

Topic :- Chemical Coordination and

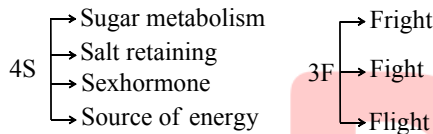
- 1 (c)
Endemic or simple goitre occurs due to deficiency of iodine. It is non-genetic. It is characterized by enlargement of thyroid gland due to increased in number and size of acinar cells of thyroid gland.
- 2 (a)
Tyrosine combines with iodine and is modified to form two thyroid hormones
(i) Triiodothyronine (T_3) (ii) Tetraiodothyronine (T_4)
Out of these two, tetraiodothyronine is popularly called thyroxine
- 3 (c)
A-dorsal, B-heart, C-immune
- 4 (b)
Vasopressin released by posterior lobe of pituitary acts mainly at the kidney and stimulates, reabsorption of water and electrolytes by the distal tubules and thereby reduces the loss of water through urine (diuresis). Hence. It is also called Anti-Diuretic Hormone (ADH)
- 5 (a)
Thyroxine is produced by thyroid gland which increases catabolism, produces energy and increases the body temperature. This process is called **calorigenic effect**.
- 6 (d)
Hormones acts as intercellular chemicals. Hormones produced in trace quantity.
Hormones are non-nutrient chemicals
- 7 (d)
The thyroid gland is composed of follicles and stromal tissue. Each thyroid follicle is composed of follicular cells enclosing a cavity.
These follicle cells synthesise two hormones tetraiodothyronine or thyroxine (T_4) and triiodothyronine (T_3)

8 **(c)**
Pineal gland is an endocrine gland, composed of modified nerve cells called pinealocytes.

9 **(b)**
Thyroid stimulating hormone or TSH is a glycoproteinaceous hormone secreted by special basophilic cells of adenohypophysis and promotes the growth and function of thyroid gland. The secretion of TSH is regulated by thyroxine through negative feedback mechanism.

10 **(a)**
The parathormone secreted by parathyroid gland regulates the calcium and phosphate balance between the blood and other tissues.

11 **(c)**
Adrenal gland is also called 4S gland and 3F gland



12 **(d)**
Secretion of posterior pituitary is under the control of neurosecretory nerve axons.

13 **(d)**
Insulin is a peptide hormone, which plays a major role in the regulation of glucose homeostasis. Insulin acts mainly on hepatocytes and adipocytes (cells of adipose tissue) and enhances cellular glucose uptake and utilization. As a result there is a rapid movement of glucose from blood to hepatocytes and adipocytes resulting in decreased blood glucose level (hypoglycemia). Insulin also stimulates conversion of glucose to glycogen (glycogenesis) in target cells

14 **(d)**
Melatonin is a naturally occurring compound found in animals, plants and microbes. In mammals melatonin is secreted by the pineal gland in the brain. It is commonly known as 'Hormone of darkness'. It may also be produced by a variety of peripheral cells, such as bone marrow cells, lymphocytes and epithelial cells.

15 **(c)**
Thyroid gland is the largest endocrine gland.

16 **(b)**
GnRH (Gonadotropin Releasing Hormone) from hypothalamus stimulates the pituitary synthesis and release of gonadotropins. On the other hand somatostatin from

hypothalamus inhibits the release of growth hormone from pituitary

17 **(a)**

The pituitary gland is located in a bony cavity called **sella tursica** attached to hypothalamus by a stalk. It is divided anatomically into an adenohypophysis and a neurohypophysis. The latter is also called pars nervosa or posterior pituitary. It stores and releases two hormone called **oxytocin** and **vasopressin**. Which are actually synthesized by the hypothalamus and are transported axonally to neurohypophysis. Vasopressin acts mainly at the kidney and stimulates resorption of water and electrolytes by the distal convoluted tubules in the nephron and thereby reduces loss of water through urine (diuresis). Hence, it is also called as anti-diuretic hormone (ADH).

18 **(d)**

Deficiency of anti diuretic hormone (ADH) or vasopressin causes diabetes insipidus, in which urination is frequent and copious, resulting in loss of water from the body and the person becomes thirsty.

19 **(b)**

Over secretion of GH stimulates abnormal growth of the body leading to gigantism and low secretion of GH results in stunted growth resulting in dwarfism

20 **(d)**

The pineal body (gland) is small mass of tissues near the centre of the mammalian brain. The pineal secretes two biogenic hormone melatonin and serotonin. The pineal contains light sensitive cells and has nervous connections from the eyes. Melatonin regulates function related to light. It also regulates sexual behavior and regulating the period of puberty.

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	c	a	c	b	a	d	d	c	b	a
Q.	11	12	13	14	15	16	17	18	19	20
A.	c	d	d	d	c	b	a	d	b	d

PE