

KATTAR NEET 2026

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Chemical Coordination and Integration

Q1 A researcher observes that exposing mice to a certain environmental toxin leads to a significant increase in their basal metabolic rate and body temperature, along with noticeable weight loss despite increased food intake. Further investigation reveals normal levels of thyroid hormones (T₃/T₄), but unusually high levels of TSH. Which of the following is the most plausible explanation for these observations?

- (A) The toxin directly stimulates the thyroid gland to produce excess hormones, leading to primary hyperthyroidism.
- (B) The toxin directly stimulates the anterior pituitary to overproduce TSH, leading to secondary hyperthyroidism.
- (C) The toxin interferes with the negative feedback mechanism of thyroid hormones on the anterior pituitary, causing uninhibited TSH release.
- (D) The toxin causes a deficiency in iodine uptake, leading to compensatory TSH increase, but the effects are unusual.

Q2 Which of the following statements about hormone feedback mechanisms are generally true?

- I. Most hormone secretions are regulated by positive feedback loops.
- II. Negative feedback loops help maintain hormone levels within a narrow physiological range.
- III. Oxytocin release during childbirth is an example of a positive feedback loop.

IV. High levels of T₃/T₄ inhibit the release of TSH from the anterior pituitary.

- (A) I, II and III
- (B) II, III and IV
- (C) I, III and IV
- (D) I, II, III and IV

Q3 Match List-I with List-II:

	List-I (Hormone)		List-II (Target Tissue/Organ)
(A)	ACTH	(I)	Bone and kidney
(B)	TSH	(II)	Adrenal Cortex
(C)	PTH	(III)	Thyroid Gland
(D)	ADH	(IV)	Renal tubules

Choose the **correct** answer from the options given below:

- (A) A-II, B-III, C-I, D-IV
- (B) A-III, B-II, C-IV, D-I
- (C) A-II, B-I, C-III, D-IV
- (D) A-IV, B-III, C-II, D-I

Q4 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: Exposure to bright light at night can suppress melatonin secretion.

Reason R: Melatonin production is stimulated by darkness and inhibited by light.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
- (B) A is false but R is true.



- (C) Both A and R are true and R is the correct explanation of A.
 (D) Both A and R are true but R is NOT the correct explanation of A.

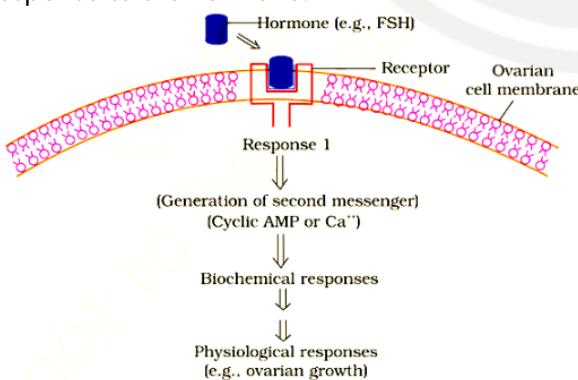
Q5 Given below are two statements:

- Statement I:** The corpus luteum secretes large amounts of progesterone after ovulation.
Statement II: Progesterone is essential for the maintenance of the uterine endometrium and pregnancy.

In the light of the above statements, choose the *most appropriate* answer from the options given below:

- (A) Statement I is correct but Statement II is incorrect.
 (B) Statement I is incorrect but Statement II is correct.
 (C) Both Statement I and Statement II are correct.
 (D) Both Statement I and Statement II are incorrect.

Q6 Observe diagram . If a chemical compound is introduced that specifically inhibits the formation of the "second messenger" without affecting the hormone-receptor binding, what would be the immediate consequence on the target cell's response to the hormone?



- (A) The hormone would directly enter the nucleus and initiate gene expression.
 (B)

The cellular response would be amplified due to increased receptor binding.

- (C) There would be no observable cellular response despite hormone binding.
 (D) The hormone would be immediately degraded by intracellular enzymes.

Q7 A male patient exhibits low sperm count and reduced testosterone levels. Blood tests reveal high levels of FSH and LH. This suggests a primary problem in the:

- (A) Hypothalamus
 (B) Anterior pituitary
 (C) Testes
 (D) Adrenal cortex

Q8 Which of the following hormones are derivatives of amino acids?

- I. Epinephrine
 II. Thyroxine
 III. Insulin
 IV. Melatonin
 V. Aldosterone

- (A) I, II, III and IV
 (B) I, II and IV
 (C) II, IV and V
 (D) I, III and V

Q9 A new chemical messenger is discovered that coordinates the development of bone density and calcium metabolism by acting locally on bone cells, without being transported significantly through the bloodstream. how would this substance be classified, and what characteristic from the new definition of hormones would best describe it?

- (A) Endocrine gland secretion; non-nutrient chemical.
 (B) Intercellular messenger; produced in trace amounts.



- (C) Hormone; acts as an intercellular messenger.
 (D) Paracrine substance; non-nutrient chemical and intercellular messenger.

Q10 Given below are two statements:

Statement I: Hyposecretion of growth hormone in children leads to gigantism.

Statement II: Hyposecretion of growth hormone in adults causes acromegaly.

In the light of the above statements, choose the *most appropriate* answer from the options given below:

- (A) Statement I is correct but Statement II is incorrect.
 (B) Statement I is incorrect but Statement II is correct.
 (C) Both Statement I and Statement II are correct.
 (D) Both Statement I and Statement II are incorrect.

Q11 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: Iodine is an essential element for the normal functioning of the thyroid gland.

Reason R: Iodine is required for the synthesis of thyroid hormones, T3 and T4.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
 (B) A is false but R is true.
 (C) Both A and R are true and R is the correct explanation of A.
 (D) Both A and R are true but R is NOT the correct explanation of A.

Q12 Read the following statements and choose the **correct** option.

I. A person experiences excessive urination and intense thirst, even after consuming adequate

fluids. Blood tests reveal high levels of blood glucose.

II. Despite medication, these symptoms persist, and further investigation shows that the person's posterior pituitary is secreting an abnormally low amount of a particular hormone.

III. This hormonal deficiency directly impacts the kidneys' ability to reabsorb water, leading to increased urine output.

IV. The condition described is most likely Diabetes Mellitus, caused by a problem with the posterior pituitary.

- (A) Statements I, II, and III are correct, and Statement IV is an incorrect conclusion.
 (B) Statements I, II, III, and IV are all correct.
 (C) Statements I and IV are correct, while II and III are incorrect.
 (D) Statement I is correct, but Statements II, III, and IV are incorrect.

Q13 Match List-I with List-II:

	List-I (Hormone)		List-II (Function)
(A)	Secretin	(I)	Stimulates secretion of pancreatic enzymes and bile from gallbladder
(B)	Cholecystokinin	(II)	Inhibits gastric secretion and motility
(C)	GIP	(III)	Stimulates secretion of water and bicarbonate from pancreas and bile



		production in liver
(D)	Gastrin	(IV) Stimulates secretion of HCl and pepsinogen in stomach

Choose the **correct** answer from the options given below:

- (A) A-III, B-I, C-II, D-IV
- (B) A-I, B- III, C-II, D-IV
- (C) A- III, B-II, C-I, D-IV
- (D) A-IV, B-I, C-II, D- III

Q14 Which of the following statements concerning Atrial Natriuretic Factor (ANF) are **true**?

- I. It is secreted by the walls of the atria of the heart.
 - II. It decreases blood pressure.
 - III. It causes vasodilation and increased sodium excretion.
 - IV. It stimulates the release of Renin from the juxtaglomerular apparatus.
- (A) I, II and III
 - (B) I, III and IV
 - (C) II, III and IV
 - (D) I, II, III and IV

Q15 Identify the **correct** statements regarding the mechanism of hormone action.

- I. Steroid hormones primarily act via second messengers.
 - II. Protein hormones bind to membrane-bound receptors.
 - III. Insulin receptor is an example of an intracellular receptor.
 - IV. Hormones that interact with intracellular receptors generally regulate gene expression.
- (A) I and III
 - (B) II and IV
 - (C) I, II and IV
 - (D) II, III and IV

Q16 Which of the following statements about the pancreas are **correct**?

- I. It is a purely exocrine gland.
 - II. Alpha cells secrete insulin, and beta cells secrete glucagon.
 - III. It plays a dual role as both an exocrine and endocrine gland.
 - IV. Insulin promotes glycogenesis in the liver and muscle cells.
 - V. Glucagon reduces the cellular glucose uptake and utilisation.
- | | |
|-------------------|-------------------|
| (A) I, II and III | (B) III and IV |
| (C) III, IV and V | (D) II, III and V |

Q17 Consider the following statements regarding the hypothalamic-pituitary axis:

- I. The hypothalamus produces releasing and inhibiting hormones that regulate the posterior pituitary.
- II. ADH and Oxytocin are synthesized by the hypothalamus and released by the posterior pituitary.
- III. The anterior pituitary is directly connected to the hypothalamus by a portal circulatory system.
- IV. Gonadotropin Releasing Hormone (GnRH) stimulates the secretion of FSH and LH from the anterior pituitary.

Which of the above statements are **correct**?

- (A) I, II and III
- (B) II, III and IV
- (C) I, III and IV
- (D) I, II, III and IV

Q18 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: The adrenal cortex can be called the 'stress cortex' of the body.

Reason R: Cortisol, a glucocorticoid from the adrenal cortex, stimulates gluconeogenesis,



lipolysis, and proteolysis to cope with stress situations.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
- (B) A is false but R is true.
- (C) Both A and R are true and R is the correct explanation of A.
- (D) Both A and R are true but R is NOT the correct explanation of A.

Q19 A patient is in a state of shock due to severe dehydration. Which of the following hormones would be released in significantly increased amounts to help regulate blood volume?

- (A) Atrial Natriuretic Factor (ANF)
- (B) Antidiuretic Hormone (ADH)
- (C) Aldosterone
- (D) Both (B) and (C)

Q20 Which of the following is the primary physiological effect of calcitonin?

- (A) Increases blood calcium levels by stimulating osteoclast activity.
- (B) Decreases blood calcium levels by inhibiting osteoclast activity and stimulating calcium deposition.
- (C) Increases absorption of calcium from the intestine.
- (D) Increases reabsorption of calcium in the renal tubules.

Q21 A person is diagnosed with pheochromocytoma, a tumor of the adrenal medulla. Which of the following symptoms would be characteristic of this condition?

- (A) Hypoglycemia, low blood pressure, weight gain
- (B) Persistent hyperglycemia, high blood pressure, increased heart rate

- (C) Tetany, muscle spasms, low blood calcium
- (D) Sluggishness, weight gain, constipation

Q22 A competitive swimmer suffers from severe muscle cramps after a long training session. Blood tests reveal low levels of sodium (hyponatremia) and high levels of potassium (hyperkalemia). Which hormone is most likely deficient?

- (A) Aldosterone
- (B) ADH
- (C) Cortisol
- (D) Parathyroid hormone

Q23 If the pars distalis region of the pituitary gland is damaged, the synthesis of which of the following hormones will be directly affected?

- (a) Growth Hormone (GH)
- (b) Oxytocin
- (c) Prolactin (PRL)
- (d) Vasopressin (ADH)
- (e) Luteinizing Hormone (LH)
- (A) (a), (b), and (c) only
- (B) (a), (c), and (e) only
- (C) (b) and (d) only
- (D) (a), (d), and (e) only

Q24 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: The posterior pituitary is often referred to as the neurohypophysis.

Reason R: It is under the direct neural control of the hypothalamus and is primarily composed of nervous tissue.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
- (B) A is false but R is true.
- (C)



Both A and R are true and R is the correct explanation of A.

(D) Both A and R are true but R is NOT the correct explanation of A.

Q25 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: Steroid hormones typically induce slower and more prolonged responses compared to peptide hormones.

Reason R: Steroid hormones bind to intracellular receptors and regulate gene expression, leading to synthesis of new proteins.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
- (B) A is false but R is true.
- (C) Both A and R are true and R is the correct explanation of A.
- (D) Both A and R are true but R is NOT the correct explanation of A.

Q26 Consider the following statements regarding hormonal regulation:

I. Melatonin plays a significant role in maintaining the diurnal rhythm of our body, including sleep-wake cycle.

II. Hypothyroidism in adult women can lead to irregular menstrual cycle and low body temperature.

III. Parathyroid hormone (PTH) helps maintain calcium and phosphate balance in the blood.

IV. Graves' disease is characterized by an enlarged thyroid gland and exophthalmos, resulting from hypothyroidism.

Which of the above statements are **correct**?

- (A) I, II, III
- (B) I, III, IV
- (C) I, II, IV

(D) II, III, IV

Q27 Which of the following hormones does not have a specific target gland but affects a wide range of body cells and tissues?

- (A) TSH (Thyroid-Stimulating Hormone)
- (B) ACTH (Adrenocorticotropic Hormone)
- (C) Growth Hormone (GH)
- (D) LH (Luteinizing Hormone)

Q28 Refer to the diagram. A patient develops a tumor at region 'A' that leads to excessive secretion of a hormone causing hyperthyroidism. Which of the following hormones is most likely being overproduced by the tumor?



- (A) TRH
- (B) TSH
- (C) Thyroxine
- (D) Calcitonin

Q29 Which of the following hormones is responsible for the 'calorigenic' effect, primarily increasing the metabolic rate of the body?

- (A) Insulin
- (B) Cortisol
- (C) Thyroxine
- (D) Growth Hormone

Q30 The 'fight or flight' response is primarily mediated by the hormones secreted from which of the following glands?

- (A) Thyroid gland
- (B) Pancreas
- (C) Adrenal medulla
- (D) Posterior pituitary

Q31



- Which of the following **correctly** describes a hormonal disorder and its underlying cause?
- Gigantism – Excess GH in adults
 - Diabetes mellitus – Lack of ADH
 - Addison's disease – Hyposecretion of cortisol
 - Acromegaly – Lack of GH during childhood
- Q32** Which of the following **correctly** explains the feedback mechanism involving cortisol?
- Low blood cortisol → stimulates ACTH release
→ stimulates CRH release
 - High cortisol → inhibits ACTH and CRH secretion
 - ACTH stimulates the adrenal medulla to release cortisol
 - CRH is secreted by the anterior pituitary
- Q33** A patient exhibits low basal metabolic rate, sluggishness, and cold intolerance. Laboratory tests reveal high TSH but low T_3 and T_4 levels. Which of the following is the most likely cause?
- Hyperthyroidism
 - Hypothyroidism due to pituitary dysfunction
 - Hypothyroidism due to thyroid gland failure
 - Overactive adrenal cortex
- Q34** Given below are two statements:
- Statement I:** Thyroxine and Epinephrine are amino acid derivative hormones.
- Statement II:** Growth hormone and prolactin are the two hormones that act directly on non-endocrine tissues.
- In the light of the above statements, choose the most appropriate answer from the options given below:
- Statement I is correct but Statement II is incorrect.
 - Statement I is incorrect but Statement II is correct.

- (C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.
- Q35** A patient with Type 2 diabetes mellitus exhibits hyperglycaemia despite normal insulin secretion. Which of the following molecular defects is most likely responsible for this condition?
- Autoimmune destruction of pancreatic β -cells leading to absolute insulin deficiency
 - Downregulation of GLUT4 transporters due to chronic insulin resistance
 - Overproduction of glucagon by pancreatic β -cells suppressing insulin action
 - Mutation in the insulin gene resulting in non-functional insulin secretion
- Q36** Which of the following conditions would most likely result from the failure of aldosterone secretion in a healthy adult?
- Increased sodium reabsorption and water retention
 - Increased potassium secretion and blood volume
 - Decreased sodium reabsorption and low blood pressure
 - Increased water reabsorption in collecting ducts
- Q37** Which of the following **correctly** explains how insulin lowers blood glucose level in a healthy individual?
- By increasing hepatic glycogenolysis and glucose release into the blood
 - By stimulating gluconeogenesis in liver and muscle tissues
 - By promoting uptake of glucose by cells and enhancing glycogenesis
 - By inhibiting glucose uptake into adipose and muscle cells



- Q38** Which of the following would most likely result from the destruction of pancreatic β -cells but not α -cells?
- Hypoglycaemia due to excess insulin in blood
 - Hyperglycaemia due to reduced insulin and increased glucagon
 - Normal blood sugar due to unaffected α -cell function
 - Low glucagon levels and suppressed hepatic glucose production
- Q39** Given below are the statements related to diabetes mellitus. Identify the **correct** one.
- A transient spike of glucose in a healthy person is diabetes mellitus.
 - A person tested negative for glycosuria; this assures that he/she is non diabetic.
 - A person with sufficient insulin in the body might be a patient of diabetes mellitus.
 - Insulin resistance and GLUT-4 impairment are not the probable causes of diabetes mellitus.
- Q40** A researcher develops a drug that selectively inhibits the breakdown of glycogen in liver cells, without affecting other metabolic pathways or hormone release. Assuming normal hormonal regulation, what would most likely be the effect of this drug after prolonged fasting?
- Elevated insulin secretion and decreased glucose uptake by adipose tissue.
 - Elevated blood glucose due to increased glucagon secretion.
 - Persistent hypoglycaemia despite normal glucagon secretion.
 - Hyperglycaemia resulting from enhanced gluconeogenesis in the muscles.
- Q41** Excess secretion of prolactin hormone in females can lead to abnormal milk production (galactorrhoea) and the absence of menstruation

- (amenorrhoea). Based on this, identify the pair of **correct** statements regarding prolactin:
- Prolactin is essential for the ejection of milk from the mammary glands.
 - Dopamine inhibits release of prolactin.
 - During pregnancy, the release of prolactin is decreased primarily due to inhibition by prolactin-inhibiting hormone (PIH).
 - The suckling reflex of a newborn suppresses the release of PIH, thereby increasing prolactin secretion.
- A and B only
 - B and C only
 - A and C only
 - B and D only

Q42 Match **List-I** with **List-II**.

	List-I		List-II
(A)	Number of distinct types of trophic cells in anterior pituitary gland (pars distalis)	(I)	6
(B)	Number of hormones released by anterior pituitary gland	(II)	5
(C)	Number of inhibitory hormones released by hypothalamus	(III)	3
(D)	Number of layers in adrenal cortex	(IV)	2

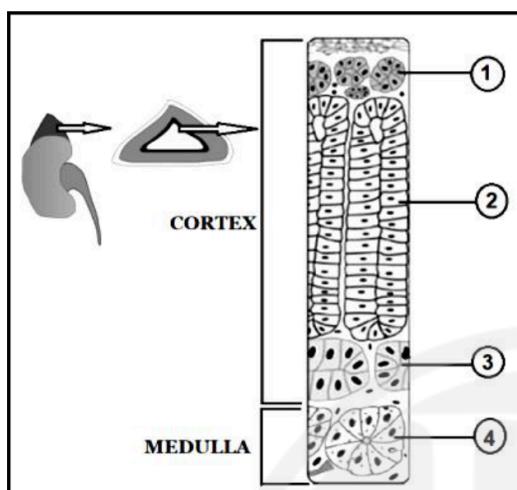
Choose the **correct** answer from the options given below:

- A-I, B-II, C-III, D-IV
- A-III, B-IV, C-II, D-I
- A-II, B-I, C-IV, D-III
- A-IV, B-III, C-II, D-I

Q43



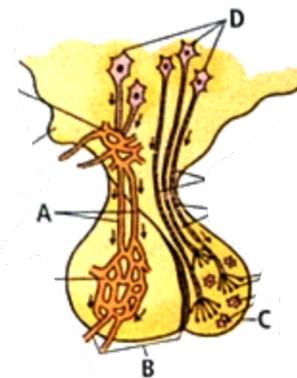
The diagram presented here is a sectional view of an endocrine gland. Its histologically characteristic layers are labelled as 1, 2, 3 and 4. Which of these is/are responsible for the secretion of C₂₁ Cortisol and Corticosterone hormones?



- (A) 1
(B) 1 and 3
(C) 2 and 4
(D) 2 and 3

- Q44** During a high-stress situation, such as anticipating an important interview, an individual may exhibit physiological responses including increased heart rate, rapid breathing, and perspiration. Which of the following hormonal secretions are primarily responsible for mediating these acute stress-induced autonomic changes?
 (A) Estrogen and progesterone
 (B) Oxytocin and vasopressin
 (C) Adrenaline and noradrenaline
 (D) Insulin and glucagon

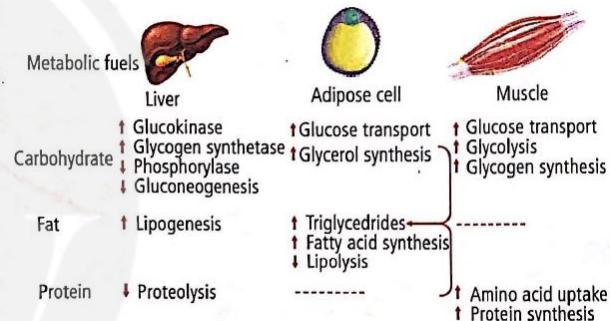
- Q45** Refer to the given figure of pituitary gland and select the **correct** option for the question that follows.



What will be the effect if part C is removed?

- (A) Oxytocin and ADH will not be synthesised.
 (B) Oxytocin and ADH will be synthesised but could not be stored.
 (C) Only synthesis of oxytocin will occur.
 (D) Only synthesis of ADH will occur.

- Q46** The given figure shows _____.



- (A) the major target sites and the metabolic actions of the anabolic hormone secreted by the beta cells of heterocrine gland
 (B) the major target sites and the metabolic actions of the hormone secreted by alpha cells of pancreas
 (C) the major target sites and the functions of the hormone secreted by the anterior pituitary gland
 (D) the major target sites and the metabolic actions of the hormone secreted by the parafollicular (C) cells

- Q47** During an educational trip to Uttarakhand, Ketki and her friends observed that many local people



exhibited swollen necks. Upon returning, they researched this observation and its broader implications. Which of the following statements about this condition is **incorrect**?

- (A) The swelling in the neck is primarily due to the hypertrophy and hyperplasia of thyroid follicular cells in an attempt to capture more of a deficient essential micronutrient.
- (B) A primary cause of this condition in a mountainous region like Uttarakhand is often the insufficient dietary intake of iodine, as glacial meltwaters tend to deplete soil iodine content.
- (C) This condition, if severe and unmanaged during pregnancy, significantly increases the risk of cretinism in the offspring, characterized by mental retardation and stunted growth.
- (D) The physiological mechanism leading to the neck swelling involves a sustained decrease in Thyroid Stimulating Hormone (TSH) levels, causing a compensatory enlargement of the thyroid gland.

Q48 Match **List-I** with **List-II** and choose the **correct** option.

List-I		List-II
(A)	Cretinism	(I) Dwarfism without mental impairment
(B)	Hyposecretion of GH in childhood	(II) Dwarfism with mental retardation
(C)	Composite gland	(III) Thyroxine and cortisol
(D)	Erythropoiesis	(IV) Gonads

- (A) A-III, B-I, C-II, D-IV
- (B) A-II, B-I, C-IV, D-III

- (C) A-II, B-I, C-III, D-IV
- (D) A-IV, B-II, C-I, D-III

Q49 George travels from the United States to India for a vacation. Upon arrival, he experiences fatigue, insomnia, and poor concentration—symptoms commonly attributed to jet lag. Which of the following **best** explains the physiological cause of his symptoms?

- (A) Sudden loss of blood volume due to pressurized cabin air
- (B) Mismatch between the body's internal circadian rhythm and external environment
- (C) Rapid accumulation of lactic acid due to prolonged immobility
- (D) Excessive melatonin secretion induced by high-altitude solar radiation

Q50 A dairy researcher studies neuroendocrine control of lactation in bovines. In one trial, a cow fails to release milk despite normal feed intake and mammary gland development. However, upon exposure to her calf, followed by gentle nuzzling and suckling, the cow exhibits normal milk ejection. Which of the following **best** describes the mechanistic pathway leading to this response?

- (A) Prolactin from the anterior pituitary stimulates alveolar epithelial cells to release oxytocin, leading to milk synthesis.
- (B) Tactile stimulation activates the parasympathetic nervous system, causing vasodilation of the mammary duct system and milk flow.
- (C) Sensory input reaches the hypothalamus, prompting posterior pituitary to release oxytocin, which contracts myoepithelial cells around alveoli.
- (D) Emotional cues from calf presence inhibit dopamine, causing prolactin surge and



passive diffusion of milk from alveoli to ducts.

- Q51** Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion (A): Hormonal deficiency disorders like myxoedema involve goitre formation.

Reason (R): Iodine deficiency leads to reduced thyroxine synthesis, causing increased TSH release and thyroid gland enlargement.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
- (B) A is false but R is true.
- (C) Both A and R are true and R is the correct explanation of A.
- (D) Both A and R are true but R is NOT the correct explanation of A.

- Q52** Read the following statements carefully and select the **correct** option regarding endocrine control of calcium homeostasis and hormone action:

(A): Parathyroid hormone (PTH) increases plasma calcium levels by stimulating osteoclast activity, enhancing calcium reabsorption in kidneys, and activating Vitamin D for better intestinal absorption.

(B): Calcitonin and PTH act antagonistically; while PTH is secreted by the thyroid, calcitonin is secreted by the parathyroid to restore calcium balance.

(C): Steroid hormones like aldosterone and cortisol act by binding to cytoplasmic or nuclear receptors and altering gene transcription, whereas peptide hormones like insulin act via secondary messengers.

(D): The hypothalamus directly regulates all peripheral endocrine glands by secreting

releasing hormones into the bloodstream, bypassing any intermediary glands.

(E): The hypothalamus integrates neural signals with hormonal control and governs both anterior pituitary (via releasing hormones) and posterior pituitary (via neurosecretory cells).

Choose the **correct** option:

- (A) Only statements A, C, and E are correct
- (B) Only statements B, C, and D are correct
- (C) Only statements A and D are correct
- (D) All statements A to E are correct

- Q53** Read the following paragraph depicting interplay of two hormones in women X and Y and select the **correct** option.

A woman X exhibits high levels of FSH (Follicle stimulating hormone) but low levels of estrogen in blood. Another woman Y exhibits high levels of both FSH and estrogen in the blood.

- (A) In woman X, FSH is over stimulating corpus luteum to secrete hormone estrogen.
- (B) In woman Y, there is some defect in negative feedback loop.
- (C) In woman X, there is some defect in negative feedback loop.
- (D) There is no defect in X and Y.

- Q54** Choose the **correct** option among the following options.

	List-I	List-II	
(A)	Delta cells of Pancreas	(I)	Release somatostatin
(B)	PTH	(II)	Insulin
(C)	Stimulate protein formation	(III)	Hyperthyroidism
(D)	Grave's disease	(IV)	Secreted from glands present at the back side of thyroid

Options:



- (A) A-II, B-I, C-III, D-I
 - (B) A-IV, B-I, C-III, D-II
 - (C) A-I, B-II, C-III, D-IV
 - (D) A-I, B-IV, C-II, D-III

Q55 How many of the given hormones are secreted by organised endocrine gland of human body?

PRL, T₄, ANF, ADH, CCK, Testosterone,
Erythropoietin, Thymosin

- (A) Three (B) Four
(C) Five (D) Two

Q56 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:

	Reduction in blood sugar level
A. Extract of pancreas	-
B. Islet cell extract	+
C. Acinar cell extract	-

The **correct** interpretation is that

- (A) anti-diabetic factor present 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 'C'

Q57 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion (A): Adrenal cortex is not vital for survival and may be removed without subsequently leading to death.

Reason (R): Adrenal cortex secretes corticoids.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
 - (B) A is false but R is true.
 - (C) Both A and R are true and R is the correct explanation of A.
 - (D) Both A and R are true but R is NOT the correct explanation of A.

Q58 Read the given statements and select the **correct** one.

- (A) Thyroid gland secretes only iodothyronines.
 - (B) ADH and ANF are synergistic to each other.
 - (C) All hypothalamic hormones originate in the hypothalamic neurons, pass through axons and are released from their nerve endings in the pituitary gland.
 - (D) A patient with normal iodine levels may have cretinism.

Q59 All of the given hormones regulate gene expression or chromosome function by the interaction of hormone-receptor complex with the genome, **except**

- (A) Luteal hormone that supports pregnancy
 - (B) Hormone that produces anti-inflammatory reactions and suppresses the immune response
 - (C) Hormone secreted by the master of master gland
 - (D) Hormone whose hypersecretion causes protrusion of eyeballs

Q60 Choose the **incorrect** option w.r.t the endocrine gland located at the basal part of diencephalon.

- (A) It lies at the base of major coordinating centre for sensory and motor signalling.
 - (B) It contains several groups of neurosecretory cells called nuclei which produce hormones.
 - (C) It is under the direct neural regulation of the posterior pituitary.

