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**Subject: Biology**

**Topic: Chemical coordination & Integration**

**M.M. 240 COMPETITIVE TEST**  **Time: 60 Min.**

1. Which one does not use second messenger?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Insulin | b) Prolactin | c) Cortisol | d) adrenaline |

1. Which is not a characteristics of hormone?

|  |  |
| --- | --- |
| a) shows antagonist and synergistic action | b) does not used in recation |
| c) maintain homeostasis | d) can have more than one target |

1. Which hormone binds to nuclear receptors?

I. TSH II. tri iodo thyronin III. Estrogen IV. FSH

|  |  |  |  |
| --- | --- | --- | --- |
| a) I and II | b) II and III | c) I and IV | d) II , III and IV |

1. Hypokalemia can be induced by:

|  |  |
| --- | --- |
| a) Hypersecretion of mineralocorticoids | b) Hypersecretion of glucocorticoids |
| c) Hyposecretion of mineralocorticoids | d) Hyposecretion of glucocorticoids |

1. Virilism is due to :

|  |  |
| --- | --- |
| a) Hyposecretion of catecholamine | b) Hyposecretion of cortisol |
| c) Hypersecretion of DHEA | d) Hyposecretion of DHEA |

1. Most important source of somatomedin is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Hypothalamus | b) pancreas | c) Pituitary | d) liver |

1. The function of thyroid gland is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) regulates metabolic rate | b) control body temperature | c) required for body growth | d) all of these |

1. Hypothyroidism is marked by :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Low TSH | b) high TSH | c) high T3 and T4 | d) Both (a) & (c) |

1. Which one is not an autoimmune disease :

I. Hashimoto diseases II. Graves diseases III. NIDDM IV. IDDM

|  |  |  |  |
| --- | --- | --- | --- |
| a) I and III | b) I and II | c) only IIII | d) only IV |

1. Thyroxine and triiodothyronine produced gland, are synthesized from iodine and :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Phenylalanine | b) tyrosine | c) tryptophan | d) cholesterol |

1. Progesterone is secreted by which of the following glands?

|  |  |  |  |
| --- | --- | --- | --- |
| a) corpus luteum | b) Placenta | c) Anterior pituitary | d) both (a) & (b) |

1. Level of insulin suddenly increased after taking carbohydrate meal in :

|  |  |  |  |
| --- | --- | --- | --- |
| a) IDDM | b) NIDDM | c) Both of these | d) None of these |

1. Which of the following match is correct?

|  |  |  |
| --- | --- | --- |
|  | Hormone | Effect |
| (a) | Oxytocin | Milk synthesizing hormone |
| (b) | Glucagon | Decrease blood sugar level |
| (c) | Adrenaline | Increases heart rate |
| (d) | Thyroxine | Decreases BMR |

1. A patient of diabetes mellitus excreted glucose in urine even when he is kept in a carbohydrates free diet. It is because :

|  |  |
| --- | --- |
| a) Fats are catabolized in adipose tissue to form glucose | b) Amino acids are catabolized in kidney to form glucose |
| c) Amino acids are discharged in blood stream from liver | d) Glycogen from muscles is released into blood stream |

1. Epinephrine is :

|  |  |
| --- | --- |
| a) Hormone of adrenal gland | b) Nephrostomal part of mesoderm |
| c) clusters of glomeruli in mammalian kidney | d) Frontal lobe of Nephridia |

1. The function of pineal gland is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) lighten skin colour | b) Control sexual behavior | c) regulates period of puberty | d) all of these |

1. Which of the following is a salt balancing hormone?

|  |  |  |  |
| --- | --- | --- | --- |
| a) FSH | b) somatotropins | c) glucocorticoids | d) Mineralocorticoids |

1. The hormone, which is related to the urine concentration in mammals, is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) ADH | b) testosterone | c) Oxytocin | d) all of these |

1. Insulin is an \_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| a) polysaccharide | b) protein | c) amino acid derivative | d) lipid |

1. Which of the following hormones is responsible for osmoregulation as it promotes water reabsorption from distal parts of nephron?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Oxytocin | b) vasopressin | c) Pitocin | d) Melatonin |

1. Which of the following statements about “neurohypophysis” is correct?

|  |  |
| --- | --- |
| a) It stores the hormones produced by adenohypophysis | b) It is poorly developed and functionless in humans |
| c) It stores and release hormone secreted by hypothalamus | d) It secretes its own hormones |

1. Which one of the following is termed temporary endocrine gland

|  |  |  |  |
| --- | --- | --- | --- |
| a) Pineal | b) Thymus | c) Placenta | d) Kidney |

1. Which of the following option is correct?

a) Posterior pituitary is connected to hypothalamus by nerve fibres

b) Anterior pituitary is connected to hypothalamus by portal vessel

c) Posterior pituitary is connected to hypothalamus by portal vessel

d) Both (a) & (b)

1. Anterior lobe of pituitary gland secretes :

I. FSH , GH and LH II. GH , TSH and Prolactin III. TSH , ADH and prolactin IV. ACTH , TSH and Oxytocin

|  |  |  |  |
| --- | --- | --- | --- |
| a) I and II are correct | b) II and IV are correct | c) I and III are correct | d) I , II and III are correct |

1. Which of the following options is not correct?

a) In males, LH stimulates synthesis and secretion of androgens from testis

b) In males, FSH and androgens regulate spermatogenesis

c) In females, LH induces ovulation of fully mature follicles and maintain corpus luteum

d) FSH is produced in only male

1. The function of pineal gland is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) regulates menstruation | b) maintain sleep-wake cycle | c) regulating temperature | d) all of these |

1. Which of the following statement is correct?

a) In an adult female, hypothyroidism may cause irregular menstrual cycle

b) Hyperthyroidism may be resulted due to thyroid cancer or nodule development in the thyroid glands

c) Deficiency of iodine in our diet results in hypothyroidism

d) All of these

1. All are the function of PTH except:

a) PTH stimulates bone reabsorption / dilution / demineralization

b) PTH retards osteoclast activity

c) PTH increases Ca2+ absorption from the digestive tube

d) PTH stimulates reabsorption of Ca2+ by the renal tubules

1. Damage of thymus in child may lead to :

|  |  |
| --- | --- |
| a) A reduction in Hb content of blood | b) Loss of cell mediated immunity |
| c) Promotion of Antibody mediated immunity | d) A reduce in stem cell production |

1. Adrenaline and nor-adrenaline are commonly called :

|  |  |  |  |
| --- | --- | --- | --- |
| a) corticoids | b) glucocorticoids | c) catecholamine | d) Sex corticoids |

1. Steroid hormone easily pass through the plasma membrane by simple diffusion because they:

|  |  |  |  |
| --- | --- | --- | --- |
| a) are water soluble | b) are lipid soluble | c) enter through pores | d) contain carbon & hydrogen |

1. Which of the following is not a true of cyclic AMP (cAMP)

|  |  |
| --- | --- |
| a) it is a second messenger | b) The enzyme adenylate cyclase converts ATP into cAMP |
| c) In the mechanism of protein molecule, cAMP is involved | d) None |

1. Mark the correct statement regarding somatostatin:

|  |  |
| --- | --- |
| a) It is secreted from anterior pituitary | b) It inhibits the release of growth hormone |
| c) It is secreted by posterior pituitary | d) It stimulates STH secretion |

1. Which statement regarding PTH is correct ?

|  |  |
| --- | --- |
| a) It is a peptide hormone | b) It is stimulates bone reabsorption |
| c) It is hypercalcemic hormone | d) all of these |

1. In males, testosterone is secreted by :

|  |  |  |  |
| --- | --- | --- | --- |
| a) sertoli cells | b) Leydig cells | c) nurse cells | d) cells of epididymis |

1. Which of the following hormone is not steroid?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Androgen | b) aldosterone | c) testosterone | d) vasopressin |

1. Which of the following hormone is released during starvation and increased blood glucose levels by promoting breakdown of glucose in liver?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Insulin | b) somatostatin | c) glucagon | d) aldosterone |

1. Match column I and column II

|  |  |
| --- | --- |
| Column I | Column II |
| A. Pineal | I. Epinephrine |
| B. Thyroid | II. Melatonin |
| C. Ovary | III. Estrogen |
| D. Adrenal medulla | IV. Tetraiodothyronine |

|  |  |
| --- | --- |
| a) A – IV ; B – II ; C – III ; D – I | b) A – II ; B – IV ; C – I ; D – III |
| c) A – IV ; B – II ; C – I ; D – III | d) A – II ; B – IV ; C – III ; D – I |

1. Mary is about to face an interview. But during the first 5 minutes before the interview she experiences sweating, increased heart beat , respiration , etc. Which hormone is responsible for her restlessness?

|  |  |
| --- | --- |
| a) estrogen and progesterone | b) oxytocin and vasopressin |
| c) adrenaline and nor adrenaline | d) Insulin and glucagon |

1. Chemically hormones are :

|  |  |
| --- | --- |
| a) steroids only | b) proteins only |
| c) biogenic amines | d) proteins , steroids and biogenic amines |

1. Hormones are called chemical signals that stimulate specific target tissues. Their specificity is due to the presence of signal receiving ‘receptors’ only in the respective target tissues. Where are these receptors present in case of hormones of protein nature?

|  |  |  |  |
| --- | --- | --- | --- |
| a) blood | b) nucleus | c) plasma membrane | d) extracellular matrix |

1. Steroid hormone work as :

a) They enter into specific cell and bind to specific receptor and activates specific genes to form protein.

b) They catalyse formation of cAMP

c) They bind to cell membrane

d) None of above

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

a) Secretion of thymosin is stimulated with ageing

b) FSH stimulates the secretion of estrogen and progesterone

c) In females, FSH first binds with specific receptors or ovarian membrane

d) Glucagon is secreted by B-cell of islet of Langerhans and stimulates glycogenolysis.

1. Which of the following pair of hormones are the example of those that can be easily pass through the cell membrane of the target cell and bind to receptor inside in?

|  |  |  |  |
| --- | --- | --- | --- |
| a) insulin , glucagon | b) thyroxine , insulin | c) cortisol , testosterone | d) somatostatin , oxytocin |

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

|  |  |  |  |
| --- | --- | --- | --- |
| a) pituitary | b) gonads | c) parathyroid | d) adrenal gland |

1. Anterior lobe of pituitary gland secretes :

|  |  |  |  |
| --- | --- | --- | --- |
| a) FSH , GH , LH | b) STH , GH , TSH | c) TSH , ADH , prolactin | d) ACTH , TSH , oxytocin |

1. Acromegaly causes:

|  |  |
| --- | --- |
| a) Dwarfism | b) Extra growth in height |
| c) Smaller hands, feet and face | d) Extra growth in hands , feet and lower jaw |

1. Axolotl larva of Ambystoma normally fails to metamorphosis due to :

|  |  |
| --- | --- |
| a) lack of iodine in water or diet | b) Absence of phosphorus in water |
| c) Lack of Ca and Mg ions in water | d) high concentration of iodine in body |

1. Graves’s diseases is due to :

|  |  |
| --- | --- |
| a) Hyperactivity of thyroid gland | b) Hypoactivity of adrenal cortex |
| c) Hyperactivity of adrenal medulla | d) Hypoactivity of islet of Langerhans |

1. Hashimoto’s diseases is related to :

|  |  |  |  |
| --- | --- | --- | --- |
| a) thyroid | b) thymus | c) pituitary | d) adrenals |

1. Parathormone is responsible for :

|  |  |
| --- | --- |
| a) Filtration of nephron | b) Increasing absorption of water |
| c) Increasing calcium level in blood | d) Decreasing calcium level in blood |

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

|  |  |  |  |
| --- | --- | --- | --- |
| a) parotid | b) thyroid | c) pancreas | d) parathyroid |

1. Hassall’s corpuscles are found in :

|  |  |  |  |
| --- | --- | --- | --- |
| a) spleen | b) parathyroid | c) adrenal gland | d) thymus |

1. All hormones of the adrenal cortex are synthesized from :

|  |  |  |  |
| --- | --- | --- | --- |
| a) tyrosine | b) cholesterol | c) glycoproteins | d) none of these |

1. Aldosterone is secreted by :

|  |  |  |  |
| --- | --- | --- | --- |
| a) zona pellucida | b) zona reticularis | c) zona fasciculates | d) zona glomerulosa |

1. Which of the following does not act, as a neurotransmitter?

|  |  |  |  |
| --- | --- | --- | --- |
| a) cortisone | b) epinephrine | c) acetylcholine | d) nor epinephrine |

1. Excess of which of the following hormones causes Cushing’s syndrome?

|  |  |  |  |
| --- | --- | --- | --- |
| a) Thyroxine | b) adrenaline | c) cortisol | d) noradrenaline |

1. Depict the correct site of hormone:

|  |  |
| --- | --- |
| a) – glucagon ; – insulin ; – somatostatin | b) – insulin ; – glucagon ; – somatostatin |
| c) – insulin ; – somatostatin ; – glucagon | d) – somatostatin ; – insulin ; – glucagon |

1. Pancreatic duct of a healthy dog is blocked. Which one of the function will not be affected?

|  |  |
| --- | --- |
| a) Protein digestion | b) carbohydrate digestion |
| c) neutralization of chime | d) maintenance of normal blood sugar level |

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

|  |  |
| --- | --- |
| a) Insulin – Diabetes insipidus | b) Thyroxine – Tetany |
| c) Parathyroid – Diabetes mellitus | d) luteinizing – Failure of ovulation hormone |

**[Class =11th]**

**Answers**

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**Topic: Chemical Control & Integration**

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