Respiratory Equations 3

1) Which one of below is not required to calculate the mean airway pressure in the volume controlled ventilation VCV?

A) Peak inspiratory pressure
B) Plateau pressure
C) PEEP

2) Which one of below is not required to calculate the mean airway pressure in the volume controlled ventilation PCV?

A) Peak inspiratory pressure
B) Peak inspiratory flow
C) PEEP

3) How do you calculate the tidal volume in pressure controlled ventilation PCV?

A) (Peak inspiratory flow – End inspiratory flow) X Inspiratory time
B) (Peak inspiratory flow – End inspiratory flow) / Inspiratory time
C) Can not be done

4) How to estimate the inspiratory flow in PCV?

A) Driving pressure / Compliance
B) Driving pressure X Compliance
C) Driving pressure / Resistance
D) Driving pressure X Resistance

5) A patient with compliance 50 ml/cmH_2O and Resistance 10 cmH_2O/L/s, on PCV with I-time 0.75 seconds, would increasing the I-time to 1 second increase the tidal volume?

A) Yes
B) No

6) In the question above, what is the I-time that will give the maximum tidal volume without changing the DP?

A) 0.5 second
B) 1 second
C) 1.25 second
D) 1.5 second

7) In VCV with constant flow of 30 L/min, and tidal volume 300 ml, what is the I-time?

A) 0.5 seconds
B) 0.66 seconds
C) 0.75 second
D) 1 second

8) What would the effect of increasing resistance be on the flow in PCV modes?

A) Increase
B) Decrease
C) Unchanged

9) With the same PIP, PEEP, I-time, RR, which mode will have a higher mean airway pressure, VCV or PCV?

A) VCV
B) PCV
C) Both equal

10) Total resistance in VCV =

A) Peak inspiratory pressure – Plateau pressure / Flow
B) Plateau pressure / Flow
C) Plateau pressure – PEEP / Tidal volume
D) Tidal volume / Flow