

Answer the Following Questions:

Question One: Choose the best answer for each of the following. (30 Mark)

1. The effects of growth hormone that could lead to enhanced protein deposition are the following, except _____.
A. it promotes amino acid uptake by cells B. it increases the breakdown of cell proteins.
C. it increases the translation of messenger RNA D. it increases the rate of transcription of DNA
2. Which of these hormones stimulates milk secretion and production?
A. estrogens B. progesterone C. prolactin D. oxytocin
3. The function of luteinizing hormone is to _____.
A. stimulate synthesis of estrogens B. cause growth of ovarian follicles
C. stimulate testosterone synthesis in Leydig cells D. stimulate milk ejection from breasts
4. One target of angiotensin II is _____.
A. proximal tubules B. distal tubules C. blood vessels D. adrenal medulla
5. The multiple effects of growth hormone on bone include the following, except _____.
A. it increases deposition of protein by the chondrocytic and osteogenic cells
B. it increases the rate of reproduction of these cells.
C. it converts chondrocytes into osteogenic cells
D. it strongly stimulates osteoclasts.
6. _____ causes sperm maturation in Sertoli cells of testes.
A. Adrenocorticotrophic hormone B. chorionic gonadotropin
C. Follicle-stimulating hormone D. Luteinizing hormone
7. Some of the factors that stimulate growth hormone secretion are the following, except _____.
A. Decreased blood glucose B. Decreased blood free fatty acids
C. Obesity D. Starvation or fasting, protein deficiency
8. The hormone that increases body metabolic rate is _____.
A. corticotropin B. Thyroxine C. Cortisol D. Norepinephrine
9. The effects of cortisol on carbohydrate metabolism include the following, except _____.
A. stimulation of gluconeogenesis B. decreased glucose utilization by cells
C. elevated blood glucose concentration D. can decrease glycogen stores of the liver
10. Which of these hormones has the same effects as sympathetic stimulation?
A. Thyroxine B. Epinephrine C. Glucagon D. Insulin
11. Concerning carbohydrate metabolism, insulin causes the following events, except _____.
A. Insulin causes enhanced uptake of glucose from the blood by the liver cells
B. it allows the free glucose to diffuse back into the blood
C. it prevents breakdown of the glycogen
D. it promotes glycogen synthesis
12. The hormone that stimulates synthesis and secretion of cortisol is _____.
A. corticotropin B. Thyrotropin C. Gonadotropin D. somatotropin

13. The hormone that Promotes deposition of calcium in the bones is _____.
A. thyroxine B. epinephrine C. oxytocin D. calcitonin
14. All the following are true for thyroxine concerning fat metabolism, except _____.
A. it mobilizes lipids rapidly from the fat tissue
B. this increases the fat stores of the body
C. this also increases the free fatty acid concentration in the plasma
D. and accelerates the oxidation of free fatty acids by the cells.
15. The hormone that inhibits release of growth hormone is _____.
A. vasopressin B. oxytocin C. prolactin D. somatostatin
16. The hormone that stimulates ovulation and formation of corpus luteum is _____.
A. corticotrophin B. Luteinizing hormone C. Follicle-stimulating hormone D. Prolactin
17. All the following are true for thyroxine concerning respiration, except _____.
A. it increases the rate of metabolism B. it decreases the formation of carbon dioxide
C. it increases the utilization of oxygen D. it increases the rate and depth of respiration
18. The hypothalamus controls the anterior pituitary by means of _____.
A. releasing hormones B. second messengers C. tropic hormones D. nerve impulses
19. The hormone that increase calcium absorption by the gut and kidneys is _____.
A. calcitonin B. aldosterone C. parathyroid hormone D. cortisol
20. Which of the following hormones has anti-inflammatory effects?
A. progesterone B. epinephrine C. cortisol D. estrogens
21. The hormone that promotes glucose entry in many cells is _____.
A. oxytocin. B. cortisol C. glucagon D. insulin
22. Insulin lack causes the following, except _____.
A. protein depletion B. increased plasma amino acids.
C. use of fat for energy D. fat synthesis and storage
23. _____ Promotes development of male secondary sexual characteristics.
A. Progesterone B. Testosterone C. Estrogens D. Epinephrine
24. _____ causes the release of luteinizing hormone and follicle-stimulating hormone.
A. corticotropin-releasing hormone B. gonadotropin-releasing hormone
C. thyrotropin-releasing hormone D. somatotropin-releasing hormone
25. Which of the following glands is not directly controlled by the anterior pituitary?
A. testis B. adrenal medulla C. adrenal cortex D. thyroid
26. _____ increases synthesis and release of glucose from the liver into the body fluids.
A. progesterone B. insuline C. glucagon D. parathormone
27. The effect of cortisol on protein metabolism includes the following, except _____.
A. it reduces cellular protein B. it decreases liver and plasma proteins
C. it increases blood amino acids D. it enhances transport of amino acids into hepatic cells
28. The hormone that Increases water reabsorption by the kidneys is _____.
A. prolactin B. oxytocin C. thyroxine D. antidiuretic hormone
29. The hormone that increases renal sodium reabsorption is _____.
A. aldosterone B. testosterone C. progesterone D. glucagon
30. The hormone that stimulates milk ejection from breasts is _____.
A. estrogens B. progesterone C. prolactin D. oxytocin

Question Two: Complete with Increase OR Decrease. (30 Mark)

1. Epinephrine _____ the activity of the heart.

2. Aldosterone _____ sodium excretion in the urine.
3. Cortisol _____ the rate of gluconeogenesis by the liver.
4. Growth hormone _____ glucose uptake in skeletal muscle and fat tissues.
5. Testosterone _____ thickness of the skin.
6. Growth hormone _____ anabolism of cell protein.
7. Testosterone _____ the growth of hair on the top of the head.
8. The amount of oxytocin in the plasma _____ during lactation.
9. Growth hormone _____ catabolism (breakdown) of cell protein.
10. Extreme excesses of thyroid secretion _____ the activities of most of the other endocrine glands.
11. Excessive quantities of thyroid hormone can _____ the basal metabolic rate.
12. Insulin _____ fat synthesis and storage.
13. Aldosterone _____ the reabsorption of sodium by the ducts of sweat glands.
14. Insulin deficiency _____ use of fat for energy.
15. Aldosterone _____ renal tubular reabsorption of sodium.
16. Antidiuretic hormone _____ the permeability of the collecting ducts and tubules to water.
17. In growing children, hypothyroidism _____ the rate of growth.
18. Vitamin D _____ intestinal absorption of calcium and phosphate.
19. In the liver, insulin _____ the rate of gluconeogenesis.
20. Glucagon _____ blood glucose concentration.
21. Growth hormone _____ glucose uptake in tissues such as skeletal muscle and fat.
22. Parathyroid hormone _____ calcium and phosphate absorption from the bone.
23. Insulin _____ protein synthesis and storage in the cells.
24. Growth hormone _____ catabolism (breakdown) of cell protein.
25. Growth hormone _____ glucose production by the liver.
26. Increased thyroid hormone _____ the concentrations of plasma cholesterol.
27. Growth hormone _____ the concentration of fatty acids in the body fluids.
28. Vitamin D _____ renal excretion of calcium and phosphate.
29. Thyroid hormones _____ the size as well as number of mitochondria in most cells.
30. Testosterone _____ protein formation.

Question Three: Put (✓) or (×) where suitable. (30 Mark)

1. Adrenocorticotrophic hormone is also called thyrotropin.
2. Aldosterone enhances sodium absorption by the intestines.
3. Calcitonin tends to increase plasma calcium concentration.
4. The hyperthyroid subject often has a feeling of constant tiredness.
5. Testosterone decreases Basal Metabolism.

6. Growth hormone increases RNA translation.
7. In hyperthyroid children, the rate of growth is greatly retarded.
8. Growth hormone causes lipolysis.
9. Growth hormone increases RNA translation.
10. The circulating epinephrine and norepinephrine have almost the same effects.
11. Insulin promotes gluconeogenesis in the liver.
12. Cortisol causes a decrease in the rate of glucose utilization by most cells.
13. During much of the day, muscle tissue depends on fatty acids for its energy.
14. Anterior pituitary secretion is controlled by nerve signals from the hypothalamus.
15. Testosterone decreases red blood cells.
16. Insulin has great effect on uptake or use of glucose by the Brain.
17. Glucose is released from the liver between meals.
18. During moderate or heavy exercise, the muscles do not use glucose.
19. Norepinephrine causes constriction of essentially all the blood vessels of the body.
20. Growth hormone causes the release of fatty acids from adipose tissue.
21. Somatostatin inhibits the release of growth hormone.
22. Hyperthyroid individual is likely to have extreme nervousness.
23. Testosterone is formed by the seminiferous tubules in the adult testes.
24. Lack of thyroid hormone in women causes frequent menstrual bleeding.
25. Insulin lack causes protein depletion and increased plasma amino acids.
26. Increased potassium ion concentration in blood increases aldosterone secretion.
27. Glucagon increases gluconeogenesis in the liver.
28. Increased thyroid hormone almost always increases the body weight.
29. Growth hormone enhances the conversion of fatty acids to acetyl coenzyme A.
30. Insulin inhibits conversion of excess glucose into fatty acids.

Best Wishes

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