

QUESTION 1

Which subunit of TSH is responsible for its biologic and immunologic specificity and differs from other glycoprotein hormones?

- A. Alpha subunit
- B. Beta subunit
- C. Gamma subunit
- D. Delta subunit

QUESTION 2

How does TSH stimulate the release of thyroid hormones, T4 and T3?

- A. By activating insulin production
- B. By promoting mRNA and protein synthesis in the thyroid
- C. By directly releasing T4 and T3 from the anterior pituitary
- D. By activating adenylyl cyclase and generating cAMP in the thyroid

QUESTION 3

Once ovulation occurs, the pathway followed differs when the egg is fertilized and when it is not. Which of the following statements about this process is/are correct?

- A. FSH, via cAMP as a second messenger, stimulates the follicle to release 17 β -estradiol.
- B. Blood levels of progesterone fall as pregnancy progresses as the corpus luteum dies.
- C. Inhibin produced by the follicle prevents release of LH.
- D. The primary influence for the corpus luteum to produce progesterone and estradiol is FSH.
- E. All of the above.

QUESTION 4

Increased reabsorption of water from kidneys is the major consequence of which of the following hormones?

- A. Cortisol
- B. Insulin
- C. Vasopressin
- D. Oxytocin
- E. Glucagon

QUESTION 5

What do the gonadotropic cells of the anterior pituitary produce in response to GnRH stimulation?

- A. Estrogen and progesterone
- B. Insulin and glucagon
- C. FSH and LH
- D. Testosterone and DHEA

QUESTION 6

How does continuously elevated or missing GnRH levels affect LH/FSH release?

- A. It promotes LH and FSH release
- B. It has no impact on LH/FSH release
- C. It efficiently blocks LH/FSH release
- D. It stimulates uterine contractions

QUESTION 7

What happens to the corpus luteum when fertilization does not occur, leading to a decrease in LH supply, and a subsequent drop in progesterone and estrogen levels?

- A. The corpus luteum remains active
- B. The corpus luteum produces more LH
- C. The corpus luteum involutes or degenerates
- D. The corpus luteum releases more GnRH

QUESTION 8

What is the primary function of increased concentrations of progesterone, particularly in relation to the corpus luteum, GnRH, and pregnancy?

- A. Promotion of LH formation
- B. Inhibition of GnRH secretion
- C. Stimulation of testosterone synthesis
- D. Preparation of the uterine lining for menstruation

QUESTION 9

A 28-year-old woman presents with hirsutism, obesity, insulin resistance, and irregular menstrual cycles. She desires to become pregnant but has been unable to conceive. Upon further evaluation, her LH:FSH ratio is found to be skewed, and her androgen levels are elevated. What is the likely diagnosis for this patient's condition?

- A. Ovarian cysts
- B. Polycystic Ovarian Syndrome (PCOS)
- C. Endometriosis
- D. Premature ovarian failure

QUESTION 10

What is the significance of neurophysin in the secretion of antidiuretic hormone (ADH) and oxytocin?

- A. Neurophysin is responsible for hormone synthesis
- B. Neurophysin is essential for hormone receptor binding
- C. Neurophysin is cleaved during hormone transport
- D. Neurophysin plays a crucial role in hormone secretion

QUESTION 11

The following hormones are released by the hypothalamus except

- A. thyrotropin-releasing hormone (TRH)
- B. gonadotropin-releasing hormone (GnRH)
- C. prolactin (Prl)
- D. corticotropin-releasing hormone (CRH)

QUESTION 12

Which of the following statements is correct

- A. Signals from connecting neurons stimulate the hypothalamus to secrete releasing factors into a blood vessel that carries the hormones directly to a capillary network in the anterior pituitary
- B. Signals from connecting organs stimulate the hypothalamus to secrete releasing factors into a blood vessel that carries the hormones directly to a capillary network in the anterior pituitary
- C. In response to each releasing factor, the anterior pituitary releases the appropriate hormone into the general circulation
- D. In response to each releasing factor, the hypothalamus releases the appropriate hormone into the general circulation

QUESTION 13

Which of the following statements about the negative feedback is correct

- A. operates when when sufficiently high levels of an ultimate hormone have been secreted
- B. In long-loop feedback, the final hormone binds a cognate receptor in/on cells of the hypothalamus
- C. Short-loop feedback is exemplified by the pituitary tropic hormone that feeds back negatively on the hypothalamus and operates through inhibitions
- D. In ultrashort feedback loops the pituitary gland feeds back on the hypothalamus to inhibit its own further secretion

QUESTION 14

Hypopituitarism is related to

- A. hypothalamic-pituitary disorder that disrupts dopamine synthesis or transport
- B. diseases of the hypothalamus or pituitary stalk interrupting the nerve or vascular connections to the pituitary gland, thereby reducing the secretion of the pituitary hormones
- C. hirsutism, obesity, insulin resistance, menstrual irregularity, and infertility
- D. early sexual maturation due to premature secretion of large amounts of GnRH

QUESTION 15

Which of the following statements is correct

- A. Regulation of the female menstrual cycle occurs in the hypothalamus and in the pituitary
- B. Pulsatile release of GnRH in the hypothalamus is not essential
- C. Without pulsatile release LH/FSH release is efficiently blocked
- D. GnRH inhibits FSH (follicle-stimulating hormone) release

QUESTION 16

Which hormones promote thickening of the wall, vascularization, and increased secretory activity in preparation for implantation of the fertilized egg?

- A. Prolactin and GnRH
- B. Estradiol and GnRH
- C. GnRH and FSH
- D. Estradiol and progesterone

QUESTION 17

All of the following statements about the production of chorionic gonadotropin are correct except

- The secretion of CG reaches a peak about 80 days after the last menstrual period.
- Once CG levels fall, the corpus luteum begins to involute
- The secretion of CG reaches a peak about 20 days after the last menstrual period
- By about 12 weeks of pregnancy, the placenta takes over production and secretion of progesterone and estrogens

QUESTION 18

Which hormone ratio increases toward the end of pregnancy and may be partly responsible for increased uterine contractions?

- A. estrogen/progesterone
- B. estradiol/GnRH
- C. GnRH/ progesterone
- D. progesterone/FSH

QUESTION 19

Which of the following statements about the pineal gland is correct

- A. does not contain any other bioactive peptides
- B. secretes melatonin and releases melatonin into the general circulation and into the cerebrospinal fluid
- C. does not regulate gonadal function and development and chronobiologic rhythms
- D. is not photosensitive

QUESTION 20

Disrupted Circadian rhythms can be related to

- A. ageing
- B. neurodegenerative diseases
- C. metabolic disease
- D. All of the above

QUESTION 21

GH mediates its functions

- A. directly through its receptor (GHR)
- B. indirectly via insulin-like growth factor 1 (IGF1)
- C. indirectly via its receptor (GHR)
- D. directly through its receptor (GHR) or indirectly via insulin-like growth factor 1 (IGF1)

QUESTION 22

The condition associated with the onset of hypersecretion of growth hormone in adults is known as

- A. Gigantism
- B. Dwarfism
- C. Acromegaly
- D. None of the above

QUESTION 23

The growth hormone is synthesized by the anterior pituitary gland, and released into the circulation in a pulsatile manner

Which of the following statements is true regarding growth hormones?

- A. secretion is decreased by sleep and physiological stress
- B. secretion is decreased by somatostatin & somatomedins
- C. growth hormone negatively regulates the secretion of Insulin-like growth factors
- D. growth hormone acts via the G protein receptor family

QUESTION 24

High levels of prolactin can suppress which of the following in women?

- A. Hair growth
- B. Ovulation
- C. Bone density
- D. Appetite

QUESTION 25

What condition is characterized by an overproduction of prolactin, often due to a benign pituitary tumor?

- A. Diabetes
- B. Hypothyroidism
- C. Prolactinoma
- D. Ovarian cancer