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Q-1 - 26853768

The hypothalamic hormones regulate the synthesis and secretion of

- (A) Thyroid hormones
- (B) Parathyroid hormones
- (C) Adrenal hormones❖
- (D) Pituitary hormones❖

---

CORRECT ANSWER: D

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SOLUTION:

The hypothalamic hormones regulate the synthesis and secretion of pituitary hormones.

Q-2 - 26854005

Increase in bleeding time and delay in blood coagulation is due to the deficiency of which hormone?

- (A) Adrenaline
- (B) Noradrenaline
- (C) Parathormone
- (D) Thyroxine

---

**CORRECT ANSWER: C**

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**SOLUTION:**

Increase in bleeding time and delay in blood coagulation occur due to parathormone.

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Q-3 - 26853777

Read the following statements and find out the incorrect statements.

- a. Adenohypophysis consists of two portions, pars distalis and pars intermedia. However, in humans, the pars intermedia is almost merged with pars distalis.
- b. The pars distalis is called anterior pituitary and pars intermedia called posterior pituitary.
- c. Neurohypophysis is called a pars nervosa and store and release two hormones called oxytocin and vasopressin (ADH).
- d. Anterior pituitary releases 9 hormones and pars intermedia releases only one hormone (MSH).
- e. Pars distaliss produces GH, PRL, TSH, ACTH, LH and F SH.

(A) a and b 

(B) b and d ❖

(C) d and e ❖

(D) c and d ❖

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CORRECT ANSWER: B

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SOLUTION:

The pars distalis is called anterior pituitary and pars nervosa called posterior pituitary

(c ). Neurohypophysis (pars nervosa) also known as posterior pituitary, stores and releases two hormones called oxytocin and vasopressin, which are actually synthesised by the hypothalamus and are transported axonally to neurohypophysis.

d. Anterior pituitary release 6 hormones as growth hormone (GH), prolactin (PRL), thyroid stimulating hormone (TSH), adrenocorticotrophic hormone (ACTH),

luteinizing hormone (LH) and follicle stimulating hormone (FSH), and pars intermedia releases only one hormone (MSH)

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Q-4 - 26854009

Which one of the following four glands is correctly matched with the accompanying description

(A) Pancreas-Delta cells of islets of Langerhans secrete a hormone which stimulates glycolysis in liver

(B) Thyroid-Hyperactivity in young children causes cretinism

(C) Thymus-Starts undergoing atrophy after puberty

(D) Parathyroid-Secretes parathormone that promotes movement of Ca ions from blood into bones during

calcification

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CORRECT ANSWER: C

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Q-5 - 26853782

In males. which of the following hormone stimulates the synthesis and secretion of androgens from testis?

(A) LH 

(B) FSH 

(C) TSH 

(D) Testosterone 

---

CORRECT ANSWER: A

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SOLUTION:

In males, LH (luteinizing hormone) stimulates the synthesis and secretion of androgens from testis.

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Q-6 - 26854031

Match the gland, hormone and function.

- (A) Corpus luteum-Estrogen-Supports pregnancy
- (B) Thyroid-Thyroxine-Regulates blood calcium level
- (C) Anterior pituitary-Oxytocin-Constriction of uterine muscles during child birth
- (D) Posterior pituitary- Vasopressin Stimulates reabsorption of water in distal tubules

---

CORRECT ANSWER: D

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Which of the following function are regulated by melatonin/pineal gland

- (a) Defense capability (b) Pigmentation
- (c ) Menstrualcycle (d) Metabolism
- (e ) Diurnal(24-hour) cycle rhythm (f) Body temperature
- (g) Sleep-wake cycle

(A) a, d, c, f and g ❖

(B) b, C , d, e, f and g

(C) a, c, d and e ❖

(D) a, b c,d, e, f and g

---

CORRECT ANSWER: D

---

SOLUTION:



Pineal secretes a hormone called melatonin.

..Melatonin plays a very important role in the regulation of a 24-hour (diurnal) rhythm of our example, it helps in maintaining the normal rhythms of sleep-wake cycle, body temperature. In addition, melatonin also influences metabolism, pigmentation, the menstrual cycle as well as our defense capability.

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Q-8 - 26854033

Which of the following vitamins has some physiological effects similar to those of parathormone ?

(A) A

(B) B

(C) C

(D) D

---

CORRECT ANSWER: D

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SOLUTION:

Vitamin D has same physiological effect similar to parathormone.

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Q-9 - 26853794

Infertility can occur in both the sexes due to deficiency of

(A) Oxytocin❖

(B) Prolactin

(C) LH❖

(D) FSH❖

---

CORRECT ANSWER: D

---

SOLUTION:

In males, FSH and androgens regulate spermatogenesis. In males, FSH stimulate the testis to initiate sperm production.

..FSH stimulates growth and development of the ovarian follicles in females.

..Infertility can occur in both the sexes due to deficiency of FSH.

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Q-10 - 26854038

Which one of the following pairs of hormones are the examples of those that can easily through the cell membrane of the target cell and bind to a receptor inside it (Mostly in the nucleus)

(A) Thyroxine, insulin

(B) Somatostatin, oxytocin

(C) Insulin, glucagon

(D) Cortisol, testosterone

---

**CORRECT ANSWER: D**

---

**SOLUTION:**

Cortisol and testosterone (steroid hormones) pass easily through cell membrane of target cells and bind to internal receptors.

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Q-11 - 26853801

Find out the correct statement.

(A) Endocrine glands regulate neural activity but not vice versa

(B) Neurons regulate endocrine activity but not vice versa

(C) Endocrine glands regulate neural activity and nervous system regulate endocrine glands

(D) Neither hormones control neural activity nor the neurons control endocrine activity.

---

CORRECT ANSWER: C

---

SOLUTION:

Endocrine glands regulate neural activity and nervous system regulates endocrine glands.

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Which of the following organs in mammals does not consist of a central medullary region surrounded by a cortical region?

- (A) Ovary
  - (B) Adrenal cortex
  - (C) Liver
  - (D) Kidney
- 

CORRECT ANSWER: C

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Identify from the following, a hormone produced by the pituitary gland in both males and females but functional only in females.

(A) Vasopressin❖

(B) Relaxin❖

(C) Prolactin❖

(D) Somatotropin

---

CORRECT ANSWER: C

---

SOLUTION:

Prolactin hormone produced by the pituitary gland both in males and females but functional only in females.

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Q-14 - 14272851

Hormones are called chemical signals that stimulate specific target tissues. Which is the correct location of these receptors in case of protein hormones?

(A) Extracellular matrix

(B) Blood

(C) Plasma membrane

(D) Nucleus

---

CORRECT ANSWER: C

---

SOLUTION:

Hormones of proteins nature bind to specific receptor molecules located on the plasma membrane to form the hormone receptor complex.

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Q-15 - 26853817

Term 'hormone' was coined by



(A) EH. Starling

(B) Trachea❖

(C) EH. Schally

(D) W.M. Bayliss

---

CORRECT ANSWER: A

---

SOLUTION:

Hormone term was coined by E.H. Starling.

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Q-16 - 14272845

Thymosin is responsible for balance of water and electrolytes in out body is

(A) raising the blood sugar level

(B) raising the blood calcium level

(C) differentiation of T-lymphocytes

(D) decrease in blood RBC.

---

CORRECT ANSWER: C

---

SOLUTION:

Thymus secretes a hormone named thymosin which stimulates the development and differentiation of T-cells increasing resistance to infections. It also hastens attainment of sexual maturity.

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Q-17 - 26853831

One of the following conditions is not linked to deficiency of thyroid hormones

(A) Cretinism

(B) Goitre

(C) Myxoedema

(D) Exophthalmic

---

CORRECT ANSWER: D

---

SOLUTION:

Exophthalmia is due to increased secretion of thyroid hormones.

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Q-18 - 14272843

Mary is about to face an interview. But during the first five minutes before the interview she experiences sweating. Hormone responsible for her restlessness?

(A) Estrogen and progesterone

(B) Oxytocin and vasopressin

(C) Adrenaline and noradrenaline

(D) Insulin and glucagon

---

**CORRECT ANSWER: C**

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**SOLUTION:**

Medulla of adrenal glands secrete two hormones adrenaline and noradrenaline. During emergency, adrenaline is released and causes dilation of blood vessels, so that the blood flow is increased it also increases heart beat so that more oxygen is consumed and it also increases blood glucose levels. Therefore, it is also known as emergency hormone.

Norepinephrine(=Noradrenaline) causes increased

activity the pupils of the eyes and so forth. Because of the role of their hormones, the adrenal glands are also called 'glands of emergency'

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Q-19 - 26853843

A woman may develop beard and moustaches due to

- (A) Hypersecretion of adrenal cortex
- (B) Hypersecretion of thyroxine
- (C) Hyposecretion of adrenaline
- (D) Hyposecretion of thyroxine

---

CORRECT ANSWER: A

---

SOLUTION:

.Small amounts of androgenic steroids are also secreted by the adrenal cortex which play a role in the growth of axial hair, pubic hair and facial hair during puberty.

.A woman may develop beard and moustaches due to hypersecretion of adrenal cortex.

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Q-20 - 14272838

Pancreas has two types of cells namely islets of Langerhans and acinar cells. In the early years of research on diabetes, extract of this gland was tested on diabetic patients. Results are tabulated below.

(i) Extract of pancreas -

(ii) Islet cell extract +

(iii) Acinar cell extract -

The correct interpretation is that

(A) anti-diabetic factor in extract 'C' was inactivated by extract 'A'

(B) anti-diabetic factor present in 'A' was destroyed by 'B'

(C) both 'A' and 'C' destroyed the anti-diabetic factor present in 'B'

(D) anti diabetic factor present in 'B' was destroyed by

---

CORRECT ANSWER: D

---

SOLUTION:

The result shows that the extract of pancreas is ineffective to reduce blood sugar level. The extract contains secretions of both exocrine and endocrine part i.e., acinar cells and islet of Langerhans respectively. Since extract of endocrine part which is islet of Langerhans is individually capable of reducing sugar

level, this shows that some factors from acinar cells are preventing anti-factor from acinar cells are preventing anti-diabetic factor to function.

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Q-21 - 26853849

Which gland stores its hormones before their release.

(A) Pancreas

(B) Pineal

(C) Pituitary 

(D) Thyroid 

---

CORRECT ANSWER: D

---

SOLUTION:



Thyroid gland stores its hormones before their release.

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Q-22 - 14272832

Estrogen and testosterone are steroid hormones, and most likely bind to

- (A) membrane ion channel
- (B) enzyme-linked membrane receptors
- (C) G-protein coupled membrane receptors
- (D) cytoplasmic receptors.

---

CORRECT ANSWER: D

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Q-23 - 26853862

The adrenal medulla secretes two hormones called adrenaline or epinephrine and noradrenaline or norepinephrine. These are commonly called

(A) Corticoids❖

(B) Catecholamines❖

(C) Gonadotrophins❖

(D) Iodothyronines

---

CORRECT ANSWER: B

---

SOLUTION:

The adrenal medulla secretes two hormones called adrenaline or epinephrine and noradrenaline or norepinephrine. These are commonly called catecholamines.

---

Q-24 - 14272828

Which of the following hormones is not a polypeptide?

(A) LH

(B) FSH

(C) Insulin

(D) Thyroxine

---

CORRECT ANSWER: D

---

SOLUTION:

Thyroxine is and iodothyronine.

Q-25 - 26853868

The corticoids, which are involved in carbohydrate metabolism and which are involved in regulation of balance of water and electrolyte in our body are called

- (A) Gonadocorticoids and mineralocorticoids respectively
  - (B) Glucocorticoids and Gonadocorticoids respectively
  - (C) Mineralocorticoids and glucocorticoids respectively
  - (D) glucocorticoids and mineralocorticoids respectively
- 

CORRECT ANSWER: D

---

SOLUTION:

Corticoids, which regulate the balance of water and electrolytes in our body are called mineralocorticoids.

Aldosterone is the main mineralocorticoid in our body.

..The corticoids, which are involved in carbohydrate

metabolism are called glucocorticoids.

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Q-26 - 14272824

All hypophysiotropic hormones are peptides except

- (A) corticotropin releasing hormone
- (B) growth hormone inhibitory hormone
- (C) somatostatin
- (D) prolactin release inhibiting hormone.

---

CORRECT ANSWER: D

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SOLUTION:

Prolactin release inhibiting hormone is an amino acid derivative hormone produced in the hypothalamus.

---

Q-27 - 26853881

Steroid hormone regulating glucos

- (A) Cortisone 
- (B) Cortisol 
- (C) Coticosterone
- (D) 11-deoxyconicosterone 

---

CORRECT ANSWER: B

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SOLUTION:

Steroid hormone regulating glucose metabolism is cortisol.

Low level of progesterone and estrogen in blood stimulate

(A) FSH-RH production

(B) LH production

(C) GH production

(D) all of these

---

CORRECT ANSWER: A

---

SOLUTION:

When secretion of hormones is under the control of factors or other hormones, it is called the feedback control. If the level of progesterone and estrogen is low in the blood, it stimulates the hypothalamus to secrete more FSH-RH which results in increased production of

FSH from anterior pituitary which in turn stimulates the increased secretion of estrogen and progesterone from ovary.

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Q-29 - 26853888

Deficiency of a hormone causes increase  $K^+$  ions and decrease  $Na^+$  ion in blood. It is caused by

- (A) Zona fasciculata
- (B) Zona glomerulata
- (C) Zona reticulata
- (D) Zona pellucida

---

CORRECT ANSWER: B

---

SOLUTION:



Deficiency of a hormone (aldosterone) causes increase in  $K^+$  ion and decrease  $Na^+$  ions in blood. It is secreted by zona glomerulata.

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Q-30 - 14272805

Which of the following hormones is necessary for the development of secondary sexual characters in human beings?

- (A) Estrogen
- (B) FSH
- (C) Testosterone
- (D) Both a and c

---

CORRECT ANSWER: D

---

SOLUTION:

Estrogen, secreted by ovaries in females, stimulates the development of secondary sexual characters during puberty and maintains them through the reproductive years of adult life in females. Testosterone is produced by testes in males, it stimulates the development of male secondary sexual characters like beard, moustache, etc.

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Q-31 - 26853890

Blood pressure is controlled by

(A) Thymus 

(B) Adrenal 

(C) Thyroid 

(D) Corpus luteum 

---

CORRECT ANSWER: B

---

SOLUTION:

In emergency, blood pressure is controlled by adrenal gland

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Q-32 - 14272800

Read the given statements that define functions of a particular hormone.

- (i) Regulates the development, maturation and functions of epididymis, vas deferens, seminal vesicle, prostate gland, urethra, etc.
- (ii) Stimulates muscular growth of facial and axillary hair, aggressiveness, low pitch of voice, etc.
- (iii) Stimulates spermatogenesis.

- (iv) Act on CNS and sexual behaviour (Libido).
- (v) Produce anabolic (synthetic) effect on protein and carbohydrate metabolism.
- (vi) The Leydig's cells/interstitial cells (present in intertubular space).  
Secrete this hormone under the influence of LH.

Which of the following hormones is referred here?

- (A) FSH
- (B) Progesterone
- (C) Androgen
- (D) Melatonin

---

**CORRECT ANSWER: C**

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Name the hormone secreted by adrenal cortex which controls water and salt concentration in urine,

(A) Adrenaline❖

(B) Aldosterone❖

(C) Norepinephrine❖

(D) Corticosteroids

---

CORRECT ANSWER: B

---

SOLUTION:

Aldosterone is secreted by adrenal cortex which controls water and salt concentration in urine.

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A patient of diabetes mellitus excretes glucose in urine even when he is kept on a carbohydrate free diet. It is because

(A) fats are catabolised in adipose tissues to form glucose

(B) amino acids are catabolised in kidney to form glucose

(C) amino acids are discharged in blood stream from liver

(D) glycogen from muscles is released in blood stream.

---

**CORRECT ANSWER: A**

---

**SOLUTION:**

In diabetes mellitus, a patient is unable to produce or utilise insulin hormone. This hormone helps in maintaining the level of glucose in the blood by converting extra glucose into glycogen. Thus, in diabetes

melitus, body of the patient becomes incapable to store glucose in the urine. A patient kept on carbohydrate free diet is excreting glucose in the urine, because high level of glucose in the blood not only depends on dietary carbohydrates but also on glycogenolysis (breakdown of glycogen into glucose in the liver) and gluconeogenesis (breakdown of fats into glucose in adipose tissues).

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Q-35 - 26853898

Androgens are produced by

(A) Pituitary 

(B) Parathyroid 

(C) Thyroid 

(D) Adrenals 

CORRECT ANSWER: D

---

SOLUTION:

Adrenal cortex secretes both male and female sex hormones, estrogens and androgens

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Q-36 - 14272789

Which of the following is synthesised in both the brain and endocrine glands?

(A) ACTH

(B) Cortisol

(C) Oxytocin

(D) Somatostatin

---



CORRECT ANSWER: D

---

SOLUTION:

Somatostatin is an inhibitory hormone which is secreted by hypothalamus in the brain and pancreas. Somatostatin from hypothalamus inhibits the secretion of growth hormone from the anterior lobe of pituitary. Somatostatin from pancreas inhibits the release of other hormones from pancreas like insulin and glucagon.

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Q-37 - 26853902

Addison's disease is due to under-secretion of

(A) Adrenaline 

(B) Corticoids 

(C) ACTH?

(D) Insulin?

---

CORRECT ANSWER: B

---

SOLUTION:

Addison's disease is due to under-secretion of cortitex is involved in water and electrolyte balance.

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Q-38 - 14272787

Which of the following statements regarding glucagon is false?

(A) It is secreted by  $\alpha$  — cells of langerhans.

(B) It acts antagonistically t insulin.

(C) It decrease blod sugar level.

(D) The gland responsible for its secretion is a heterocrine gland.

---

CORRECT ANSWER: C

---

SOLUTION:

Glucagon increases blood sugar level. It is secreted by  $\alpha$  — cells of islets of Langerhans of pancreas (heterocrine gland).

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Q-39 - 26853905

Diabetes mellitus is due to

(A) Insulin deficiency 

(B) Glucagon deficiency

(C) Insulin resistance

(D) Either A or C 

---

CORRECT ANSWER: D

---

SOLUTION:

Diabetes mellitus is due to insulin deficiency and/or insulin resistance.

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Q-40 - 14272781

The islets of Langerhans are found in

(A) Liver

(B) pancreas

(C) stomach

(D) alimentary canal.

---

CORRECT ANSWER: B

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Q-41 - 26853914

The endocrine part of pancreas consists of

- (A) Crypts of Lieberkuhn
- (B) Islets of Langerhans
- (C) Valves of Kerkring
- (D) Sacculus rotundus

---

CORRECT ANSWER: C

---

SOLUTION:

The endocrine part of pancreas consists of Islets of Langerhans

---

Q-42 - 14272780

Besides corticotropin releasing hormone (CRH) which other hormone also stimulates the release of adrenocorticotrophic hormone (ACTH) ?

(A) Glucagon

(B) Insulin

(C) Aldosterone

(D) Epinephrine

---

CORRECT ANSWER: D

---

SOLUTION:

Feedback control is a mechanism by which secretion of hormones is under the control of factors or other

hormones. When the level of epinephrine decreases in the blood. It stimulates the hypothalamus to secrete more CRH which results in increased production of epinephrine from adrenal medulla.

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Q-43 - 26853919

Allotoxan treatment destroys

- (A) STH cells
- (B) Sertoli cells
- (C) Leydig's cells
- (D)  $\beta$ -cells of islets of Langerhans

---

CORRECT ANSWER: D

---

SOLUTION:

Alloxan treatment destroys  $\beta$ -cells of islets of Langerhans.

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Q-44 - 14272782

Insulin is secreted by \_\_\_\_\_ of pancreas.

(A)  $\alpha$  — cells`

(B)  $\delta$  — cells

(C)  $\beta$  — cells

(D) none of these

---

CORRECT ANSWER: C

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Q-45 - 26853923



Hormones involved in carbohydrate metabolism are

- (A) Insulin, glucagon, epinephrine and parathormone
- (B) Insulin, glucagon, epinephrine and glucocorticoid
- (C) Insulin, glucagon, glucacorticoid and calcitonin
- (D) Insulin, glucagon, norepinephrine and melatonin

---

CORRECT ANSWER: B

---

SOLUTION:

Hormones involved in carbohydrate metabolism are insulin, glucagon, epinephrine and glucocorticoids.

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Q-46 - 14272794

Which of the following is not a characteristic of insulin?

(A) It stimulates the process of gluconeogenesis.

(B) It binds to glycoprotein receptors on cell membrane.

(C) Its deficiency leads to diabetes mellitus.

(D) Its oversecretion leads to insulin shock.

---

**CORRECT ANSWER: A**

---

**SOLUTION:**

Insulin hormone produce dby beta cells of glucose to glycogen, i.e, glycogenesis. Gluconeogenesis is stimulated by glucagon.

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Q-47 - 26853931

Erythropoietin hormone which stimulates erythropoiesi (formation of RBC) is secreted by

(A) Cells of the bone marrow

(B) Blood platelets

(C) Megakaryocytes

(D) JG cells of the kidney

---

CORRECT ANSWER: D

---

SOLUTION:

Erythropoietin hormone which stimulates erythro poiesis (formation of RBC) is secreted by JG cells of the kidney

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Q-48 - 14272799

Which one of the following statements is incorrect?

(A) Glucagon is secreted by pancreas.

(B) Androgens are produced by ovary.

(C) Thyrogens is secreted by thyroid.

(D) Oxytocin is secreted by pituitary.

---

CORRECT ANSWER: B

---

SOLUTION:

Androgens are produced by testes and in small amounts by adrenal cortices.

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Q-49 - 26853947

Secretion of gastric juice is stopped by

(A) Gastrin

(B) Secretin

(C) Cholecystokinin

(D) Enterogasterone

---

CORRECT ANSWER: D

---

SOLUTION:

Secretion of gastric juice is stopped by enterogasterone (GIP).

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Q-50 - 26853973

Which is not a secondary messenger?

(A) CAMP

(B)  $IP_3$

(C) Calcium

(D) Sodium

---

CORRECT ANSWER: D

---

SOLUTION:

Hormones which interact with membrane-bound receptors normally do not enter the target cell, but generate secondary messengers (e.g., cyclic AMP, CGMP DAG, IP3, Caetc.) which in turn regulate cellular metabolism.

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Q-51 - 26853771

Which is under the direct neural regulation of the hypothalamus?

(A) Anterior pituitary

(B) Posterior pituitary

(C) Middle lobe of pituitary❖

(D) Both A and B

---

CORRECT ANSWER: B

---

SOLUTION:

The posterior pituitary is under the direct neural regulation of the hypothalamus.

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Q-52 - 26854036

A person entering an empty room suddenly finds a snake right in front on opening the door. Which one of the following is likely to happen in his neuro-hormonal control system

(A) Sympathetic nervous system activated, releasing epinephrine and norepinephrine from adrenal medulla

(B) Activation of sympathetic nervous system releasing epinephrine and norepinephrine from adrenal cortex

(C) Neurotransmitters diffuse rapidly across synaptic

(D) Hypothalamus activates parasympathetic nervous

---

CORRECT ANSWER: A

---

SOLUTION:

person entering an empty room suddenly finds a snake in front. Sympathetic nervous system activated, releasing epinephrine and norepinephrine from adrenal medulla.

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Q-53 - 26853778

Excess secretion of GH in adults especially in middle age can result



in severe disfigurement (especially of face) called

(A) Acromegaly❖

(B) Gigantism❖

(C) Dwarfism❖

(D) Simmond❖s disease.❖

---

CORRECT ANSWER: A

---

SOLUTION:

Excess secretion of GH in adults especially in middle age can result in severe disfigurement (especially of face) called acromegaly.

(2) Acromegaly may lead to serious complications and premature death if unchecked.

(3) The disease is hard to diagnose in the early stages and often goes undetected for many years until changes

in external features become noticeable.

(4) Acromegaly patient a gorilla like appearance and huge hands and legs.

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Q-54 - 26854042

Catecholamine normally induces

- (A) Alertness
- (B) Decreased heart beat
- (C) Excessive urination
- (D) Intense salivation

---

CORRECT ANSWER: A

---

SOLUTION:

Catecholamine normally induces alertness.

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Q-55 - 26853787

Pineal gland is located on

- (A) Dorsal side of the heart
- (B) Ventral side of the arora
- (C) Dorsal Side of the forebrain
- (D) Ventral side of the sternum

---

CORRECT ANSWER: C

---

SOLUTION:

Pineal gland is located ont eh dorsal side of the forebrain

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Which one of the following hormones is not a glycoprotein?

(A) FSH

(B) TSH

(C) LH

(D) ACTH

---

CORRECT ANSWER: D

---

SOLUTION:

ACTH is not a glycoprotein.

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Somatostatin is produced by

(A) Adenohypophysis❖

(B) Neurohypophysis❖

(C) Pineal gland

(D) Basal part of diencephalon

---

CORRECT ANSWER: D

---

SOLUTION:

Somatostatin is produced by basal part of diencephalon (i.e., hypothalamus).

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Q-58 - 14272848

Corpus luteum secretes a hormone called

(A) prolactin

(B) progesterone

(C) aldosterone

(D) testosterone.

---

CORRECT ANSWER: B

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Q-59 - 26853800

Which is not produced by pituitary?

(A) FSH

(B) MSH

(C) Oxytocin

(D) Prolactin 

---

CORRECT ANSWER: C

---

## SOLUTION:

Oxytocin is produced by hypothalamus which is stored and released by pituitary.

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Q-60 - 14272846

In the mechanism of action of a protein hormone, one of the second messengers is

(A) cyclic AMP

(B) insulin

(C)  $T_3$

(D) gastrin.

---

CORRECT ANSWER: A

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## SOLUTION:

The molecules of hormones that are amino acid derivatives, peptides or proteins are large and insoluble in lipids and cannot enter the target cell. Therefore, they act at the cell surface. They bind to specific receptor molecules located on the cell membrane and generate second messenger, e.g., cyclic AMP,  $IP_3$ ,  $Ca^{++}$ , etc.

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Q-61 - 26853802

Which of the following is an accumulation and release centre of neurohormones

(A) Posterior  pituitary

(B) Anterior  pituitary



(C) Interior lobe of pituitary

(D) Hypothalamus❖

---

CORRECT ANSWER: A

---

SOLUTION:

Answer for Q.33 Posterior pituitary is accumulation and release centre of neurohormones (oxytocin and ADH).

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Q-62 - 14272844

The steroid responsible for balance of water and electrolytes in our body is

(A) Insulin-Gluconeogenesis

(B) melatonin

(C) testosterone

(D) Aldosterone.

---

CORRECT ANSWER: D

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Q-63 - 26853808

Complete failure of adenohypophysis of pituitary causes

(A) Addison's disease

(B) Acromegaly

(C) Cushing's disease

(D) Simmond's disease

---

CORRECT ANSWER: D

---

SOLUTION:

Complete failure of the anterior lobe of pituitary causes Simmond's disease.

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Q-64 - 14272841

Which of the following hormones is not secreted by anterior pituitary?

- (A) Growth hormone
- (B) Follicle stimulating hormone
- (C) Oxytocin
- (D) Adrenocorticotrophic hormone

---

CORRECT ANSWER: C

---

SOLUTION:

Oxytocin is secreted by the posterior lobe of pituitary gland.

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Q-65 - 26853815

Melanocyte stimulating hormone (MSH) is secreted by pituitary .

- (A) Anterior lobe
- (B) Median lobe
- (C) Posterior lobe
- (D) Not any particular lobe

---

CORRECT ANSWER: B

---

SOLUTION:

Melanocyte stimulating hormone (MSH) is secreted by

median lobe of pituitary (pars intermedia).

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Q-66 - 14272839

The anterior pituitary gland facilitates growth of an individual by release of the human growth hormone (HGH) which in turn is regulated by two hormones namely growth hormone releasing hormone (GHRH) and growth hormone inhibiting hormone (GHIH). Imbalance of these hormones could result in gigantism, dwarfism or acromegaly. Interpret the data given below and select the appropriate statement.



(A) 1 and 3 will lead to gigantism while 4 and 5 will show dwarfism.

(B) 3 will show gigantism, 1 will show acromegaly and 4 and 5 will show dwarfism.

(C) 2,3 and 4 will show normal growth.

(D) 1 will show gigantism, 3 will show acromegaly and 5

will show dwarfism.

---

CORRECT ANSWER: D

---

SOLUTION:

Growth hormone (GH) stimulates body growth by promoting the synthesis and deposition of proteins in tissues and growth of bones and muscles. Its deficient secretion at an early stage causes dwarfism while its excessive secretion from childhood causes gigantism, its oversecretion in adulthood

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Q-67 - 26853830

Blood calcium level is a resultant of how much dietary calcium is absorbed, how much calcium is lost in the urine, how much bone dissolves releasing calcium into the blood and how much calcium

from blood enters tissues . A number of factors play an important role in these process . Mark the one which has no role

(A) Vitamin D

(B) Parathyroid hormone

(C) Thyrocalcitonin

(D) Thymosin

---

CORRECT ANSWER: D

---

SOLUTION:

Thymosin have no role in regulation of blood calcium level.

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A scientist was studying the production of a protein that was released by an animal cell into a culture medium, she found that the protein only appeared in the culture medium after she added a few drops of a hormone to the cell. Before adding the hormone, she labelled the protein inside the cell with a fluorescent dye and looked at the cell under the light microscope. The dye was seen in flattened sheets and tube-like structures throughout the cell, and in stacks of flattened sac-like structures. After adding the hormone, the dye was also seen as small dots clustered against the cell membrane. Which statement most likely explains these observations?

(A) The hormone stimulates protein synthesis in the cell vacuole, the protein is then passed to the Golgi apparatus, and eventually passes through the cell membrane by passive diffusion.

(B) The hormone triggers the synthesis of the protein in

the endoplasmic reticulum and it is then secreted outside of the cell via channel proteins in the cell membrane

(C) The protein is made in the endoplasmic reticulum, is passed to the Golgi apparatus and is secreted through hormone-stimulated exocytosis.

(D) The protein is made in the Golgi apparatus, is passed to the endoplasmic reticulum and is secreted through hormone-stimulated pinocytosis.

---

CORRECT ANSWER: C

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SOLUTION:

Hormones bring about their characteristic effects on target cells by modifying cellular activity. The given experiment shows that the hormone is a releasing hormone which has increased the secretion of protein product in the target cell.

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Q-69 - 26853845

Gull's disease is related to deficient working of

- (A) Thyroid gland
  - (B) Parathyroid
  - (C) Adrenal cortex
  - (D) Gonads
- 

**CORRECT ANSWER: A**

---

**SOLUTION:**

Myxoedema or Gull's disease-It is due to deficiency of thyroxine hormone in adults.

In myxoedema the face and hands become swollen due to deposition of fat.

Q-70 - 14272831

The signal transduction of steroid hormone across cell is through

(A) binding of hormone to the cytoplasmic receptor and the complex binds to hormone response element on DNA within promoter DNA

(B) binding of hormone to the transmembrane receptor which initiates the production of second messenger that activates enzymes which further activates transcription factors

(C) binding of hormone to the transmembrane receptor which diffuses inside the cell cytoplasm and then activates the enzyme necessary for the activation of transcription factors.

(D) binding of hormone to the cytoplasmic receptor that initiates the production of second messenger which activates enzymes that further activates transcription factors.

---

CORRECT ANSWER: A

---

SOLUTION:

Steroid hormones, being hydrophobic molecules, diffuse freely into all cells and act within the cell. Steroid hormones enter the cytoplasm of a target cell and bind with specific receptor proteins (mobile). Hormone - receptor complex then diffuses into nucleus and activates specific response for a particular steroid hormone.

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Disease caused by deficiency of parathormone is

- (A) Cretinism❖
- (B) Hypercalcemia❖
- (C) Tetany❖
- (D) Myxoedema

---

CORRECT ANSWER: C

---

SOLUTION:

Disease caused by deficiency of parathormone is tetany

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Hormones of which of the following endocrine glands lacks peptides, amines and sulphur?

- (A) Thyroid and adrenal gland
- (B) Anterior pituitary
- (C) Testes
- (D) Posterior pituitary and pancreas

---

CORRECT ANSWER: C

---

SOLUTION:

Hormones of testes are steroid in nature. They are derived from cholesterol.

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The adrenal cortex can be divided into three layers. The arrangement of these layers from outer to inner side is

(A) Zona glomerulosa, zona fasciculata and zona reticularis. ❖

(B) Zona reticularis, zona fasciculata and zona glomerulosa. . ❖

(C) Zona glomerulosa, zona reticularis, zona fasciculata ❖

(D) Zona fasciculata, zona glomerulosa, zona reticularis. ❖

---

CORRECT ANSWER: A

---

SOLUTION:

The adrenal cortex can be divided into three layers, called zona reticularis (inner layer), zona fasciculata



(middle layer) and zona glomerulosa (outer layer)

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Q-74 - 14272823

Insulin receptors are

- (A) extrinsic proteins
- (B) intrinsic proteins
- (C) G-proteins
- (D) trimeric proteins.

---

CORRECT ANSWER: A

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Q-75 - 26853869

Read the following statements and find out the incorrect statements

- (a) Glucocorticoids stimulate lipolysis and proteolysis.
- (b). Glucocorticoids stimulate cellular uptake and utilisation of amino acids.
- (c ). Cortisol is involved in the cardio-vascular system as well as kidney functions.
- (d). Cortisol stimulates the RBC production
- (e ) Aldosterone acts mainly at the renal tubules and the reabsorption of  $Na^+$ ,  $K^+$  and water and excretion of phosphate ions.

(A) b and c

(B) a and d

(C) b and c

(D) d and e

---

CORRECT ANSWER: A

---

## SOLUTION:

Glucocorticoids inhibit cellular uptake and utilisation of amino acids.

..Aldosterone acts mainly at the renal tubules and stimulates the reabsorption of  $\text{Na}^+$  and water and excretion of  $\text{K}^+$  and phosphate ions.

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Q-76 - 14272817

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

- (A) Glucagon is secreted by  $\beta$  — cells of islets of Langerhans and stimulates glycogenolysis.
- (B) Secretion of thymosin is stimulated with aging.
- (C) In females, FSH first binds with specific receptors on

ovarian cell membrane.

(D) FSH stimulates the secretion of androgens.

---

CORRECT ANSWER: C

---

SOLUTION:

Mechanism of hormone action is not the same in all categories of hormones. These hormones bind with the specific receptors located in their target tissues.

Hormone receptor is of two types: membrane bound receptor and intracellular receptor. FSH is a proteinaceous hormone, has large molecular weight and is insoluble in lipids, therefore, it cannot enter the target cell . Thus, it binds with the membrane bound receptor present on ovarian cell membrane

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Osteoporosis is caused by

(A)  $Ca^{2+}$  deficiency

(B)  $Na^{+}$  deficiency

(C)  $K^{+}$  deficiency

(D) Parathormone hypersecretion

---

CORRECT ANSWER: D

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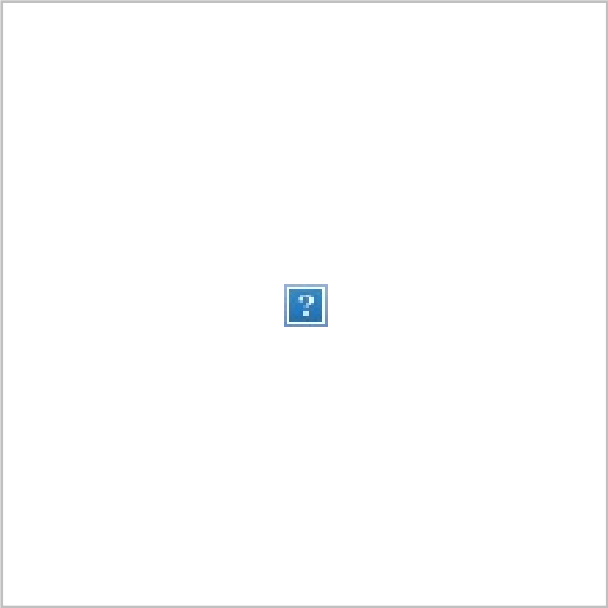
SOLUTION:

Osteoporosis is caused by parathormone hypersecretion.

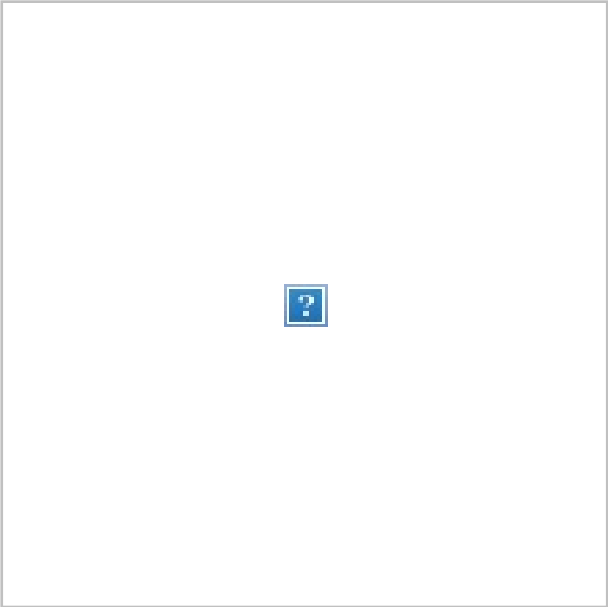
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Match the sourcegland with its respective hormone and functon and  
select the correct option

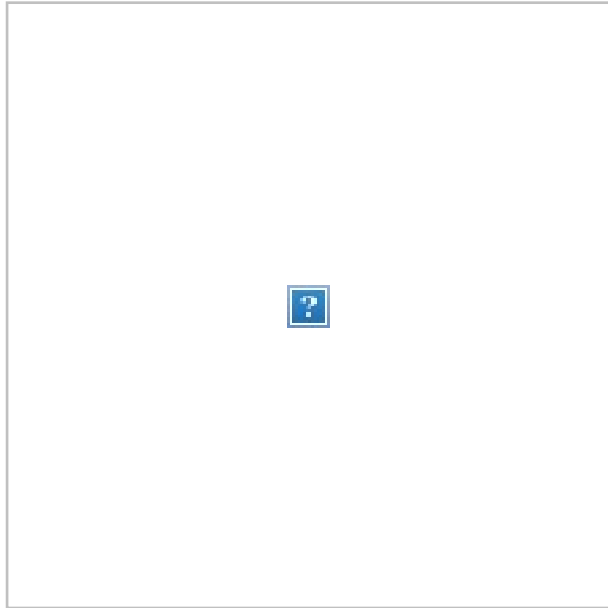
(A)



(B)



(C)





(D)

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CORRECT ANSWER: B

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SOLUTION:

Oxytocin is released by posterior pituitary. Corpus luteum secretes progesterone. Calcitonin released by thyroid gland regulates blood calcium level.

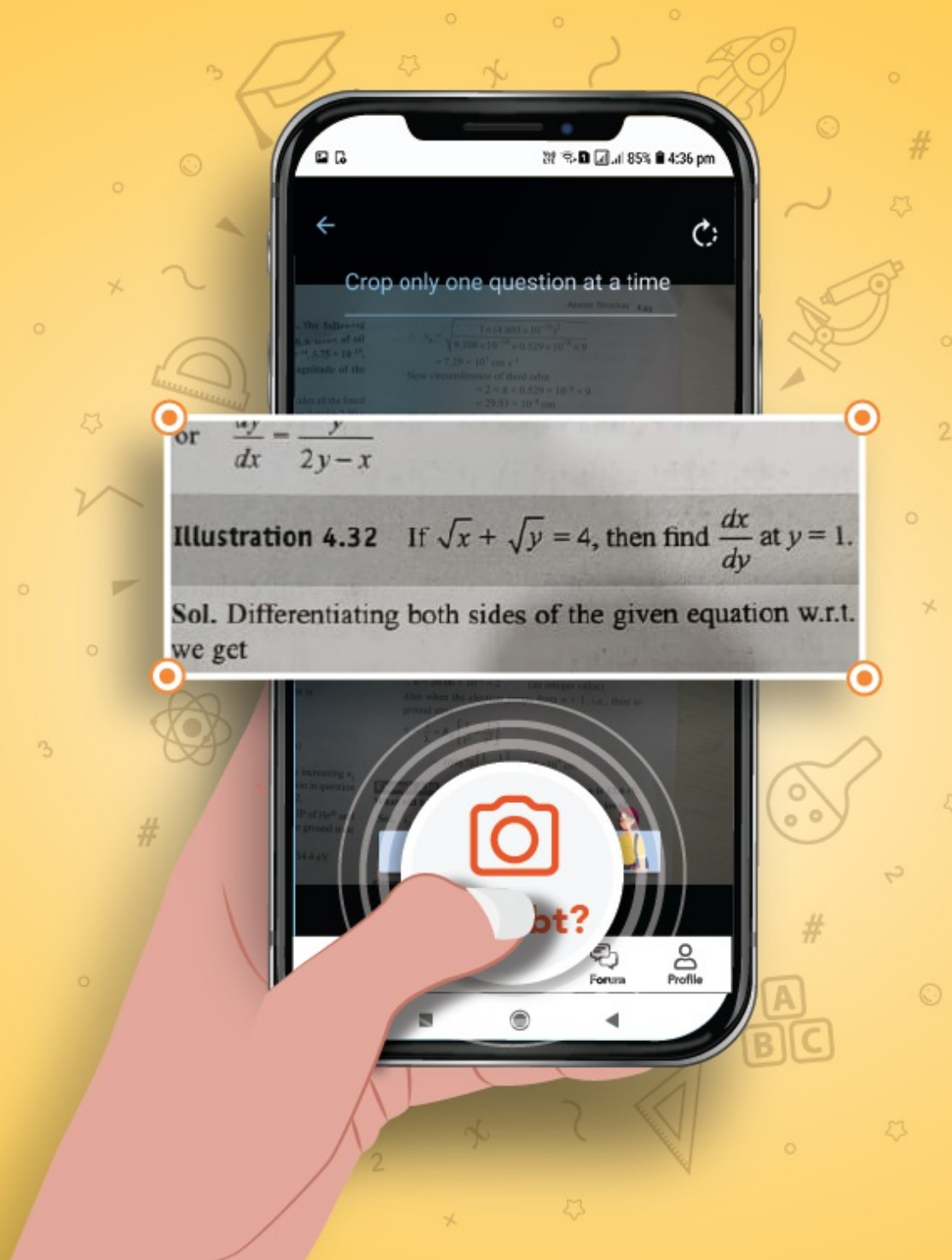
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