

Control & Coordination



Multiple Choice Questions (MCQs) on Hormonal System

1. Which gland is often referred to as the "master gland"?
 - a) Thyroid gland
 - b) Adrenal gland
 - c) Pituitary gland
 - d) Pancreas
2. Which hormone is produced by the thyroid gland to regulate metabolism?
 - a) Insulin
 - b) Cortisol
 - c) Thyroxine (T4)
 - d) Adrenaline
3. The hormone responsible for lowering blood calcium levels is:
 - a) Calcitonin
 - b) Parathyroid hormone (PTH)
 - c) Aldosterone
 - d) Glucagon
4. Which hormone is released by the adrenal medulla?
 - a) Cortisol
 - b) Aldosterone
 - c) Adrenaline
 - d) Thyroxine (T4)
5. The pancreas secretes insulin to:
 - a) Increase blood glucose levels
 - b) Decrease blood glucose levels
 - c) Increase blood calcium levels
 - d) Decrease blood calcium levels
6. Which hormone is involved in the regulation of sleep-wake cycles?
 - a) Melatonin
 - b) Glucagon
 - c) Prolactin
 - d) Adrenaline
7. Testosterone is produced by the:
 - a) Ovaries
 - b) Pituitary gland
 - c) Thyroid gland
 - d) Testes
8. The receptors for lipid-soluble hormones are typically located:
 - a) On the cell surface
 - b) Inside the cell
 - c) In the bloodstream
 - d) On the plasma membrane
9. Which of the following acts as a second messenger in hormone action?

- a) DNA
 - b) mRNA
 - c) Cyclic AMP (cAMP)
 - d) Ribosome
10. The process by which a hormone activates gene expression by binding to DNA is characteristic of:
- a) Peptide hormones
 - b) Steroid hormones
 - c) Amino acid-derived hormones
 - d) Protein hormones
11. Negative feedback regulation is best exemplified by the control of:
- a) Oxytocin during childbirth
 - b) Insulin and blood glucose levels
 - c) Adrenaline release in stress response
 - d) Melatonin and sleep-wake cycles
12. Which hormone increases blood calcium levels?
- a) Insulin
 - b) Calcitonin
 - c) Parathyroid hormone (PTH)
 - d) Melatonin
13. The hormone that prepares the body for 'fight or flight' response is:
- a) Cortisol
 - b) Adrenaline
 - c) Aldosterone
 - d) Thyroxine (T4)
14. The pituitary hormone that stimulates the adrenal cortex to release its hormones is:
- a) Thyroid Stimulating Hormone (TSH)
 - b) Adrenocorticotrophic Hormone (ACTH)
 - c) Luteinizing Hormone (LH)
 - d) Follicle Stimulating Hormone (FSH)
15. The hormone that regulates water balance by increasing water reabsorption in the kidneys is:
- a) Insulin
 - b) Glucagon
 - c) Antidiuretic Hormone (ADH)
 - d) Cortisol

Answer Key

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| 1. c) Pituitary gland | 13. b) Adrenaline |
| 2. c) Thyroxine (T4) | 14. b) Adrenocorticotrophic Hormone (ACTH) |
| 3. a) Calcitonin | 15. c) Antidiuretic Hormone (ADH) |
| 4. c) Adrenaline | |
| 5. b) Decrease blood glucose levels | |
| 6. a) Melatonin | |
| 7. d) Testes | |
| 8. b) Inside the cell | |
| 9. c) Cyclic AMP (cAMP) | |
| 10. b) Steroid hormones | |
| 11. b) Insulin and blood glucose levels | |
| 12. c) Parathyroid hormone (PTH) | |

