**TOPIC: EXCRETORY PRODUCTS AND THEIR ELIMINATION, NERURAL CONTROL AND COORDINATION, CHEMICAL COORDINATION AND INTEGRATION**

**UNIT NO: B-09**

1. In human beings kidneys are situated between ---- close to dorsal inner wall of abdominal cavity

1. 2nd lumbar and last thoracic 2. Last thoracic and first sacral

3. 3rd lumbar and last thoracic 4. Last thoracic and 3rd sacral

1. Select the incorrect statement from the following

1. Animals accumulate ammonia, urea, uric acid, CO2 and water by metabolic activities

2. Animals accumulate substances like ions (Na+, K+, Cl-) and urea, ammonia, uric acid, CO2 and water are removed totally or partially

3. Ammonia produced by metabolism is converted into urea in the liver of mammals.

4. Kidney play significant role in the removal of ammonia directly.

1. Select the order of toxicity

A. Ammonia B. Urea C. Uric acid

1. A > B > C 2. B > A > C 3. C > A > B 4. C > B > A

1. Ammonia which is produced by metabolism is converted into A in the liver of mammals and released into B which is filter and C .

1. A – Uric acid, B- blood, C- excreted 2. A – Urea, B- blood, C- excreted

3. A- Amino acid, B – blood, C- excreted 4. A – Sugar, B- blood, C- excreted

1. Aquatic animals are mostly ammonotelic because

1. Ammonia helps in checking the inflow of water into body

2. Excretion of ammonia requires larger amount of water which available to these animals

3. Water contains less nitrogen 4. These get less light

1. Select the correct statement from the following:

1. In most of the invertebrates, excretory structures are in complex tubular forms

2. Vertebrates have simple tubular organ as excretory structure like kidney

3. Protonephrida is primarily concerned with excretion

4. Protonephridia are excretory structure in rotifers, some annelids and cephalochordates (Amphioxus)

1. A 2. B 3. C 4. D

1. Coxal glands are excretory organs of

1. Spiders and scorpions 2. Insects 3. Annelids 4. Molluscs

1. The extension of cortex in medulla is known as

1. Columnae carneae 2. Column of bertini 3. Renal column 4. Both 2 and 3

1. Which of the following is correct about hilum of kidney?

1. It present on the convex outer surface 2. It is present at the inner convex surface

3. It is notch through which ureter, nerve and blood vessel enter

4. It is place where the calyces are open

1. Which of the following is incorrect about human kidney?

1. Kidney is covered by tough capsule

2. Kidney is divided into cortex and medulla on the outer side

3. The cortex is extended in between the medullary pyramid and the renal column of bertini

4. Kidney is situated close to the dorsal inner wall of abdominal cavity

1. Which of the following sets of animals are uricotelic?

1. Fish, snake, fowl and man 2. Fish, frog, lizard and fowl

3. Crow, snake, cockroach and lizard 4. Camel, dog, monkey and man

1. A part of Nephron is situated in cortex completely?

A. Malpighian Corpuscle B. DCT C. Collecting duct

D. PCT E. Loop of Henle

1. A, B and D only 2. B and C only 3. A, B, C and D only 4. D and E only

1. Select the incorrect statement from the following

1. The DCTs of many nephrons opens into a straight tube called collecting duct

2. In cortical nephrons (majority), the loop of Henle is too short and extended only very little in medulla

3. In juxta medullary nephrons (minority), the loop of Henle is very long and runs deeply into medulla

4. Vasa recta is not a part of peritubular network

1. A malpighian corpuscle is

1. Another name for nephron

2. An excretory structure of insects

3. Combined name for glomerulus and Bowman’s capsule 4. None of these

1. Blood vessel draining the glomerulus in a mammalian nephron is called

1. Afferent arteriole and is narrower than the vessel entering it

2. Efferent venule and is narrower than the vessel entering it

3. Efferent arteriole and is narrower than the vessel entering it

4. Renal artery and is wider than the vessel entering it

1. Following are the points of mechanism of JGA. Arrange them accordingly

A. Activation of JG cells B. Activated JG cells release rennin

C. Fall in GFR D. Increase of glomerular blood flow

E. GFR back to normal

1. E, A, D, C, B 2. C, A , B, D, E 3. A, B, C, D, E 4. C, A, D, B, E

1. The person is suffering from a disease called muscular dystrophy, will eliminate in urine great amount of

1. Sulphate 2.Glucose 3. Creatine 4. Water

1. Brush border is a characteristic of

1. Neck of nephron 2. Collecting tube 3. Proximal convoluted tubule 4. All of these

1. The glomerular filtration rate would be decreased by

1. Construction of the efferent arteriole 2. An increase in afferent arteriolar pressure

3. Compression of the renal capsule 4. An increase in the renal blood flow

1. Which of the following is incorrect about ultrafiltration?

1. Podocytes are arranged in intricate manner so as to leaves minute space called filtration slits and slit pore, filtration occurs finely through these pores

2. Filtration is so fine that almost all the constituent of blood except protein pass onto the lumen of Bowman’s capsule

3. Filtrated fluid is isotonic to blood plasma 4. JGA controls the filtration rate of ultrafiltration

1. Which of the following is incorrect about PCT?

1. Lined with simple cuboidal brush border epithelium

2. All essential nutrient and 70 to 80 percent of the electrolyte and water are reabsorbed here

3. It helps in the pHmaintenance of body fluid by the selective secretion of H+ ion and by the absorption of HCO-3

4. It does not help in the maintenance of ionic balance of body fluid

1. Select the total number of correct statements about the loop of Henle

1. Descending limb is permeable to water

2. Descending limb is almost impermeable to electrolyte

3. Ascending limb is impermeable to water

4. It allows the transport of electrolyte only actively

5. At the tip of loop of Henle, the concentration of filtrate is 1200 m osmol/1

6. It helps in the maintenance of high osmolarity in medullary interstitium

1. All 2. 5 3. 4 4. 3

1. Which of the following is incorrect about counter – current mechanism?

1. The flow of filtrate in two limbs of vasa recta is in opposite direction

2. The flow of blood in two limbs of vasa recta is also in opposite direction

3. NaCI is transported by the ascending limb of HL which is exchanged with descending limb of vasa recta

4. NaCI is returned to interstitium by the ascending portion of vasa recta.

1. The total filtrate formed in 24 hours in human kidney is

1. 1.8 litre 2. 8.0 litre 3. 18 litre 4. 180 litre

1. Which of the following is most likely to cause an increase in the glomerular filtration rates?

1. Blockage of ureter 2. Dilation of the afferent arterioles

3. Release of renin from the juxtaglomerular apparatus 4. Volume depletion

1. The part of the nephron that helps in active reabsorption of sodium is

1. Bowman’s capsule 2. Distal convoluted tubule

3. Ascending limb of Henle’s loop 4. Proximal convoluted tubules

1. Which of the following substance is actively secreted into glomerular filtrate of the kidney tubule?

1. Amino acids 2. Chloride ions 3. Na+  4. K+

1. When a person is suffering from poor renal reabsorption, which one of the following will not help in the maintenance of blood volume?

1. Increased ADH secretion 2. Decreased glomerular filtration

3. Increased arterial pressure in kidneys 4. Decreased arterial pressure in kidney

1. The number of nephrons in a kidney is equal to the

1. Number of Bowman’s capsules 2. Sum of Bowman’s capsules and glomeruli

3. Double the number of Bowman’s capsules

4. Sum of Bowman’s capsules and Malpighian corpuscels

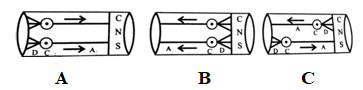
1. If Henle’s loop were absent from mammalian nephron, which of the following is to be expected?

1. The urine will be more dilute 2. There will be no urine formation

3. The urine will have more concentration

4. There will be hardly any change in the quality and quantity of urine formed

1. Which of the following is a motor neuron ( D – Dendrite C- cyton A- axon )



1. A 2. B 3. C 4. None

1. In a resting nerve, what is true

1. 3 Na+ are pumped in and 2 K+ pumped out 2. 3 Na+ are pumped out for every 2 K+ pumped in

3. There is no Na +K+ pump 4. Na +K+ pump stops working

1. By which nervous system and of what type, the message is supplied to visceral organs?

1. SNS, involuntary 2. SNS, voluntary 3. PNS, involuntary 4. SNS, PNS involuntary

1. Sympathetic nerves in mammals arise from

1. Sacral region 2. Cervical region

3. Thoracolumbar region 4. 3rd, 7th, 9th and 10th cranial

1. Unidirectional transmission of a nerve impulse through nerve fibre is due to the fact that

1. Nerve fibre is insulated by a medullary sheath

2. Sodium pump starts operating only at the cyton and then continues into the nerve fibre

3. Neurotransmitters are released by dendrites and not by axon endings

4. Neurotransmitters are released by the axon endings and not by dendrites

1. During the transmission of nerve impulse through a nerve fibre, the potential on the inner side of the plasma membrane has which type of electric charge

1. First positive, then negative and continue to be negative

2. First negative, then positive and continue to be positive

3. First positive, then negative and again back to positive

4. First negative, then positive and again back to negative

1. Myelin of the nerve fibres of central nervous system is produced and maintained by

1. Oilgodendrocytes 2. Astrocytes 3. Microglia 4. Schwann cells

1. Mark the correct statement

1. Electrical synapses are more common in our neural system than chemical synapses

2. The new potential in post synaptic neuron may be either excitatory or inhibitory

3. Hypothalamus is the major coordination centre for sensory and motor signaling

4. The tracts of nerve fibres that connect two cerebral hemispheres are called corpora bigemina

1. The cerebral cortex is

1. The outer layer of cerebrum, called white matter

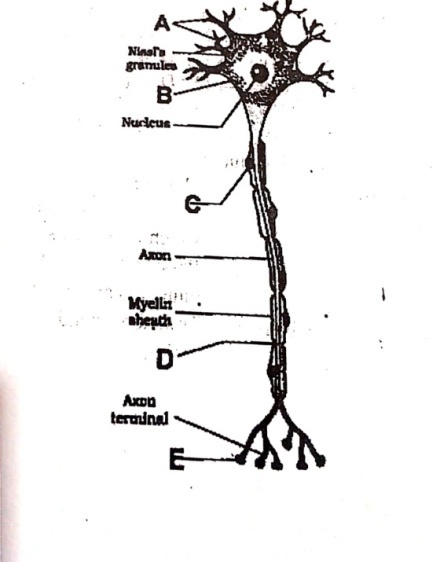
2. Inner layer of cerebrum, called white matter

3. The outer layer of cerebrum, called grey matter

4. Inner layer of cerebrum, called grey matter

1. Nervous system diseases result from a loss of support cells or of substances produced by support cells (such as myelin). The primary function of these support cells is to

1. Act as supporting structures within nervous tissue

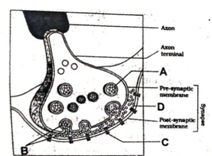
2. Produce insulating material around axons

3. Assist in the conduction of impulses along the neurons

4. All of the above

1. The diagram shows the structure of neuron. Identify A to E

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A | B | C | D | E |
| 1. Synaptic  knob | Cyton or cell body | Schwann cell | Node of Ranveir | Synaptic knob |
| 2. Dendrite | Cyton or cell body | Schwann cell | Node of Ranveir | Synaptic knob |
| 3. Dendrite | Synaptic knob | Schwann cell | Node of Ranveir | Synaptic knob |
| 4. Dendrite | Synaptic vesicle | Schwann cell | Node of Ranveir | Synaptic knob |

1. Study the diagram of synapse

I. Which numbered label indicates the location of the receptor molecules?

II. Which number points to synaptic vesicles?

III. Which number point to neurotransmitter?

IV. Which number points to synaptic cleft?

**I II III IV**

1. C A B D

2. B A C D

3. C A D B

4. C D A B

1. The correct sequence for depolarization and repolarization is

A. Stimulus applied at a site on polarised membrane B. increase the permeability for Na+

C .Generation of A.P (Action potential) D. Increase the permeability for K+

E. Restoration of membrane potential

1. A → B → C → D → E 2. B → A → C → D → E

3. A → D → C → B → E 4. A → B → D → C → E

1. The lateral ventricles of the brain open into the third ventricle *via*

1. Foramen of Magendie 2. Foramen magnum

3. Foramen of Monro 4. None of these

1. Select the total number of true statements from the following

A. There are two types of synapses, namely electrical synapses and chemical synapses

B. Electrical synapses are rare in our system

C. At chemical synapse, the membranes of pre- and post- synaptic neuron are in very close proximity

D. Transmission of an impulse across electrical synapses is very similar to impulse conduction along a single axon

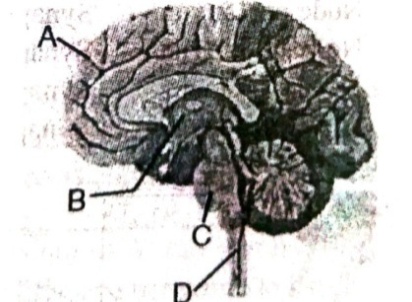
E. At a chemical synapse, the membrane of the pre- and post- synaptic neuron are separated by a fluid filled space called synaptic cleft

1. Five 2. Two 3. Four 4. One

1. Injury localized to the hypothalamus would most disrupt the

1. Short – term memory 2. Executive functions, such as decision making

3. Judgments and consciousness 4. Regulation of body temperature

1. A sagittal section of human – brain is shown here. Identify at least two labels from A – D

1. A – Cerebral hemispheres; B – Cerebellum

2. C – Mid brain; D - Cerebellum

3. A – Cerebrum; C – Pons

4. B – Corpus callosum; D – Medulla

1. Statement A : Medulla oblongata causes reflex actions like vomiting, coughing and sneezing

Statement B: It has many nerve cells which control autonomic reflexes.

1. Both A and B are correct and B is the correct explanation for A

2. Both A and B are correct and B is not the correct explanation for A

3. A is correct B is incorrect 4. A is incorrect B is correct

1. Select the correct terms for the following alphabets

The --**A**-- wraps around a structure called thalamus which is major coordinating centre for --**B**-- and --**C**-- signaling

1. A – cerebellum B- motor C- Afferent 2. B- cerebrum B- motor C- efferent

3. A-cerebellum B-motor C-efferent 4. A-cerebrum B-sensory C-motor

1. How many of following are true statements

a. A canal called corpora qudrigemina passes through midbrain.

b. Midbrain and hindbrain form the brain stem.

c. Hypothalamus lies at the base of thalamus with number of centers to control body temperature, urge of eating, drinking.

d. Corpus callosum is a tract of nerve fibres connect cerebellar hemisphere.

e. The afferent neuron receives signal from a sensory organ and transmit via dorsal nerve root into the spinal cord.

f. The cerebral cortex contains large regions that are neither sensory nor motor called an association area.

1. Five 2. Four 3. Two 4. Only one

1. Human brain is protected by skull .Inside the skull the brain is covered by cranial meninges. Layer of meninges from inner to outer is (D- Duramater; P-Piamater; A- Arachnoid)

1. DAP 2. PDA 3. PAD 4. DPA

1. A patient is admitted to hospital after a head injury and sinks rapidly into a coma. An MRI scan indicates an extradural haemorrhage because of extravasated blood between the

1. Duramater and arachnoid 2. Skull bones and duramater

3. Arachnoid and piamater 4. Piamater and brain surface

1. An area in the brain which is associated with strong emotions is

1. Cerebral cortex 2. Cerebellum 3. Limbic system 4. Medulla

1. Statement A: Inner parts of cerebral hemispheres and a group of associated deep structures like amygdale and hippocampus form a structure called limbic lobe.

Statement B: It is involved in the regulation of sexual behavior, expression of excitement, pleasure etc.

1. Both A and B are correct and B is the correct explanation for A

2. Both A and B are correct and B is not the correct explanation for A

3. A is correct B is incorrect 4. A is incorrect B is correct

1. How many of the following cranial nerves and its nature are correct

1. Only 1, 2, 5 correct

2. Only 3, 4 correct

3. Only 12 correct

4. All correct

1. The pathway of reflex arc

1. Sense organ, spinal cord, motor neuron, sensory nerve, muscle

2. Sense organ, sensory neuron, motor neuron, spinal cord, muscle

3. Sense organ, sensory neuron, spinal cord, motor neuron, muscle

4. Sense organ, motor neuron, spinal cord, sensory neuron, muscle

1. Which among the following is incorrect w.r.t conditioned reflex

1. Trained reflex with a specific repeated external stimulus.

2. Pavlov’s experiment in which a dog salivates at the ringing of a bell, over a period of time, every feeding is preceded by the bell ringing stimulus.

3. Looking left and right before crossing the road, driving are the examples

4. It is an inborn and genetically inherent reflex

1. Which is incorrect pair w.r.t spinal nerves

|  |  |  |
| --- | --- | --- |
| 1. Cervical nerve | neck | 8 pairs |
| 2. Thoracic | chest | 12 pairs |
| 3. Lumbar | abdomen | 5 pairs |
| 4. Sacral | tail | 4 pairs |

1. The defective condition of eye in which distant objects are seen distinct but near objects are indistinct is called

1. Myopia 2. Astigmatism 3. Glucoma 4. Hypermetropia

1. Eyes of cats glitter at night due to the presence of

1. Luciferin 2. Tapetum cellulosum 3. Porphyropsin 4.Tapetum fibrosum

1. Which one of the following statement is correct?

1. Endrocrine glands regulate neural activity, and nervous system regulates endocrine glands

2. Neither hormones control neural activity nor the neurons control endocrine activity

3. Endocrine glands regulate neural activity, but not vice – versa

4. Neurons regulate endocrine activity, but not vice versa

1. Which of the following statements is correct in relation to the endocrine system?

1. Adenohypophysis is under direct neural regulation of the hypothalamus

2. Thymus gland regulate sleep wake cycle

3. Non – nutrient chemicals produced by the body in trace amount that act as intercellular messenger are known as hormones

4. Releasing and inhibitory hormones are produced by the pituitary gland

1. Somatostatin

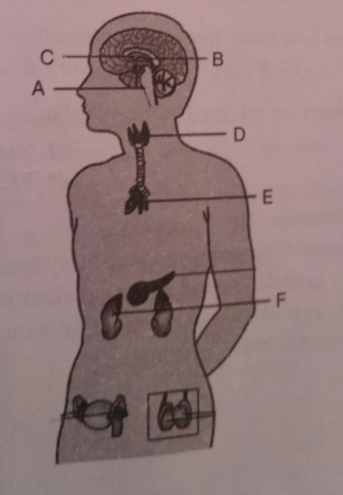
1. Stimulates glucagon release while inhibits insulin release

2. Stimulates release of insulin and glucagon

3. Inhibits release of insulin and glucagon

4. Inhibits glucagon release while stimulates insulin release

1. Posterior pituitary stores and releases

1. Oxytocine hormone 2. Vasopressin 3. MSH 4. Both 1 and 2

1. Identify A to F in the given figure

1. A – Hypothalamus, B- Pineal, C – Thymus, D – Adrenal,

E – Pituitary, F – Thyroid and parathyroid

2. A – Medulla, B - Pineal, C – Hypothalamus,

D – Thyroid and parathyroid, E – Thymus, F- Adrenal

3. A - Thymus, B- Pituitary, C – Thyroid and parathyroid,

D – Pineal, E – Hypothalamus, F –Adrenal

4. A - Pineal, B - Thyroid and parathyroid, C – Pituitary,

D – Hypothalamus, E – Adrenal, F – Pineal

1. Select the correct option about hypothalamus.

I. It is ectodermal in origin provides the anatomical connection between nervous and endocrine system.

II. Supreme commander of endocrine regulation.

III. The neurosecretory cells produce both releasing hormone and stimulating hormones.

IV. Hypophyseal portal system regulate the functions of anterior pitutory .

V. Posterior pitutory is under the direct neural regulation of the hypothalamus

1. All correct except V 2. I, II, III correct

3. II, III, IV correct 4. All correct except III

1. Melanocyte stimulating hormone (MSH) is produced by

1. Parathyroid 2. Pars intermedia of pituitary

3. Anterior pituitary 4. Posterior pituitary

1. Choose the correct answer

1. Adenohypophysis consist of pars distalis and pars intermedia

2. Pars distalis commonly called anterior pituitary

3. In humans pars intermedia is merged with pars distalis

4. Pars nervosa also known as posterior pituitary

1. Only 1 and 2 correct 2. Only 1 and 3 correct

3. Only 1, 2, 3 correct 4. All correct

1. The urine of a man is very dilute and the quantity of urine is too much, dehydration has started in his body and he is very thirsty by the cause of

1. Hypersecretion of ADH 2. Hyposecretion of ADH

3. Both 1 and 2 4. None of these

1. What is correct to say about the hormone action in humans?

1. Glucagon is secreted by β – cells of islets of Langerhans and stimulates glycogenolysis

2. Secretion of thymosin is stimulated with aging

3. In females, FSH first binds with specific receptors on ovarian cell membrane

4. FSH stimulates the secretion of oestrogen progesterone, relaxin

1. Which of the following endocrine gland is not paired?

1. Gonad 2. Thymus 3. Parathyroid 4. Adrenal gland

1. Choose the correct answer

1. LH – stimulate the synthesis and secretion of androgen

2. MSH – regulate skin pigmentation

3. Oxytocine – stimulate uterine contraction

4. Vasopressin – prevent diuresis

1. All correct except 2 2. All correct except 3

3. All correct except 1 4.All correct

1. Which of the following is not under direct control of pituitary gland with respect to the regulation of its secretory function?

1. Adrenal cortex 2. Adrenal medulla 3. Thyroid 4. Testis

1. Which of the following glands is correctly matched with the description?

1. Thyroid - Hyperactivity in young children causes cretinism

2. Thymus - Starts undergoing atrophy after puberty

3. Parathyroid - Secretes parathormone, which promotes movement of calcium ions from blood into bones during calcification

4. Pancreas - Delta cells of the islets of Langerhans secrete a hormone, which stimulates glycolysis in liver

1. Match the source gland with its respective hormone as well as the function

|  |  |  |
| --- | --- | --- |
| Source gland | Hormone | Function |
| 1. Posterior pituitary | Vasopressin | Stimulates reabsorption of water in the distal tubules in the nephron |
| 2. Corpus luteum | Oestrogen | Supports pregnancy |
| 3. Thyroid | Thyroxine | Regulat blood calcium level |
| 4. Anterior pituitary | Oxytocin | Contraction of uterus muscles during child birth |

1. Pineal gland is located on the

1. Dorsal side of forebrain 2. Ventral side of forebrain

3. Dorsal side of heart 4. Ventral side of heart

1. Identify the hormone with its correct matching of source and function

1. Oxytocin – Posterior pituitary, growth and maintenance of mammary glands

2. Melatonin – Pineal gland, regulates the normal rhythm of sleep wake cycle

3. Progesteron – Corpus luteum, stimulation of growth and activities of female secondary sex organs

4. Atrial natriuretic factor – Ventricular wall increase the blood pressure

1. Calcitonin is a thyroid hormone which

1. Lowers calcium level in blood 2. Elevates calcium level in blood

3. Has no effect on calcium 4. Elevates potassium level in blood

1. Which of the following endocrine gland stores its secretion in the extracellular space before discharging it into the blood?

1. Pancreas 2. Adrenal 3. Testis 4. Thyroid

1. Hypothyroidism in adults and hyperparathyroidism will respectively lead to

1. Myxoederma and Cretinism 2. Grave’s and Hashimoto’s disease

3. Myxoedema and Osteitis fibrosa cystica 4. Addison’s disease and Cretinism

1. Aldosterone helps in the maintenance of

1. Electrolyte and body fluid volume 2. Osmotic pressure

3. Blood pressure 4. All of these

1. The toxic agents present in food which interfere with thyroxin synthesis lead to the development of

1. Toxic goiter 2. Cretinism 3. Simple goiter 4. Thyrotoxicosis

1. Select the answer which correctly matches (A; Endocrine gland, B: Hormone, C: Function/deficiency symptoms)

|  |  |  |
| --- | --- | --- |
| **A** | **B** | **C** |
| 1. Anterior pituitary | Oxytocin | Stimulates uterus contraction during child birth |
| 2.Posterior pituitary | Growth hormone (GH) | Over secretion stimulates abnormal growth |
| 3. Thyroid | Thyroxin | Lack of iodine in diet results in goiter |
| 4. Corpus luteum | Testosterone | Stimulates spermatogenesis |

1. Grave’s disease is caused due to

1. Hypersecretion of thyroid gland 2. Hyposecretion of adrenal gland

3. Hypersecretion of adrenal gland 4. Hyposecretion of thyroid gland

1. Main function of thyroid hormones are

1. Regulation of BMR 2. Production of RBC

3. Control carbohydrate, protein, fat metabolism 4. All

1. PTH

1. Increases calcium in blood 2. Cause bone resorption

3. Reabsorb calcium from renal tubule 4. All

1. Which one of the following pairs correctly matches a hormone with a disease resulting from its deficiency?

1. Insulin – Diabetes insipidus 2. Relaxin – Gigantism

3. Prolactin – Cretinism 4. Parathyroid hormone – Tetany

1. Mammals born without a thymus gland fail to manufacture

1. B – Lymphocytes 2. T – Lymphocytes 3. Plasma cells 4. Basophils

1. Epinephrine is

1. Secreted from adrenal cortex and decrease heart beat

2. Secreted from adrenal medulla and increase heart beat

3. Secreted from adrenal medulla and decrease heart beat

4. Secreted from adrenal cortex increase heart beat

1. Both adrenaline and cortisol are secreted in response to stress. Which of the following statements is true for both of these hormones?

1. They act to increase blood glucose level

2. They are secreted by the adrenal cortex

3. Their secretion is stimulated by adrenocorticotropin

4. They are secreted into the blood within seconds of the onset of stress

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**UNIT NO: B-09**

**ANSWER KEY**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Q. No.** | **Ans.** | **Q. No.** | **Ans.** | **Q. No.** | **Ans.** | **Q. No.** | **Ans.** | **Q. No.** | **Ans.** |
| 1 | **3** | 2 | **4** | 3 | **1** | 4 | **2** | 5 | **2** |
| 6 | **4** | 7 | **4** | 8 | **1** | 9 | **3** | 10 | **2** |
| 11 | **3** | 12 | **1** | 13 | **4** | 14 | **3** | 15 | **3** |
| 16 | **3** | 17 | **3** | 18 | **3** | 19 | **3** | 20 | **2** |
| 21 | **4** | 22 | **1** | 23 | **1** | 24 | **4** | 25 | **2** |
| 26 | **2** | 27 | **4** | 28 | **3** | 29 | **1** | 30 | **1** |
| 31 | **2** | 32 | **2** | 33 | **4** | 34 | **3** | 35 | **4** |
| 36 | **4** | 37 | **4** | 38 | **2** | 39 | **3** | 40 | **4** |
| 41 | **2** | 42 | **1** | 43 | **1** | 44 | **3** | 45 | **3** |
| 46 | **4** | 47 | **3** | 48 | **1** | 49 | **4** | 50 | **2** |
| 51 | **3** | 52 | **2** | 53 | **3** | 54 | **2** | 55 | **4** |
| 56 | **3** | 57 | **4** | 58 | **4** | 59 | **4** | 60 | **2** |
| 61 | **1** | 62 | **3** | 63 | **3** | 64 | **4** | 65 | **2** |
| 66 | **4** | 67 | **2** | 68 | **4** | 69 | **2** | 70 | **3** |
| 71 | **2** | 72 | **4** | 73 | **2** | 74 | **2** | 75 | **1** |
| 76 | **1** | 77 | **2** | 78 | **1** | 79 | **4** | 80 | **3** |
| 81 | **4** | 82 | **3** | 83 | **3** | 84 | **1** | 85 | **4** |
| 86 | **4** | 87 | **4** | 88 | **2** | 89 | **2** | 90 | **1** |