Short quiz: Chapter 40

1. Which of the following does not affect an animal’s exchange rate with its surroundings?
   1. Size
   2. Shape
   3. Surface area
   4. Height
   5. Volume
2. Which statement below is correct?
   1. As cell number increases, the ratio of inner surface area steadily decreases.
   2. As cell number increases, the ratio of outer surface area to total volume steadily decreases.
   3. As cell number increases, the total metabolic rate decreases
   4. As cell number increases, the average cellular metabolic rate decreases
   5. B & D
3. Which of the following actions will increase exchange rate at the cellular level?
   1. Increase in volume
   2. Decrease in surface area
   3. Increase in ISF for animals
   4. Increase in surface area to volume ratio
   5. A & B
4. Which is incorrectly matched with its function?
   1. Connective tissue – blood
   2. Fibroblasts – secrete proteins of ECM fibers
   3. Collagenous fibers – provide strength & flexibility
   4. Adipose tissue – synonymous to fuel
   5. All are correctly matched
5. Helps nourish, Insulate, & replenish neurons and nerve cells
   1. Osteoclasts
   2. Glial cells
   3. Integrins
   4. Macrophages
   5. B & D
6. Which of the following best illustrates the concept of homeostasis?
   1. Paying a speeding ticket
   2. Getting a pat on the back for positive reinforcement
   3. Getting bailed out of jail
   4. Receiving a returned letter in the mail
   5. Having a bank fee waived
7. Which of the following is an example of an endotherm?
   1. Most invertebrates
   2. Bony fishes
   3. Birds
   4. Non-avian reptiles
   5. C & D
8. An organism will not gain heat by which of the following processes?
   1. Radiation
   2. Evaporation
   3. Convection
   4. Conduction
   5. All of the above
9. Not an adaptation that helps with thermoregulation.
   1. Evaporative heat loss
   2. Insulation
   3. Adjusting metabolic heat production
   4. Hibernation
   5. Circulatory adaptations
10. Someone incapable of thermoregulation most likely has a defect at which of the following organs or glands?
    1. Pineal gland
    2. Adrenal gland
    3. Thyroid gland
    4. Hypothalamus
    5. Medulla oblongata