

NEET CHEMICAL COORDINATION AND INTEGRATION —
PARATHYROID, THYMUS AND ADRENAL GLAND — PYQS

Max. Marks: 64

Questions: 16

Section A (MCQ) — 16 questions

Q.1 Consider the following statements regarding function of adrenal medullary hormones:

- A. It causes pupillary constriction.
 - B. It is a hyperglycemic hormone.
 - C. It causes piloerection.
 - D. It increases strength of heart contraction.
- Choose the correct answer from the options given below : [NEET (UG) 2025]

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

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Q.2 Which of the following are not the effects of Parathyroid hormone?

- A. Stimulates the process of bone resorption
 - B. Decreases Ca^{2+} level in blood
 - C. Reabsorption of Ca^{2+} by renal tubules
 - D. Decreases the absorption of Ca^{2+} from digested food
 - E. Increases metabolism of carbohydrates
- Choose the most appropriate answer from the options given below: [NEET (UG) 2022]

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

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Q.3 Select the correct statement [NEET (UG) 2020]

- (1) Glucagon is associated with hypoglycemia.
- (2) Glucocorticoids stimulate gluconeogenesis
- (3) Insulin acts on pancreatic cells and adipocytes.
- (4) Insulin is associated with hyperglycemia.

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Q.4 Which one of the following hormones is not involved in sugar metabolism? [AIPMT 2015]

- (1) Insulin (2) Glucagon
(3) Cortisone (4) Aldosterone

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Q.5 A chemical signal that has both endocrine and neural roles is [AIPMT 2015 (Cancelled)]

- (1) epinephrine (2) cortisol
(3) melatonin (4) calcitonin.

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Q.6 Fight-or-flight reactions cause activation of [AIPMT 2014]

- (1) the parathyroid glands, leading to increased metabolic rate
- (2) the kidney, leading to suppression of renin-angiotensin-aldosterone pathway
- (3) the adrenal medulla, leading to increased secretion of epinephrine and norepinephrine
- (4) the pancreas leading to a reduction in the blood sugar levels.

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Q.7 Norepinephrine

- (i) is released by sympathetic fibres
- (ii) is released by parasympathetic fibers
- (iii) increases the heart rate
- (iv) decreases blood pressure.

Which of the above statements are correct?

[NEET 2013 (Karnataka)]

- (1) (i) and (iii) (2) (ii) and (iii)
(3) (ii) and (iv) (4) (i) and (iv)

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Q.8 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?

[AIPMT 2012 (Prelims)]

- (1) Sympathetic nervous system is activated releasing epinephrine and norepinephrine from adrenal medulla.
- (2) Neurotransmitters diffuse rapidly across the cleft and transmit a nerve impulse.
- (3) Hypothalamus activates the parasympathetic division of brain.
- (4) Sympathetic nervous system is activated releasing epinephrine and norepinephrine from adrenal cortex.

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Q.9 Injury to adrenal cortex is not likely to affect the secretion of which one of the following?

[AIPMT 2010 (Prelims)]

- (1) Aldosterone
- (2) Both androstenedione and dehydroepiandrosterone
- (3) Adrenaline
- (4) Cortisol

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Q.10 The blood calcium level is lowered by the deficiency of

[AIPMT 2008]

- (1) both calcitonin and parathormone
- (2) calcitonin
- (3) parathormone
- (4) thyroxine

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Q.11 Feeling the tremors of an earthquake a scared resident of seventh floor of a multistoreyed building starts climbing down the stairs rapidly. Which hormone initiated this action?

[AIPMT 2007]

- (1) Adrenaline (2) Glucagon
- (3) Gastrin (4) Thyroxine

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Q.12 A person is having problems with calcium and phosphorus metabolism in his body. Which one of the following glands may not be functioning properly?

[AIPMT 2007]

- (1) Parotid (2) Pancreas
- (3) Thyroid (4) Parathyroid

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Q.13 Which hormone causes dilation of blood vessels, increased oxygen consumption and gluconeogenesis?

[AIPMT 2006]

- (1) Glucagon (2) ACTH
- (3) Insulin (4) Adrenaline

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Q.14 A steroid hormone which regulates glucose metabolism is

[AIPMT 2006]

- (1) cortisone
- (2) cortisol
- (3) corticosterone
- (4) 11-deoxycorticosterone.

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Q.15 Which one of the following pairs correctly matches a hormone with a disease resulting from its deficiency?

[AIPMT 2003]

- (1) Relaxin – Gigantism
- (2) Prolactin – Cretinism
- (3) Parathyroid hormone – Tetany
- (4) Insulin – Diabetes insipidus

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Q.16 Adrenaline directly affects

[AIPMT 2002]

- (1) S.A. node
- (2) β -cells of Langerhans
- (3) dorsal root of spinal nerve
- (4) epithelial cells of stomach

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	2	2	4	1	3	1	1	3	3	1
Ques.	12	13	14	15	16						
Ans.	4	4	2	3	1						