# Test Prep

## RPFT

### Registered Pulmonary Function Technologist

## QUESTION & ANSWERS

**Exam A**

**QUESTION 1**
The following results are obtained:

| | Actual | Predicted |
|---|---|---|
| TLC | 6.0 L | 6.2 L |
| FRC | 2.2 L | 3.0 L |
| VC | 4.8 L | 5.0 L |

The RV/TLC ratio from these data is consistent with which of the following?

A. Obstructive defect
B. Normal lung volumes
C. Combined obstructive/restrictive defect
D. Restrictive defect

**Correct Answer:** A

**QUESTION 2**
During an exercise study, a pulmonary function technologist notices the systolic blood pressure increased to 270 mm Hg using an automated cuff. Which of the following should the technologist do?

A. Terminate the test and administer oxygen by nasal cannula.
B. Continue the test and recheck blood pressure using manual cuff method.
C. Terminate the test at this time and recheck blood pressure.
D. Continue the test if within 5 minutes of completion.

**Correct Answer:** A

**QUESTION 3**
The following values are reported at maximum effort for a 50-year-old, 70-kg (154-lb) male with significant coronary artery disease during ergometer stress testing. Which of the following is most likely an error?

A. workload 200 watts
B. VE65L/min
C. HR145/min
D. RER1.2

**Correct Answer:** A

**QUESTION 4**
During the calibration and set-up of the metabolic stress testing system for a patient breathing supplemental

oxygen, which of the following gas concentrations will ensure accurate calibration of the system?

| | 5% $CO_2$ | 10% $CO_2$ | 15% $O_2$ | 26% $O_2$ |
|---|---|---|---|---|
| A. | yes | no | yes | yes |
| B. | no | yes | no | no |
| C. | no | yes | yes | no |
| D. | yes | no | no | yes |

A. Option A
B. Option B
C. Option C
D. Option D

**Correct Answer:** D

**QUESTION 5**
A pulmonary function technologist is performing an exercise (stress) test on a patient with severe COPD. As the test progresses, the patient shows signs of increasing dyspnea. Measurements of inspiratory capacity decreased from 2.0 L to 1.5 L. Which of the following most likely occurred?

A. dynamic hyperinflation
B. disconnected gas sampling line
C. drift in the flow transducer
D. acute decrease in FRC

**Correct Answer:** D

**QUESTION 6**
A pulmonary function technologist can calculate which of the following if values for pH, $PaO_2$, $SaO_2$, $SvO_2$ $PvO_2$, $VO_2$, and Hb are obtained?

A. Cardiac output
B. RER
C. VD/VT
D. Stroke volume

**Correct Answer:** A

**QUESTION 7**
A 9-year-old girl had an FVC of 2.35 L1 year ago. She was 122 cm (4 ft) tall and weighed 29.5 kg (65 lb). Her current height is 127 cm (4 ft 2 in), and her weight is 34 kg (75 lb). The current FVC measurement is

2.20 L. The quality of both tests met ATS/ERS goals. A pulmonary function technologist should conclude the change is

A. Not significant since it is less than a 15% decrease.
B. Not significant since it is within normal test variability.
C. Significant since a decline is not expected.
D. Significant since her weight has changed.

**Correct Answer:** C

**QUESTION 8**
Which of the following may cause a reduction in end-tidal $CO_2$?

A. Increased VD/VT ratio
B. Anxiety-induced hyperventilation
C. Exercise below the anaerobic threshold
D. Eating a high-protein diet

**Correct Answer:** B

**QUESTION 9**
During a cardiopulmonary stress test using breath-by-breath gas analysis, a pulmonary function technologist notices that the $VO_2$ suddenly decreases. Which of the following may explain this change?

1. The patient has achieved anaerobic threshold.
2. The measurement of the expired gas volumes is inaccurate.
3. $O_2$ analyzer "phase delay" has increased.
4. There is a leak in the tubing or mouthpiece.

A. 1, 3, and 4 only
B. 1, 2, and 3 only
C. 1, 2, and 4 only
D. 2, 3, and 4 only

**Correct Answer:** A

**QUESTION 10**
A comparison of two techniques for measuring Rawis shown below:

| Subject | $R_{aw}$ Panting (cm $H_2O$/L/sec) | $R_{aw}$ Quiet Breathing (cm $H_2O$/L/sec) |
|---|---|---|
| 1 | 0.8 | 2.1 |
| 2 | 2.4 | 3.2 |