Endocrinology-Dr.SALAH

Identify the letter of the choice that best completes the statement or answers the question. (20 Marks)

(1). Melatonin is produced in which gland? (a) anterior pituitary. (b) posterior pituitary. (c) pineal. (d) hypothalamus. e) thyroid.

(2). Melatonin's actions may include: (a) regulation of circadian rhythms. (b) antioxidant activity. (c) induction of calcium resorption. (d) Both (a) and (b) above. (e) Both (a) and (c) above.

(3). Melanocyte-stimulating hormones (a) are responsible for the deposition of melanin in the skin during the process of tanning. (b) are not present in significant amounts in adult humans. (c) are present in varying amounts in races of different skin color. (d) are important for color adaptations associated with camouflage in certain lower vertebrates. (e) are produced in the thyroid gland.

(4). Melanocyte-stimulating hormones are (a) secreted by the intermediate lobe of the pituitary in some lower vertebrates. (b) known to cause skin darkening in certain lower vertebrates. (c) believed to be responsible for the tanning phenomenon in humans. (d) Both (a) and (b) above. (e) All of these answers.

(5). Which of the following hormones is released from the hypothalamus? (a) CRH (b) TSH (c) FS. (d) LH (e) GH

(6). Select the incorrect association. (a) adrenal medulla/vasopressin (b) anterior pituitary/adenohypophysis (c) epinephrine/catecholamine (d) insulin/polypeptide (e) posterior pituitary/neurohypophysis

(7). The anterior pituitary (a) is also known as the adenohypophysis. (b) is composed primarily of nervous tissue. (c) primarily secretes tropic hormones. (d) Both (a) and (c) above. (e) All of these answers.

(8). Which structure(s) is/are neuroendocrine in nature? (a) anterior pituitary gland. (b) posterior pituitary gland. (c) hypothalamus (d) Both (a) and (b) above. (e) Both (b) and (c) above.

(9). Which of the following hormones secreted by the anterior pituitary is nontropic? (a) TSH (b) prolactin (c) LH (d) ACTH (e) FSH

(10). Hormone secretion from the anterior pituitary gland is controlled (a) by hypophysiotropic hormones from the hypothalamus. (b) directly by neural innervation of anterior pituitary cells. (c) by negative-feedback action of target-tissue hormones. (d) Both (a) and (c) above. (e) All of these answers.

(11). A portal system exists between the (a) adrenal cortex and adrenal medulla. (b) hypothalamus and anterior pituitary. (c) hypothalamus and posterior pituitary. (d) large intestine and small intestine. (e) large intestine and stomach.

(12). Which statement regarding vasopressin in incorrect? (a) it is produced in the hypothalamus. (b) it stimulates uterine smooth muscle contraction. (c) it increases kidney reabsorption of water. (d) it is a potent arteriolar vasoconstrictor. (e) it is released when the osmolarity of the plasma increases.

(13). Which is not a characteristic of the hormone oxytocin? (a) it stimulate uterine contractions. (b) It promotes milk ejection from mammary gland ducts. (c) It influences bonding behavior between mother and baby. (d) It is a tropic hormone. (e) None of these answers.

(14). Which of the following hormones is regulated by the anterior pituitary? (a) parathyroid hormone (b) cortisol (c) aldosterone (d) insulin (e) TRH

(15). Hypophysiotropic hormones from the hypothalamus (a) control the release of oxytocin and vasopressin from the posterior pituitary. (b) travel via neuron axons from the hypothalamus to the anterior pituitary. (c) are carried in the hypothalamo-hypophyseal portal system. (d) are released upon positive-feedback stimulation via the anterior pituitary tropic hormones. (e) always act to stimulate the release of anterior pituitary hormones.

(16). LH stimulates the (a) cells that destroy the cells of Leydig. (b) enlargement of the follicles. (c) development of the hypothalamus. (d) formation of the corpus luteum. (e) water balance in the kidney.

(17). Which of the following statements concerning hypophysiotropic hormones is correct? (a) each hypophysiotropic hormone influences only one anterior pituitary hormone. (b) all hypophysiotropic hormones stimulate the release of anterior pituitary hormones. (c) hypophysiotropic hormones are also produced outside of the hypothalamus, where they serve different functions. (d) hypophysiotropic hormones are secreted into the general circulation. (e) None of these answers.

(18). Which one of the following hormones signals the kidneys to control water balance? (a) vasopressin (b) ACTH (c) TRH (d) somatostatin (e) prolactin-inhibiting hormone

(19). The hypothalamo-hypophyseal portal system (a) anterior pituitary hormones from the anterior pituitary gland to the hypothalamus to regulate the release of hypophysiotropic hormones. (b) carries diverts blood directly to the pituitary, completely bypassing the hypothalamus. (c) hypophysiotropic hormones from the hypothalamus to the anterior pituitary to regulate anterior pituitary hormone secretion. (d) carries the anterior pituitary hormones into the general systemic circulation. (e) connects the hypothalamus and posterior pituitary.

(20). The hypothalamo-hypophyseal portal system (a) carries vasopressin and oxytocin from the hypothalamus to the posterior pituitary for storage. (b) carries hypophysiotropic hormones from the hypothalamus to the posterior pituitary to control the release of posterior pituitary hormones. (c) carries hypophysiotropic hormones from the hypothalamus to the anterior pituitary to control the release of anterior pituitary hormones. (d) carries vasopressin and oxytocin from the hypothalamus to the anterior pituitary to control the release of anterior pituitary hormones. (e) Both (b) and (c) above.

(21). In a short-loop negative feedback control system (a) the anterior pituitary hormone feeds back to the hypothalamus, suppressing releasing hormone. (b) the target gland's hormone feeds back to the anterior pituitary suppressing the tropic hormone. (c) the target gland's hormone does not feed back to any other gland. (d) Both (a) and (b) above (e) Both (a) and (c) above.

(22). Hormones produced in the anterior pituitary (a) are made in distinct populations of cells. (b) may be tropic or nontropic. (c) are secreted into the blood. (d) Both (a) and (b) above. (e) All these answers.

(23). Which pituitary hormone has no role in reproductive physiology? (a) follicle-stimulating hormone. (b) luteinizing hormone. (c) oxytocin. (d) prolactin (e) vasopressin.

(24). Which of the following represent long-loop negative feedback in the CRH-ACTH-cortisol system? (a) cortisol inhibits CRH secretion. (b) CRH inhibits ACTH secretion. (c) ACTH inhibits CRH secretion. (d) ACTH inhibits cortisol secretion. (e) CRH inhibits cortisol secretion.

(25). _____ is the hypothalmic hormone which causes the anterior pituitary to release _____, thus, resulting in thyroid hormone release. (a) thyroid-releasing hormone; thyroid-stimulating hormone. (b) thyroid stimulating hormone; thyrotropin-releasing hormone. (c) thyrotropin-releasing hormone; thyroid-stimulating hormone. (d) thyroid hormone; Thyrotropin-releasing hormone (e) thyrotropin-releasing hormone; Thyroid hormone

(26). Which of the following is not an effect of GH? (a) increased fat breakdown. (b) increased bone growth. (c) decreased glucose entry into muscle cells. (d) decreased protein synthesis. (e) increased rate of cell division.

(27). Growth hormone (a) levels in the blood are directly correlated with the rate of growth throughout life. (b) stimulates the secretion of somatomedins. (c) stimulates osteoblast activity. (d) Both (b) and (c) above. (e) All of these answers.

(28). Growth hormone (a) increases the uptake of amino acids by cells. (b) promotes triglyceride breakdown. (c) works with insulin to lower blood sugar. (d) Both (a) and (b) above. (e) All of these answers.

(29). Which of the following is not a function of growth hormone? (a) increases uptake of amino acids by cells (b) stimulates the synthesis of somatomedins (c) enhances glucose uptake by muscle cells (d) stimulates cell division (e) promotes bone growth until the epiphyseal plate is closed

(30). Growth hormone (a) closes the epiphyseal plate of long bones. (b) promotes hypertrophy and hyperplasia. (c) secretion is stimulated by an increased blood glucose level. (d) is the only factor responsible for governing the growth of an individual. (e) All of these answers.

(31). Growth hormone (a) directly stimulates bone growth. (b) exerts its effects on bones via somatomedin release. (c) promotes closure of the epiphyseal plate. (d) Both (a) and (c) above. (e) Both b) and (c) above.

(32). The growth hormone signals activity of the _____ of a long bone to influence its length. (a) articular cartilage. (b) endosteum. (c) epiphyseal plate. (d) medullary cavity. (e) periosteum.

(33). Excessive growth hormone secretion in an adult leads to (a) gigantism. (b) disproportionate growth resulting in thickened bones and coarse features. (c) no symptoms because growth is already complete. (d) acromegaly. (e) Both (b) and (d) above.

(34). Somatomedins are released from the liver in response to (a) increased plasma growth hormone levels. (b) increased plasma somatostatin levels. (c) decreased plasma growth hormone levels. (d) decreased plasma somatostatin levels. (e) elevated levels of blood sugar.

(35). In addition to GH, other hormones including the following are essential for normal growth: (a) insulin (b) thyroid hormone (c) androgens (d) estrogen (e) All of these answers.

(36). Growth hormone exerts its effects on growth (a) by stimulating production of somatomedins. (b) by directly invoking gene activity. (c) by elevating blood glucose levels. (d) by increasing fat metabolism. (e) by increasing thyroid hormone levels.

(37). Dwarfism may be the result of a deficiency of (a) growth-hormone releasing hormone. (b) GH. (c) somatomedins. (d) Both GH and somatomedins are correct. (e) All of these answers.

(38). Osteoblasts (a) secrete the organic matrix components of bone. (b) become osteocytes once they become entrapped in the bone that they form. (c) dissolve bone. (d) form cartilage. (e) Both (a) and (b) above.

(39). Which of the following factors does not increase growth hormone secretion? (a) deep sleep (b) exercise (c) low blood amino acid level (d) stress (e) low blood glucose level

(40). Which of the following are masculinizing hormones produced from the adrenal gland? (a) growth hormone (b) androgens (c) thyroid hormone (d) cortisol (e) insulin.