Biol-131 Exam 1 A

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Many effects of growth hormone are mediated by insulin-like growth factors (IGFs) secreted by the pancreas.
A) True
B) False

Regardless of the cause of stress, the body reacts in a fairly consistent way to different stressors.
A) True
B) False

Addison disease is a consequence of a tumor of the adrenal medulla.
A) True
B) False

Which of the following is true regarding endocrine glands?
A) They secrete their products by way of ducts.
B) They secrete substances that do not alter the metabolism of their target cells, but have extracellular effects.
C) They have an unusually low density of blood capillaries.
D) They release their secretions into the blood.
E) Their secretions may be released onto the body surface.

The nervous system reacts to stimuli _____ compared to the endocrine system, adapts _____ compared to the endocrine system, and has _____ effects compared to the endocrine system.
A) slowly; slowly; widespread
B) slowly; quickly; specific
C) quickly; quickly; widespread
D) quickly; quickly; specific
E) quickly; slowly; specific

The _____ secretes growth hormone, which is also known as somatotropin.
A) hypothalamus
B) posterior pituitary
C) anterior pituitary
D) thymus
E) thyroid

The _____ is not an endocrine gland but it has a role in endocrine function.
A) thyroid gland
B) adrenal gland
C) kidney
D) parathyroid gland
E) pancreas

What makes a cell responsive to a particular hormone?
A) The site where the hormone is secreted
B) The location of the gland that secretes the hormone
C) The location of the target cells in the body
D) The chemical properties of the hormone
E) The presence of a receptor for that particular hormone

The posterior pituitary secretes _____.
A) prolactin (PRL)
B) growth hormone (GH)
C) oxytocin (OT)
D) thyroid hormone (TH)
E) adrenocorticotropic hormone (ACTH)

The hypophyseal portal system connects the _____ with the _____.
A) hypothalamus; thyroid
B) anterior pituitary; hypothalamus
C) anterior pituitary; posterior pituitary
D) pituitary glands; thyroid
E) posterior pituitary; hypothalamus

Antidiuretic hormone (ADH) targets the _____.
A) hypothalamus
B) adrenal gland
C) pancreas
D) anterior pituitary
E) kidneys

Of the following hormones, which has more target cells in the body than the others?
A) Growth hormone (GH)
B) Antidiuretic hormone (ADH)
C) Corticotropin releasing hormone (CRH)
D) Oxytocin (OT)
E) Growth hormone-releasing hormone (GHRH)

Target organs most often regulate the pituitary gland via _____.
A) up-regulation
B) down-regulation
C) antagonistic regulation
D) negative feedback inhibition
E) positive feedback inhibition

The infundibulum is a _____.
A) bulky nucleus composed of the paraventricular nucleus and the supraoptic nucleus
B) portal system between the hypothalamus and the pituitary gland
C) depression of the sphenoid bone that protects the pituitary gland
D) mass of endocrine and neural cells
E) projection of the hypothalamus from which the pituitary gland hangs

The hormone called _____ plays an important role in synchronizing physiological function with the cycle of daylight and darkness.
A) melatonin B) hepcidin C) inhibin D) melanin E) calcitonin

The _____ secretes several hormones that stimulate the development of lymphatic organs and regulates development and activity of T cells (white blood cells).
A) parathyroid
B) adrenal gland
C) thyroid
D) thymus
E) spleen

The _____ secretes a hormone that increases the body's metabolic rate, promotes alertness, quickens reflexes, and stimulates the fetal nervous system.
A) parathyroid gland
B) thyroid gland
C) adrenal gland
D) pancreas
E) thymus

The _____ secrete(s) a hormone as a response to hypocalcemia.
A) parathyroid glands
B) thyroid gland
C) pineal gland
D) thymus
E) pituitary gland

46) Which of the following is not a steroid hormone?
A) Aldosterone
B) Progesterone
C) Insulin
D) Cortisol
E) Estradiol

Circulating hormones are mostly taken up and degraded by the _____ and the _____.
A) liver; spleen
B) adrenal glands; intestines
C) liver; kidneys
D) spleen; kidneys
E) blood; kidneys

Neither follicle stimulating hormone (FSH) nor testosterone alone can stimulate significant sperm production, whereas when they act together, the testes produce some 300,000 sperm per minute. This is an example of which principle regarding hormones?
A) The synergistic effect
B) The cascade effect
C) The antagonistic effect
D) Hormone clearance
E) The permissive effect

Glucagon increases blood glucose concentration and insulin decreases it. This is an example of _____.
A) the synergistic effect
B) the cascade effect
C) the antagonistic effect
D) the permissive effect
E) hormone clearance

The initial response to stress is called the _____ and is mediated mainly by _____.
A) alarm reaction; cortisol
B) resistance stage; aldosterone and cortisol
C) alarm reaction; norepinephrine and epinephrine
D) exhaustion stage; norepinephrine and epinephrine
E) resistance stage; cortisol

Growth hormone (GH) hypersecretion causes gigantism when it begins in childhood, but it is more likely to cause _____ when it begins in adulthood.
A) goiter
B) Cushing syndrome
C) acromegaly
D) myxedema
E) Graves disease

46) Which of the following is not a characteristic of diabetes mellitus?
A) Glycosuria
B) Polyuria
C) Polyphagia
D) Hypoglycemia
E) Polydipsia

Blood viscosity stems mainly from electrolytes and monomers dissolved in plasma.
A) True
B) False

The liver stores excess iron in ferritin.
A) True
B) False

The most important components in the cytoplasm of RBCs are hemoglobin and carbonic anhydrase.
A) True
B) False

A person develops anti-A antibodies only after he is exposed to antigen A, and anti-B antibodies only after he is exposed to antigen B.
A) True
B) False

Incompatibility of one person's blood with another results from the action of plasma antibodies against the RBCs' antigens.
A) True
B) False

Rh incompatibility between a sensitized Rh^+ woman and an Rh- fetus can cause hemolytic disease of the newborn.
A) True
B) False

Circulating WBCs spend most of their lives in the bloodstream.
A) True
B) False

Monocytes differentiate into large phagocytic cells.
A) True
B) False

Clotting deficiency can result from thrombocytopenia or hemophilia.
A) True
B) False

46) Which of the following is *not* a function of blood?
A) Transports a variety of nutrients
B) Helps to regulate body temperature
C) Participates in the initiation of blood clotting
D) Produces plasma hormones
E) Helps to stabilize the pH of extracellular fluids

46) Which of the following is *not* contained in the buffy coat?
A) Granulocytes
B) Platelets
C) Lymphocytes
D) Agranulocytes
E) Erythrocytes

Which of the following proteins is *not* normally found in plasma?
A) Fibrinogen
B) Transferrin
C) Prothrombin
D) Albumin
E) Hemoglobin

What is the most abundant protein in plasma?
A) Insulin B) Albumin C) Creatine D) Creatinine E) Bilirubin

Where does myeloid hemopoiesis take place in adults?
A) Yellow bone marrow
B) Spleen
C) Red bone marrow
D) Thymus
E) Liver

Erythrocytes transport oxygen and _____.
A) initiate blood clotting
B) transport some carbon dioxide
C) transport nutrients
D) defend the body against pathogens
E) regulate erythropoiesis

Most oxygen is transported in the blood bound to _____.
A) the plasma membrane of erythrocytes
B) heme groups in hemoglobin
C) alpha chains in hemoglobin
D) delta chains in hemoglobin
E) beta chains in hemoglobin

Where do most RBCs die?
A) Lymph nodes and thymus
B) Stomach and liver
C) Stomach and small intestine
D) Red bone marrow
E) Spleen and liver

What is the final product of the breakdown of hemoglobin?
A) Bilirubin B) Biliverdin C) Heme D) Iron E) Globin

Correction of hypoxemia is regulated by _____.
A) a positive feedback loop
B) a self-amplifying mechanism
C) a cascade effect
D) an enzymatic amplification
E) a negative feedback loop

A deficiency of _____ can cause pernicious anemia.
A) vitamin B_{12}
B) vitamin C
C) EPO secretion
D) folic acid
E) iron

46) Which of the following is not true regarding sickle-cell disease?
A) It is due to a hereditary hemoglobin defect.
B) It is a cause of anemia.
C) It is caused by a recessive allele that modifies the structure of hemoglobin.
D) It is a cause of malaria.
E) It is advantageous in that it can protect carriers against malaria.

47) A person with type A blood can safely donate RBCs to someone of type _____ and can receive RBCs from someone of type _____.
A) A; B B) B; A C) O; O D) O; AB E) AB; O

48) A person with type AB blood has _____ antigen(s).
A) anti-A
B) A and B
C) no
D) anti-B
E) anti-A and anti-B

49) The universal donor of RBC is blood type _____.
A) AB, Rh-positive
B) O, Rh-positive
C) AB, Rh-negative
D) O, Rh-negative
E) ABO, Rh-negative

50) The main reason why an individual with type AB, Rh-negative blood cannot donate blood to an individual with type A, Rh-positive blood is because _____.
A) anti-A antibodies in the donor will agglutinate RBCs of the recipient
B) anti-A antibodies in the recipient will agglutinate RBCs of the donor
C) anti-B antibodies in the recipient will agglutinate RBCs of the donor
D) anti-D antibodies in the donor will agglutinate RBC of the recipient
E) anti-B antibodies in the donor will agglutinate RBCs of the recipient

51) The number of _____ typically increases in response to bacterial infections.
A) eosinophils
B) basophils
C) erythrocytes
D) neutrophils
E) monocytes

52) The cessation of bleeding is *specifically* called _____.
A) homeostasis
B) a vascular spasm
C) coagulation
D) platelet plug formation
E) hemostasis

53) A patient is suffering from ketoacidosis caused by an unregulated high protein diet. Which function of the blood has been compromised?
A) Stabilizing fluid distribution in the body
B) Transporting hormones
C) Transporting nutrients
D) Protecting against microorganisms
E) Stabilizing the body's pH

54) Where in the body are hemopoietic stem cells found?
A) Thymus
B) Yellow bone marrow
C) Spleen
D) Liver
E) Red bone marrow

55) Blood clots in the limbs put a patient most at risk for _____.
A) septicemia
B) hemophilia
C) disseminated intravascular coagulation (DIC)
D) thrombocytopenia
E) pulmonary embolism