ALBERTA BIOLOGY 20 · UNIT 4 · 10 QUESTIONS

Human Systems — Practice Test

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1 **Inside each villus, the lymph vessel that absorbs fatty acids and glycerol from digested fat is the**

- **A** Lacteal
- **B** Capillary
- **C** Arteriole
- **D** Microvillus

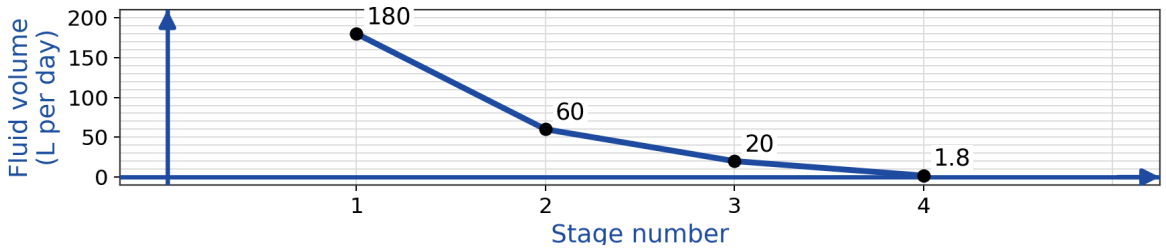
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2 **Which statement about capillaries is correct?**

- **A** Capillaries contain valves that prevent the backflow of blood
- **B** Capillary walls are thick and muscular so they can withstand high blood pressure
- **C** Capillary walls are one cell thick, allowing substances to diffuse between the blood and the body cells
- **D** Capillaries carry blood directly from the heart to the body tissues

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3 **The graph shows the volume of fluid remaining at each stage of urine formation, in order: stage 1 is filtration at the glomerulus, stage 2 is the proximal tubule, stage 3 is the loop of Henle, and stage 4 is urine leaving the body. The volume of fluid reabsorbed back into the blood each day, in litres, is ____**



ANSWER _____

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4 **On a hot day, a student sweats heavily and drinks very little water, so the pituitary gland releases more ADH (antidiuretic hormone) into the blood. The effect of the ADH on the kidneys is to**

- **A** Increase the rate of filtration at the glomerulus
- **B** Decrease the reabsorption of water in the collecting duct
- **C** Cause the urinary bladder to hold a larger volume of dilute urine
- **D** Increase the reabsorption of water in the collecting duct, producing a smaller volume of concentrated urine

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5 **Most of the carbon dioxide produced by body cells is transported to the lungs**

- **A** As bicarbonate ions in the plasma
- **B** Attached to platelets
- **C** Dissolved as a gas in the plasma
- **D** Inside white blood cells

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6 **The stomach wall is not digested by its own gastric juice mainly because**

A A thick layer of mucus coats and protects the stomach lining

B Pepsin is never released into the stomach

C Bile neutralizes the hydrochloric acid in the stomach

D The stomach lining has no blood supply

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7 **Some processes involved in urine formation are listed below. 1 Tubular secretion 2 Glomerular filtration 3 Tubular reabsorption The order in which these processes occur, from first to last, is ____. Record your answer as a three-digit number.**

ANSWER _____

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8 **During inhalation, the external intercostal muscles contract and the rib cage**

A Moves down and in, decreasing the volume of the chest cavity

B Moves up and out, increasing the volume of the chest cavity

C Moves up and out, decreasing the volume of the chest cavity

D Does not move at all during breathing

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9 **Bile salts break large fat globules into many tiny droplets, increasing the surface area on which lipase can act. This physical process is called**

A Peristalsis

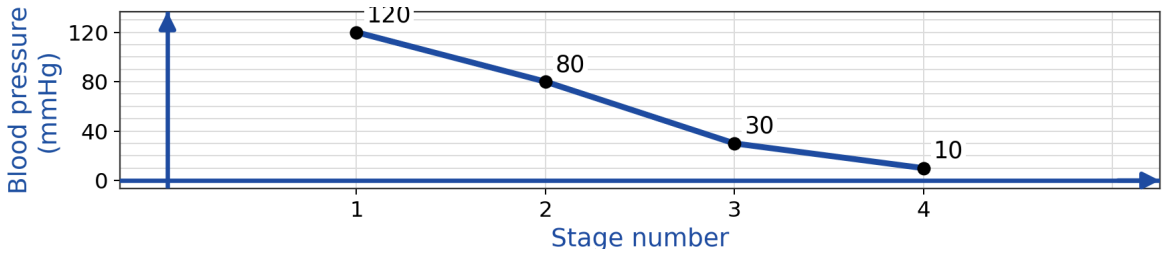
B Hydrolysis

C Absorption

D Emulsification

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10 **The graph shows blood pressure at each stage of the circulation, in order: stage 1 is the aorta, stage 2 is the arteries, stage 3 is the capillaries, and stage 4 is the veins. The blood pressure in the capillaries, in mmHg, is _____**



ANSWER

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ANSWER KEY

1. A
2. C
3. 178.2
4. D
5. A
6. A
7. 231
8. B
9. D
10. 30

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