

## ANSWERS

### Word bank

- 1)**SODIUM** is an electrolyte that functions mainly as an extracellular component.
  - 2)**POTASSIUM** is mostly intracellular and helps maintain membrane potential.
  - 3)More than **300** enzymes are activated by magnesium.
  - 4)Grass tetany occurs mainly in **CATTLE** fed lush, rapidly growing pasture.
  - 5)Excess dietary phosphorus can lead to **NUTRITIONAL SECONDARY HYPERPARATHYROIDISM**.
  - 6)In ruminant diets, the nitrogen-to-sulfur ratio should be **10:1**.
  - 7)Excess sulfur can tie up **COPPER** and molybdenum.
  - 8)**SULFUR** is not essential in inorganic form but is needed in organic compounds like amino acids and vitamins.
  - 9)Cobalt is part of the vitamin **B12**.
  - 10)Iodine combines with the amino acid **TYROSINE** to form thyroid hormones.
  - 11)Deficiency of iodine causes **GOITERS**.
  - 12)High dietary calcium can reduce absorption of **ZINC**.
  - 13)Iron deficiency commonly causes **ANEMIA** in newborn animals.
  - 14)Copper is needed for **COLLAGEN** and elastin synthesis.
  - 15)Manganese is important for **BONE** formation and glucose metabolism.
  - 16)Selenium works closely with vitamin **E** as an antioxidant.
  - 17)Selenium toxicity is known as **ALKALI DISEASE** or “blind staggers.”
  - 18)Chromium increases the stability and activity of the **INSULIN** receptor.
- Chelated trace minerals are bound to a(n) **AMINO ACID** or a protein.

Chelated minerals cost **30 TO 50** percent more than inorganic forms.

Sulfate forms of minerals may affect the **ODOR** of manure.

Zinc deficiency causes **PARAKERATOSIS**, which affects skin health.

Sodium, potassium, and chloride help maintain **ACID-BASE** balance.

The Na/K pump allows for **NERVE** transmission.

Potassium, sodium, and chlorine are classified as **ELECTROLYTES**.