

D-277 Dental Physiology Quiz 5  
Monday, June 16, 2008

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Name

Student Number

\*\*\*NOTE: 2 PAGES, 6 QUESTIONS !!!

1. Are the following statements about single unit visceral smooth muscle (SUVSM) correct ?  
If not, which statement is incorrect ?
  - a. \*SUVSM responds to a prolonged stretch and the increase in tension by decreasing its length and resisting the increase in tension.
  - b. Rapid increases of intracellular  $\text{Ca}^{++}$  concentrations trigger the contractile sequence of SUVSM.
  - c. The calcium-calmodulin complex (\*CAM) formed during activation of SUVSM will attach to myosin light chain kinase (MLCK) and cause troponin to move away from the bond sites on actin.
  - d. Yes, all of the above statements (a, b & c) are **correct**.
  
2. Why is saliva **always** hypotonic to plasma ?
  - a. More NaCl is actively pumped into saliva than  $\text{K}^+$  &  $\text{HCO}_3^-$  is reabsorbed into the blood.
  - b. More  $\text{H}_2\text{O}$  is actively pumped into the saliva by the duct cells.
  - c. \*More NaCl is reabsorbed into the blood than  $\text{K}^+$  &  $\text{HCO}_3^-$  is secreted into saliva.
  - d. More  $\text{H}_2\text{O}$  is actively pumped out of the saliva in exchange for NaCl.
  - e. The initial statement is incorrect. Saliva is always isotonic to plasma.
  
3. The character of the fluid absorbed by ileum into the hepatic-portal circulation can best be described as a:
  - a.  $\text{NaHCO}_3$  solution.
  - b. \*NaCl solution.
  - c. NaK solution.
  - d. KCl solution.
  
4. It is common to find that the control systems of the anterior hypophysis are based upon models containing:
  - a. A single positive feedback loop.
  - b. \*Several negative feedback loops.
  - c. Several positive feedback loops.
  - d. A single negative feedback loop.

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5. The presence of which of the following must be present to confirm that a patient has Cushing's Syndrome and not Cushing's Disease ?
- a. Moon shaped face.
  - b. Purple striae.
  - c. High plasma [ACTH].
  - d. \*Low plasma [ACTH].
6. Which, of the following, will occur during the luteal phase of a **normal, non pregnant** menstrual cycle ?
- a. Human chorionic gonadotrophin is secreted by the corpus luteum.
  - b. \*LH stimulates the corpus luteum to secrete estrogen & progesterone.
  - c. FSH stimulates the corpus luteum to secrete inhibin.
  - d. Formation of the corpus luteum occurs only after the ovum is fertilized.

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