alarm seem to be triggering more frequently. This has not been a problem since the patient was set-up on the LTV ventilator eight weeks ago. What might this be attributed to?**
 - a. The patient is getting used to the ventilator now.
 - b. There is a leak in the patient circuit.
 - c. There is a leak around the tracheostomy tube which has increased in size.
 - d. Both b and c.

- 3. The audible High Pressure alarm is not sounding but “High Pressure” is flashing in the display window intermittently. What is the most probable cause?**
 - a. The audible alarm is malfunctioning
 - b. The visual display is malfunctioning.
 - c. Electromagnetic interference is causing the visual display to flash.
 - d. The High Pressure alarm delay is turned on.

- 4. During a Pressure Support breath, the Pressure Support display flashes. This may be caused by?**
 - a. An incorrect Pressure Support setting.
 - b. The Pressure Support breath is time terminating instead of flow terminating.
 - c. The Sensitivity setting is not properly adjusted.
 - d. The LMV Alarm is turned off.

- 5. The night shift nurse reports that the low peak pressure (LPP) alarm seems to be triggering a lot. However, the day shift nurse states that this has not been a problem. What is the likely cause of the LPP alarm being triggered more frequently at night?**
 - a. The alarm is not set correctly.
 - b. The Sensitivity is not set correctly.
 - c. During the night, when the patient is asleep, his airway muscles are relaxing and the leak around the tracheostomy tube is increased..
 - d. The pressure is set too low.

Pulmonetic Systems LTV Ventilator Test – Nursing Personnel

6. **Occasionally the Pressure Control light flashes. What is the most likely cause for this?**
 - a. The LTV is malfunctioning.
 - b. The respiratory therapist failed to properly set the Rise Time and/or Flow Termination to appropriate setting for this particular patient.
 - c. The Pressure Control setting was not adjusted to compensate for PEEP.
 - d. The Flow Termination feature has been turned on for Pressure Control breaths.

7. **The night shift nurse notices that the exhaled tidal volume (Vte) display is reading 1500 ml, but has been reading about 135 ml-145 ml pretty consistently earlier. What might a possible cause be?**
 - a. The ventilator automatically switched to internal power.
 - b. The ventilator automatically switched to external power.
 - c. A leak has been introduced into the system, either around the tracheostomy tube or in the circuit somewhere.
 - d. The patient's lungs are improving.

8. **The day shift nurse notices that the PIP and Vte readings seem to be "all over the place" with no consistency. What might be a reason for this?**
 - a. Condensation pooling-up in the circuit.
 - b. Water or sputum in the sensor port lines.
 - c. Positional leak around the tracheostomy tube.
 - d. All of the above.

9. **A home health nurse notices that water needs to be drained from the patient ventilator circuit rather frequently. She reviews the ventilator flow chart to see what the heater setting has been, and finds it has been set at "4" consistently since the ventilator was set-up in February. It is now May. What might the cause be?**
 - a. The heated humidifier is set too high for this patient.
 - b. The heated humidifier is set too low for this patient.
 - c. Now that the weather has warmed up, the air conditioner is being used more and this is causing a temperature change in the room, resulting in "rain-out" in the patient circuit.
 - d. All of the above.

10. **Even though the Pressure Control level is set at 23 cmH₂O, the PIP display is reading 27 cmH₂O. This may be due to which of the following?**
 - a. The LTV is not a "true" pressure control ventilator.
 - b. The patient is actively exhaling during inspiratory flow or the first 300 ms of exhalation.
 - c. There is a leak around the endotracheal tube cuff.
 - d. The Rise Time is set at a Profile of 8.

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Post-test Answers

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____
7. ____
8. ____
9. ____
10. ____

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