36) Which of the following appears to exert the most direct influence over autonomic functions? 36) C
A) reticular formation
B) hypothalamus
C) medulla oblongata
D) midbrain

37) What organ in the body regulates erythrocyte production? 37) A
A) liver
B) pancreas
C) kidney
D) brain

38) A lack of intrinsic factor, leading to a deficiency of vitamin B_{12} and causing an appearance of large pale cells called macrocytes, is characteristic of _____. 38) A
A) pernicious anemia
B) aplastic anemia
C) polycythemia
D) sickle-cell anemia

39) Blood reticulocyte counts provide information regarding _____. 39) C
A) WBC ability to defend the body against disease
B) rate of platelet formation
C) clotting ability of the blood
D) rate of erythrocyte formation

40) Which is NOT true of thrombocytopenia? 40) A
A) It increases the risk of embolus formation.
B) It can be caused by conditions that destroy bone marrow.
C) It is caused by having a low number of circulating platelets.
D) It may produce petechiae.

41) If the mitral valve is unable to close properly, _____. 41) C
A) blood could flow back into the right ventricle
B) blood could flow back into the left ventricle
C) blood could flow back into the left atrium
D) blood could flow back into the right atrium

42) One of the least complicated of the endocrine control systems directly responds to changing blood levels of ions and nutrients. Which of the following describes this mechanism? 42) C
A) protein synthesis
B) catabolic inhibition
C) humoral stimulation
D) neural stimulation

43) Dave has discovered a new lipid-soluble hormone. Which of the following is true regarding this hormone? 43) A
A) will be bound to a transport protein in the blood
B) receptor will be located on the plasma membrane
C) can be stored in secretory vesicles
D) will likely act through a second-messenger system

44) A mismatch of blood types during a transfusion is dangerous because _____. 44) A
A) preformed antibodies in the **recipient's** blood will bind and clump (agglutinate) the donated cells
B) white blood cells from the **donor's** blood cause inflammation
C) clotting factors in the **donor's** blood will cause unwanted clots known as thrombus
D) antibodies in the **donor's** plasma will attack and kill the recipient's healthy blood cells