

There are ten questions, 10% each.

1. Please describe the external respiration and internal respiration.
2. Please describe the regulation and mechanism of HCl secretion in the stomach.
3. Please describe the location and functions of juxtaglomerular apparatus.
4. Please describe the ovarian cycle and uterine (menstrual) cycle with hormonal regulation.
5. Please describe the functional relationships between hypothalamus and pituitary gland with respect to hormonal regulation.
6. All muscle cells are specialized in contraction. Please discuss the similarities and differences in their contractile mechanisms.
7. Please discuss the role of blood volume in the long-term regulation of arterial pressure.
8. How do synapses function in neurotransmission?
9. Please explain why different cell types can respond differently to the same messenger (e.g. hormone or neurotransmitter).
10. Please explain how molecules move across cell membrane and the overall function of these movements.