CBSE TEST PAPER-02

CLASS - XI BIOLOGY

(Chemical Co – Ordination and Integration)

General Instruction:

- All questions are compulsory.
- Question No. 1 to 3 carry one marks each. Question No. 4 to 6 carry two marks each. Question No. 7 and 8 carry three marks each. Question No. 9 carry five marks.

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1. Distinguish between diabetes mellitus and diabetes insipidus.

2. Name the hormones of fight or flight.

3. Name the hormone secreted from outermost cellular layer of adrenal cortex?

4. What usually can cause over secretion of parathormone in human body? List any two effects on the body because of this hormone.

5. What is the function of pineal gland?

6. Explain the hormones of kidney and GI tract.

7. Differentiate between exocrine, endocrine & heterocrine glands.

8. Name the T3 and T4 components of thyroid hormone. Explain their specific function.

9. Explain the Hormones of adrenal gland and their action on target tissue in a tabular from.

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[ANSWERS]

Ans 01. Diabetes mellitus is caused due to less secretion of Insulin by β cells of Islet of langerhans in pancreas. Diabetes insipidus is caused due to less secretion of ADH (vasopressin) by posterior pituitary gland.

Ans 02. Adrenaline and nor – adrenaline.

Ans 03. Aldosterone, a mineral ocorticoid.

Ans 04. A tumors in parathyroid glands causes the over secretion / hypersecretion of parthormone. Due to demineralization, the bones become deformed and are early fractured. If untreated, it can lead to osteitis fibrosa cystica disease in human beings.

Ans 05. It secretes a hormone the melatonin. It reduces the reproductive activity and may also delay the sexual development in an individual.

Ans 06. Kidney – Juxtaglimerular cells of kidney secrete a peptide hormone called erythropoietin. It stimulates erythropoiesis or formation of RBC's of blood-

G – I tract – The endocrine cells found in various parts of gastro-intestine tract secrete 4 peptide hormones –

Gastrin, secretin, cholecystokinin (CCK) as well as gastric Inhibitory peptide or GIP.

Ans 07.

	Exocrine glands	Endocrine glands	Heterorine glands
1.	It has a duct	It is ductless gland.	It is partly endocrine & partly exocrine
2.	Their secretions are carried by the ducts to the internal parts or body surface e.g salivary gland	Their secretions are carried by blood to the target organs e.g. Parathyroid, pituitary	Endocrine part releases hormones into blood stream while exocrine part into ducts associated with it e.g. pancreas,

	in mouth.	and adrenals.	ovary's, testis.

Ans 08. T3 = Thyroxin. It contains 4 atoms of iodine.

T4 = Triiodothyroxine. It has 3 atoms of iodine

T3 and T4 have identical effects on target cells. They are called together as TH (Thyroid hormone)

They : 1) regulate metabolic rate 2) regulate metabolism

3) help in metamorphosis of frog.

Ans 09.

	Endocrine glands & Hormones	Principal Action	Target tissue
1.	Mineral corticoids (Aldosterone)	They control electrolyte and water metabolism. The increase blood level of Na^+ and water. They decrease blood levels of K^+ by stimulating kidney tubules to reabsorb more Na^+ Cl^- and water and less K^+.	Kidney tubules
2.	Glucocorticoids (corticosol corticosterone & cortisone)	They raise blood glucose level. They promote gluconeogenesis and also promote liver glycogen formation and breakdown of plasma proteins. They increase availability of amino acids for enzymes synthesis by liver general resistance to long term. Stress counter inflammatory and allergic responses, and decreases antibody production.	Liver
3.	Gonadocorticoids (Androgens and estrogens)	Concentrations secreted by adults are low. Their effects are usually insignificant. They stimulate development of secondary sexual characteristics specially in males.	Gonads
		Stimulates elevation of blood glucose by converting liver glycogen to glucose, hormone. Rise in blood pressure	Skeletal muscles fat cells,

4.	Adrenaline	acceleration of rate and force of heart beat, constriction of skin and visceral smooth muscle capillaries muscles, dilation of arterioles of heart and skeleton increase in breakdown of lipids Increase in oxygen consumption erection of hairs, dilation of pupils. They initiate stress responses.	cardiac muscles, smooth muscles, blood vessel.
5.	Nor adrenaline Hormone	It stimulates reactions similar to those produced by adrenaline.	-