



RPFT Examination Matrix

Content Area	Cognitive Level			Number of Items
	Recall	Application	Analysis	
I. INSTRUMENTATION/EQUIPMENT	6	8	11	25
A. Set Up, Maintain, Calibrate	2	3	3	8
B. Troubleshoot	2	3	5	10
C. Perform Quality Control	2	2	3	7
II. DIAGNOSTIC PROCEDURES	9	16	15	40
A. Select Test Protocols and Equipment	3	4	5	12
B. Perform Procedure	3	6	5	14
C. Evaluate Validity of Procedure	3	6	5	14
III. DATA MANAGEMENT	5	13	17	35
A. Calculate and Select Data	2	3	4	9
B. Evaluate Reliability of Results	2	5	7	14
C. Evaluate Clinical Implications	1	5	6	12
Totals	20	37	43	100



An "X" denotes the examination does NOT contain items for the given task at the cognitive level indicated in the respective column

	Application		
	Recall	Application	Analysis
I. INSTRUMENTATION/EQUIPMENT	6	8	11
A. Set Up, Maintain, Calibrate	2*	3*	3*
1. Blood gas analyzers	X	X	
2. CO-oximeters/hemoximeters			
3. Aerosol delivery devices (e.g., bronchodilator/bronchial challenge, dosimeters)	X	X	
4. Valves (e.g., directional, demand)	X	X	
5. Infrared analyzers (e.g., CO ₂ , CO, CH ₄)			
6. Oxygen analyzers (e.g., paramagnetic, polarographic, fuel cell)	X		
7. Helium analyzers			
8. Nitrogen analyzers			
9. Gas delivery systems (e.g., blenders, flowmeters)	X		
10. Pressure measuring devices (e.g., manometers, transducers, strain gauges)	X		
11. Recording devices (e.g., strip chart, X-Y)			
12. Plethysmographs (e.g., body box)	X		
13. Exercise equipment (e.g., treadmill, cycle or arm ergometer)	X		
14. Exercise testing metabolic measurement systems			
15. Fiberoptic bronchoscopy equipment			
16. Information management equipment (e.g., computers, interfaces, modems, networks, printers, security)	X		
17. Quality control devices and materials (e.g., calibration syringes, isothermal bottle, gas exchange validation device)	X	X	
18. Infection control materials/methods (e.g., sterilization devices, gowns, gloves, masks)	X	X	
B. Troubleshoot	2	3	5
1. Blood gas analyzers	X	X	
2. CO-oximeters/hemoximeters			
3. Aerosol delivery devices (e.g., bronchodilator/bronchial challenge, dosimeters)	X	X	
4. Valves (e.g., directional, demand)	X		
5. Infrared analyzers (e.g., CO ₂ , CO, CH ₄)			
6. Oxygen analyzers (e.g., paramagnetic, polarographic, fuel cell)	X		
7. Helium analyzers			
8. Nitrogen analyzers			
9. Gas delivery systems (e.g., blenders, flowmeters)	X		
10. Recording devices (e.g., strip chart, X-Y)			
11. Plethysmographs (e.g., body box)	X		
12. Exercise equipment (e.g., treadmill, cycle or arm ergometer)	X		
13. Exercise testing metabolic measurement systems			
14. Indirect calorimeter metabolic measurement systems			
15. Electrocardiograph monitors	X	X	
16. Oximeter monitors	X	X	
17. Fiberoptic bronchoscopy equipment			
18. Information management equipment (e.g., computers, interfaces, modems, networks, printers, security)	X		
19. Quality control devices and materials (e.g., calibration syringes, isothermal bottle, gas exchange validation device)	X		
20. Infection control materials/methods (e.g., sterilization devices, gowns, gloves, masks)	X	X	
C. Perform Quality Control	2	2	3
1. Blood gas analyzers	X	X	
2. CO-oximeters/hemoximeters			
3. Aerosol delivery devices (e.g., bronchodilator/bronchial challenge, dosimeters)	X		
4. Infrared analyzers (e.g., CO ₂ , CO, CH ₄)	X		
5. Oxygen analyzers (e.g., paramagnetic, polarographic, fuel cell)	X		
6. Helium analyzers			
7. Nitrogen analyzers			
8. Recording devices (e.g., strip chart, X-Y)			
9. Plethysmographs (e.g., body box)	X		

* The number in each column is the number of items in that content area and cognitive level contained in each examination. Specified items in each section could be asked relative to any tasks listed.

	Application		
	Recall		
10. Exercise equipment (e.g., treadmill, cycle or arm ergometer)			
11. Exercise testing metabolic measurement systems			
12. Indirect calorimeter metabolic measurement systems			
13. Electrocardiograph monitors			
14. Oximeter monitors	X	X	
II. DIAGNOSTIC PROCEDURES	9	16	15
A. Select Test Protocols and Equipment	3	4	5
1. End tidal CO ₂			
2. Blood gas analysis (e.g., pH, PO ₂ , PCO ₂)	X	X	
3. CO-oximetry/hemoximetry (e.g., CaO ₂ , SaO ₂ , COHb)	X	X	
4. Gas dilution methods (e.g., N ₂ , He) for static lung volumes (e.g., FRC, RV, TLC)	X	X	
5. Body plethysmography (e.g., body box) for static lung volumes (e.g., FRC, RV, TLC)	X		
6. Lung diffusion studies (D _{LCO})	X	X	
7. Home testing (e.g., spirometry, peak flow, patient education, set-up, and evaluation)			X
8. Oxygen prescription for pulmonary rehabilitation			
9. Patient education (e.g., medication use, travel, nutrition, asthma) for pulmonary rehabilitation	X		
10. Airway clearance for pulmonary rehabilitation	X		
11. Timed walking test for exercise (stress) testing	X	X	
12. Monitored (e.g., ECG, blood pressure, SpO ₂) exercise (stress) testing	X	X	
13. Exhaled gas analysis (e.g., $\dot{V}O_{2max}$, anaerobic threshold) for exercise (stress) testing			
14. Blood gas analysis for exercise (stress) testing			
15. CPR	X	X	
16. ECG analysis (e.g., arrhythmia, rate, pattern)			
17. Bronchial provocation studies (e.g., methacholine, exercise hyperventilation) of airway response	X		
18. Airway resistance/conductance by plethysmography			
19. Inspiratory/expiratory pressures (e.g., MIP, MEP)	X	X	
20. Patient response monitoring during fiberoptic bronchoscopy procedures			
21. Specimen preparation during fiberoptic bronchoscopy procedures			
22. Topical anesthesia administration during fiberoptic bronchoscopy procedures			
23. Bronchoscope cleaning after fiberoptic bronchoscopy procedures			
24. Laboratory safety (e.g., electrical, mechanical, infectious)	X	X	
25. Hazardous materials and patient safety	X	X	
B. Perform Procedure	3	6	5
1. End tidal CO ₂			
2. Capillary blood sample collection			
3. CO-oximetry/hemoximetry (e.g., CaO ₂ , SaO ₂ , COHb)	X	X	
4. Shunt studies ($\dot{Q}s/\dot{Q}t$)			
5. Gas dilution methods (e.g., N ₂ , He) for static lung volumes (e.g., FRC, RV, TLC)	X	X	
6. Body plethysmography (e.g., body box) for static lung volumes (e.g., FRC, RV, TLC)	X		
7. Lung diffusion studies (D _{LCO})	X	X	
8. Home testing (e.g., spirometry, peak flow, patient education, set-up, and evaluation)	X		
9. Exercise training for pulmonary rehabilitation			
10. Oxygen prescription for pulmonary rehabilitation	X		
11. Patient education (e.g., medication use, travel, nutrition, asthma) for pulmonary rehabilitation	X		
12. Airway clearance for pulmonary rehabilitation	X		
13. Timed walking test for exercise (stress) testing	X	X	
14. Monitored (e.g., ECG, blood pressure, SpO ₂) exercise (stress) testing	X	X	
15. Exhaled gas analysis (e.g., $\dot{V}O_{2max}$, anaerobic threshold) for exercise (stress) testing			
16. Blood gas analysis for exercise (stress) testing			
17. Indirect calorimetry (nutritional studies)			
18. ECG analysis (e.g., arrhythmia, rate, pattern)	X		
19. Pulse oximetry	X	X	
20. Bronchial provocation studies (e.g., methacholine, exercise hyperventilation) of airway response	X		
21. Airway resistance/conductance by plethysmography	X	X	
22. Inspiratory/expiratory pressures (e.g., MIP, MEP)	X	X	
23. Patient response monitoring during fiberoptic bronchoscopy procedures			
24. Specimen preparation during fiberoptic bronchoscopy procedures			

	Application		
	Recall		
25. Topical anesthesia administration during fiberoptic bronchoscopy procedures		X	
26. Laboratory safety (e.g., electrical, mechanical, infectious)	X	X	
C. Evaluate Validity of Procedure	3	6	5
1. End tidal CO ₂			
2. Capillary blood sample collection			
3. CO-oximetry/hemoximetry (e.g., CaO ₂ , SaO ₂ , COHb)	X	X	
4. Shunt studies (\dot{Q}_s/\dot{Q}_t)			
5. Dead space (V_D/V_T)			
6. Gas dilution methods (e.g., N ₂ , He) for static lung volumes (e.g., FRC, RV, TLC)	X	X	
7. Body plethysmography (e.g., body box) for static lung volumes (e.g., FRC, RV, TLC)	X	X	
8. Lung diffusion studies (D_{LCO})	X	X	
9. Home testing (e.g., spirometry, peak flow, patient education, set-up, and evaluation)	X	X	
10. Exercise training for pulmonary rehabilitation			
11. Oxygen prescription for pulmonary rehabilitation	X	X	
12. Patient education (e.g., medication use, travel, nutrition, asthma) for pulmonary rehabilitation	X		
13. Airway clearance for pulmonary rehabilitation	X		
14. Timed walking test for exercise (stress) testing	X	X	
15. Monitored (e.g., ECG, blood pressure, SpO ₂) exercise (stress) testing	X	X	
16. Exhaled gas analysis (e.g., $\dot{V}O_{2max}$, anaerobic threshold) for exercise (stress) testing			
17. Blood gas analysis for exercise (stress) testing			
18. Indirect calorimetry (nutritional studies)			
19. ECG analysis (e.g., arrhythmia, rate, pattern)			
20. Bronchial provocation studies (e.g., methacholine, exercise hyperventilation) of airway response	X		
21. Airway resistance/conductance by plethysmography	X	X	
22. Inspiratory/expiratory pressures (e.g., MIP, MEP)	X	X	
23. Patient response monitoring during fiberoptic bronchoscopy procedures			
24. Specimen preparation during fiberoptic bronchoscopy procedures			
25. Topical anesthesia administration during fiberoptic bronchoscopy procedures			
26. Bronchoscope cleaning after fiberoptic bronchoscopy procedures			
27. Laboratory safety (e.g., electrical, mechanical, infectious)	X	X	
III. DATA MANAGEMENT	5	13	17
A. Calculate and Select Data	2	3	4
1. Measured and calculated CO-oximetry/hemoximetry results			
2. Body plethysmography data (e.g., body box) for static lung volumes (e.g., FRC, RV, TLC)	X		
3. Lung diffusion studies (D_{LCO})	X	X	
4. Monitored (e.g., ECG, blood pressure, SpO ₂) exercise (stress) test data	X	X	
5. Exhaled gas analysis (e.g., $\dot{V}O_{2max}$, anaerobic threshold) for exercise (stress) test data			
6. Blood gas analysis for exercise (stress) test data			
7. Noninvasive blood pressure data	X		X
8. ECG waveforms (e.g., arrhythmia, rate, pattern)	X	X	
9. Bronchial provocation studies (e.g., methacholine, exercise, hyperventilation) of airway response data	X		
10. Airway resistance/conductance data by plethysmography			
11. Inspiratory/expiratory pressures (e.g., MIP, MEP)	X	X	
12. Reference values regarding statistical and graphical methods for quality control and pulmonary function data	X		
13. Means, standard deviations, confidence intervals (e.g., Levy-Jennings) regarding statistical and graphical methods for quality control and pulmonary function data			
14. Laboratory quality management	X		
B. Evaluate Reliability of Results	2	5	7
1. Measured and calculated CO-oximetry/hemoximetry results	X	X	
2. Shunt studies (\dot{Q}_s/\dot{Q}_t)			
3. Dead space (V_D/V_T)			
4. Gas dilution data (e.g., N ₂ , He) for static lung volumes (e.g., FRC, RV, TLC)	X	X	
5. Body plethysmography data (e.g., body box) for static lung volumes (e.g., FRC, RV, TLC)	X		
6. Lung diffusion studies (D_{LCO})	X	X	
7. Home pulmonary function data (e.g., spirometry, peak flow)			
8. Timed walking test for exercise (stress) test data	X	X	

	Application		
	Recall		
9. Monitored (e.g., ECG, blood pressure, SpO ₂) exercise (stress) test data	X	X	
10. Exhaled gas analysis (e.g., VO _{2max} , anaerobic threshold) for exercise (stress) test data			
11. Blood gas analysis for exercise (stress) test data	X		
12. Indirect calorimetry (nutritional studies)			
13. ECG waveforms (e.g., arrhythmia, rate, pattern)	X	X	
14. Bronchial provocation studies (e.g., methacholine, exercise, hyperventilation) of airway response data.	X		
15. Airway resistance/conductance data by plethysmography	X		
16. Inspiratory/expiratory pressures (e.g., MIP, MEP).	X	X	
17. Reference values regarding statistical and graphical methods for quality control and pulmonary function data	X		
18. Means, standard deviations, confidence intervals (e.g., Levy-Jennings) regarding statistical and graphical methods for quality control and pulmonary function data	X		
19. Clinical history and demographics (e.g., height, weight, age, race, gender, smoking and occupational history, vital signs, medical/surgical history, medications, respiratory care).	X	X	
20. Laboratory quality management	X	X	
C. Evaluate Clinical Implications	1	5	6
1. Measured and calculated blood gas results	X	X	
2. Measured and calculated CO-oximetry/ hemoximetry results	X	X	
3. Dead space (V _D /V _T)			
4. Body plethysmography data (e.g., body box) for static lung volumes (e.g., FRC, RV, TLC)	X	X	
5. Lung diffusion studies (D _{LCO}).	X	X	
6. Timed walking test for exercise (stress) test data	X	X	
7. Monitored (e.g., ECG, blood pressure, SpO ₂) exercise (stress) test data	X	X	
8. Exhaled gas analysis (e.g., VO _{2max} , anaerobic threshold) for exercise (stress) test data			
9. Blood gas analysis for exercise (stress) test data	X		
10. Indirect calorimetry (nutritional studies)			
11. Noninvasive blood pressure data	X	X	
12. ECG waveforms (e.g., arrhythmia, rate, pattern)	X	X	
13. Bronchial provocation studies (e.g., methacholine, exercise, hyperventilation) of airway response data.	X		
14. Airway resistance/conductance data by plethysmography	X		
15. Inspiratory/expiratory pressures (e.g., MIP, MEP).	X		
16. Reference values regarding statistical and graphical methods for quality control and pulmonary function data	X	X	
17. Means, standard deviations, confidence intervals (e.g., Levy-Jennings) regarding statistical and graphical methods for quality control and pulmonary function data	X		
18. Laboratory quality management	X	X	
TOTALS	20	37	43