**Question 1**

Mono-iodo-tyrosine (MIT) and di-iodo-tyrosine (DIT) molecules:

Select one:

a. Are the inactive metabolites of T3 and T4

b. Are deiodinated before joining to form T3 and T4

c. Are cleaved from thyroglobulin by proteases in lysosomes

d. Are secreted into plasma alongside T3 and T4

Answer C. Ganong 23rd Edition pg 304 “attack thyroglobulin…first product is MIT”

**Question 2**

Regarding the control of thyroid secretion:

Select one:

a. Free T3 and T4 do not affect day to day control of their secretion

b. Free T3 and T4 exert feedback control on the anterior pituitary

c. Free T3 and T4 exert feedback control on the anterior pituitary and hypothalamus”

d. The basal metabolic rate is the most important determinant of thyroid secretion

Answer C. Ganong 23rd Edition pg 308 “at the hypothalamic level…also action on the pituitary

**Question 3**

Regarding the “iodine pump” in thyroid cells, which is NOT true?

Select one:

a. It is stimulated by TSH

b. It pumps iodide against an electrical gradient

c. It pumps iodide into the colloid, after entering the cell down an electrical gradient

d. It depends on NaK ATPase activity

Answer C. Ganong 23rd Edition pg 303 “against the electrochemical gradient”

**Question 4**

Thyroxine (T4)

Select one:

a. Secretion is regulated by positive feedback at the hypothalamus

b. Is transported principally by albumin in the blood

c. Is physiologically more active than T3

d. Increases β receptors in the cardiovascular system

Answer D. Ganong 23rd Edition pg 311 table 20-5 “increased beta receptors”

**Question 5**

Which compound is present in the greatest amounts in the adult thyroid gland?

Select one:

a. T3

b. T4

c. MIT

d. DIT

Answer B. Ganong 23rd Edition pg 306 “35% T4”

**Question 6**

Which is true regarding the effect of thyroid hormones on the cardiovascular system?

Select one:

a. β adrenergic receptor affinity is decreased in heart muscle

b. Levels of noradrenaline are increased

c. Thyroid hormone levels alter the ratio of cardiac myosin isoform types

d. Circulating adrenaline levels are decreased

Answer C. Ganong 23rd Edition pg 311 table 20-5 “increased proportion of alpha myosin”

**Question 7**

Which of the following do NOT increase TSH secretion?

Select one:

a. Glucocorticoids

b. TRH

c. Night time

d. Infants exposed to cold temperature

Answer A. Ganong 23rd Edition pg 308 “glucocorticoids inhibit TSH secretion”

**Question 8**

Which of the following tissues possess few thyroid hormone receptors?

Select one:

a. Liver

b. Skeletal muscle

c. Testis

d. Kidney

Answer C. Ganong 23rd Edition pg 311 table 20-5

**Question 9**

Which plasma protein has the greatest thyroxine binding capacity?

Select one:

a. Thyroxine binding globulin

b. Thyroxine binding pre-albumin

c. Albumin

d. Alpha 1 acid glycoprotein

Answer C. Ganong 23rd Edition pg 305 “albumin has the largest capacity to bind T4”

**Question 10**

Regarding thyroid hormones, which statement is INCORRECT?

Select one:

a. T3 is less potent than T4

b. They bind to receptors in cell nuclei

c. T3 promotes nitrogen excretion

d. They increase oxygen consumption

Answer A. Ganong 23rd Edition pg 309 “T3 is 3-5 times more potent than T4”