

Biol-131 Exam 1 B

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

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

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

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

- 4) 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 recipient will agglutinate RBCs of the donor
 - B) anti-B antibodies in the recipient will agglutinate RBCs of the donor
 - C) anti-A antibodies in the donor will agglutinate RBCs of the recipient
 - D) anti-B antibodies in the donor will agglutinate RBCs of the recipient
 - E) anti-D antibodies in the donor will agglutinate RBC of the recipient

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

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

- 7) What is the final product of the breakdown of hemoglobin?
A) Iron B) Globin C) Bilirubin D) Biliverdin E) Heme
- 8) 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) mass of endocrine and neural cells
D) projection of the hypothalamus from which the pituitary gland hangs
E) depression of the sphenoid bone that protects the pituitary gland
- 9) Which of the following is *not* a function of blood?
A) Participates in the initiation of blood clotting
B) Helps to stabilize the pH of extracellular fluids
C) Helps to regulate body temperature
D) Produces plasma hormones
E) Transports a variety of nutrients
- 10) Regardless of the cause of stress, the body reacts in a fairly consistent way to different stressors.
A) True
B) False
- 11) 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) quickly; quickly; specific
B) quickly; slowly; specific
C) slowly; quickly; specific
D) quickly; quickly; widespread
E) slowly; slowly; widespread
- 12) 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
- 13) Addison disease is a consequence of a tumor of the adrenal medulla.
A) True
B) False

- 14) Which of the following is *not* contained in the buffy coat?
- A) Erythrocytes
 - B) Lymphocytes
 - C) Granulocytes
 - D) Agranulocytes
 - E) Platelets
- 15) Most oxygen is transported in the blood bound to _____.
- A) beta chains in hemoglobin
 - B) alpha chains in hemoglobin
 - C) delta chains in hemoglobin
 - D) the plasma membrane of erythrocytes
 - E) heme groups in hemoglobin
- 16) A patient is suffering from ketoacidosis caused by an unregulated high protein diet. Which function of the blood has been compromised?
- A) Transporting hormones
 - B) Stabilizing fluid distribution in the body
 - C) Stabilizing the body's pH
 - D) Transporting nutrients
 - E) Protecting against microorganisms
- 17) A deficiency of _____ can cause pernicious anemia.
- A) vitamin C
 - B) vitamin B₁₂
 - C) EPO secretion
 - D) folic acid
 - E) iron
- 18) Monocytes differentiate into large phagocytic cells.
- A) True
 - B) False
- 19) The most important components in the cytoplasm of RBCs are hemoglobin and carbonic anhydrase.
- A) True
 - B) False

- 20) The universal donor of RBC is blood type _____.
- A) AB, Rh-positive
 - B) O, Rh-negative
 - C) AB, Rh-negative
 - D) O, Rh-positive
 - E) ABO, Rh-negative
- 21) The _____ secretes growth hormone, which is also known as somatotropin.
- A) thymus
 - B) posterior pituitary
 - C) anterior pituitary
 - D) hypothalamus
 - E) thyroid
- 22) Where does myeloid hemopoiesis take place in adults?
- A) Yellow bone marrow
 - B) Spleen
 - C) Thymus
 - D) Red bone marrow
 - E) Liver
- 23) Incompatibility of one person's blood with another results from the action of plasma antibodies against the RBCs' antigens.
- A) True
 - B) False
- 24) The cessation of bleeding is *specifically* called _____.
- A) a vascular spasm
 - B) hemostasis
 - C) homeostasis
 - D) coagulation
 - E) platelet plug formation
- 25) Which of the following is true regarding endocrine glands?
- A) They have an unusually low density of blood capillaries.
 - B) Their secretions may be released onto the body surface.
 - C) They secrete their products by way of ducts.
 - D) They secrete substances that do not alter the metabolism of their target cells, but have extracellular effects.
 - E) They release their secretions into the blood.

- 26) The initial response to stress is called the _____ and is mediated mainly by _____.
- A) resistance stage; cortisol
 - B) alarm reaction; cortisol
 - C) exhaustion stage; norepinephrine and epinephrine
 - D) resistance stage; aldosterone and cortisol
 - E) alarm reaction; norepinephrine and epinephrine
- 27) The _____ secretes several hormones that stimulate the development of lymphatic organs and regulates development and activity of T cells (white blood cells).
- A) adrenal gland
 - B) thymus
 - C) spleen
 - D) thyroid
 - E) parathyroid
- 28) Rh incompatibility between a sensitized Rh⁺ woman and an Rh⁻ fetus can cause hemolytic disease of the newborn.
- A) True
 - B) False
- 29) 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) Hormone clearance
 - C) The cascade effect
 - D) The permissive effect
 - E) The antagonistic effect
- 30) A person with type AB blood has _____ antigen(s).
- A) no
 - B) A and B
 - C) anti-B
 - D) anti-A
 - E) anti-A and anti-B
- 31) Which of the following is *not* a characteristic of diabetes mellitus?
- A) Polydipsia
 - B) Polyphagia
 - C) Hypoglycemia
 - D) Glycosuria
 - E) Polyuria

- 32) 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) O; AB C) AB; O D) B; A E) O; O
- 33) Of the following hormones, which has more target cells in the body than the others?
- A) Corticotropin releasing hormone (CRH)
B) Growth hormone-releasing hormone (GHRH)
C) Antidiuretic hormone (ADH)
D) Growth hormone (GH)
E) Oxytocin (OT)
- 34) Glucagon increases blood glucose concentration and insulin decreases it. This is an example of _____.
- A) the permissive effect
B) the cascade effect
C) hormone clearance
D) the antagonistic effect
E) the synergistic effect
- 35) Blood viscosity stems mainly from electrolytes and monomers dissolved in plasma.
- A) True
B) False
- 36) Antidiuretic hormone (ADH) targets the _____.
- A) anterior pituitary
B) pancreas
C) hypothalamus
D) kidneys
E) adrenal gland
- 37) The number of _____ typically increases in response to bacterial infections.
- A) erythrocytes
B) basophils
C) monocytes
D) eosinophils
E) neutrophils
- 38) Which of the following proteins is *not* normally found in plasma?
- A) Transferrin
B) Albumin
C) Hemoglobin
D) Fibrinogen
E) Prothrombin

- 39) Clotting deficiency can result from thrombocytopenia or hemophilia.
A) True
B) False
- 40) Where in the body are hemopoietic stem cells found?
A) Liver
B) Spleen
C) Yellow bone marrow
D) Thymus
E) Red bone marrow
- 41) Correction of hypoxemia is regulated by _____.
A) a negative feedback loop
B) an enzymatic amplification
C) a cascade effect
D) a positive feedback loop
E) a self-amplifying mechanism
- 42) Target organs most often regulate the pituitary gland via _____.
A) negative feedback inhibition
B) positive feedback inhibition
C) up-regulation
D) antagonistic regulation
E) down-regulation
- 43) What is the most abundant protein in plasma?
A) Albumin B) Insulin C) Creatine D) Creatinine E) Bilirubin
- 44) Which of the following is *not* a steroid hormone?
A) Estradiol
B) Progesterone
C) Aldosterone
D) Insulin
E) Cortisol
- 45) Where do most RBCs die?
A) Stomach and liver
B) Lymph nodes and thymus
C) Spleen and liver
D) Red bone marrow
E) Stomach and small intestine

- 46) The hypophyseal portal system connects the _____ with the _____.
- A) hypothalamus; thyroid
 - B) anterior pituitary; posterior pituitary
 - C) anterior pituitary; hypothalamus
 - D) pituitary glands; thyroid
 - E) posterior pituitary; hypothalamus
- 47) The _____ is not an endocrine gland but it has a role in endocrine function.
- A) adrenal gland
 - B) kidney
 - C) pancreas
 - D) thyroid gland
 - E) parathyroid gland
- 48) Circulating WBCs spend most of their lives in the bloodstream.
- A) True
 - B) False
- 49) Erythrocytes transport oxygen and _____.
- A) transport some carbon dioxide
 - B) initiate blood clotting
 - C) transport nutrients
 - D) regulate erythropoiesis
 - E) defend the body against pathogens
- 50) Which of the following is *not* true regarding sickle-cell disease?
- A) It is a cause of anemia.
 - B) It is caused by a recessive allele that modifies the structure of hemoglobin.
 - C) It is due to a hereditary hemoglobin defect.
 - D) It is a cause of malaria.
 - E) It is advantageous in that it can protect carriers against malaria.
- 51) What makes a cell responsive to a particular hormone?
- A) The presence of a receptor for that particular hormone
 - B) The chemical properties of the hormone
 - C) The location of the gland that secretes the hormone
 - D) The site where the hormone is secreted
 - E) The location of the target cells in the body

- 52) The _____ secretes a hormone that increases the body's metabolic rate, promotes alertness, quickens reflexes, and stimulates the fetal nervous system.
- A) adrenal gland
 - B) parathyroid gland
 - C) thymus
 - D) thyroid gland
 - E) pancreas
- 53) The _____ secrete(s) a hormone as a response to hypocalcemia.
- A) pineal gland
 - B) parathyroid glands
 - C) pituitary gland
 - D) thyroid gland
 - E) thymus
- 54) The hormone called _____ plays an important role in synchronizing physiological function with the cycle of daylight and darkness.
- A) melanin B) inhibin C) melatonin D) calcitonin E) hepcidin
- 55) Blood clots in the limbs put a patient most at risk for _____.
- A) septicemia
 - B) thrombocytopenia
 - C) hemophilia
 - D) pulmonary embolism
 - E) disseminated intravascular coagulation (DIC)

