

BLOOD FLOW MCQS:

1. Turbulent flow is more likely in a fluid-filled system with
 - A: high velocity ✓
 - B: high viscosity
 - C: low density
 - D: narrow diameter

2. A small change in the radius of a vessel leads to large changes in all EXCEPT
 - A: blood pressure
 - B: elastic recoil ✓
 - C: flow
 - D: resistance

3. Flow in a vessel is equal to the effective perfusion pressure in that section of the vessel divided by the
 - A: compliance
 - B: heart rate
 - C: radius
 - D: resistance ✓

4. When the haematocrit increases, the effect on viscosity will be greatest in
 - A: arteries ✓
 - B: arterioles
 - C: capillaries
 - D: venules

5. Mr A has an aortic aneurysm. The wall tension is greatest with
 - A: increasing intra-abdominal pressure
 - B: increasing radius ✓
 - C: increasing wall thickness
 - D: turbulent flow

6. This is an effect of gravity on venous pressure:
 - A: CVP drops to -10mmHg on standing
 - B: dural sinuses collapse in the upright position
 - C: muscle contractions cannot overcome venous valve incompetence
 - D: venous pressure at the ankle while standing is 85-90 mmHg ✓

- 7: What causes the c wave in the CVP trace?
- A: blood regurgitation due to atrial systole
 - B: increase in RAP before the tricuspid valve opens during diastole
 - C: increase in RAP by a bulging tricuspid valve during systole ✓
 - D: rising intrathoracic pressure during expiration
- 8: The lymph draining from here has the highest protein content:
- A: intestines
 - B: liver ✓
 - C: lung
 - D: skeletal muscle
- 9: This is NOT a cause of increased interstitial fluid:
- A: histamine release
 - B: hypoalbuminaemia
 - C: intravascular osmotically-active substance ✓
 - D: right ventricular failure
- 10: What is a cause of local arteriolar vasoconstriction?
- A: decreased temperature ✓
 - B: increased CO₂
 - C: increased K⁺
 - D: increased lactate