**IQRA NATIONAL UNIVERSITY**

**DEPARTMENT OF ALLIED HEALTH SCIENCES**

**Final -Term Examination (Spring-2020)**

**Course Title: chemical pathology (MLT 4rth ) Instructor: Mr adnan ahmad**

**Time: 6 hours Marks 50**

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**Note:**

* **Attempt All(five) questions from this section, all questions carry equal marks.**
* **Use only Blue / Black Ink other than diagrams**
* **Answer Briefly and to the point, avoid un-necessary details**
* **Possession of Mobile Phones is strictly prohibited**
* **Every question must be attempted within one single page of two sided specified in answer book**

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Q1: Write down a detail note on thyroid hormones.

Answer. 1.

Thyroid hormones:

Thyroid hormones are released by thyroid gland.

And they are produced two types hormones. Namely triiodothyonin (T3) and other one is thyroxine (T) .these are responsible for regulations of metabolism. T3 andT4 enlarges the thyroid tissue to caused the disease known as Graves disease. The major form of thyroid hormone is thyroxine (T4) which are longer life than (T3) .

They act to increase metabolic rate to all body parts.

Thyroid hormone are important for different cell developed. These are regular protein, fat and also carbohydrates metabolism

Function.

Thyroid hormone are play in important role of body metabolism, protein synthesis, help long bone growth and increase body sensitivity.

Helps to cell maturation of cells.

If the thyroid hormone are produced abnormal least to disease called Hyperthyroidism.

Hyperthyroidism.

If the T3 and T4 are become overactive.

And other one is hypothyroidism.

Hypothyroidism.

If the thyroid hormone are released are very low the disease called hypothyroidism.

Lab diagnosis:

Measured plasma level for T3 and T4

Also basal metabolic rate etc

Q2: Explain and classify Adrenocortical Hormone.

Answer. 2.

Adrenocortical Hormone:

Adrenocortical hormone are produced by the adrenal cortex, these are the outer part of the adrenal gland.

These are polycyclic steroid hormone have a different act of body functions .these are responsible for the stress .example. Fight\_or\_Fight responsible. Are also regulate other body function. For the stress responsible hormone called aldosterone and cortisol .

These hormone to regulate homeostasis.

Classify:

Three classes by there function .1.Mineral ocotillos hormone. These are synthesis are the outer most layer of the adrenal cortex.

Their function to regulate the concentration of electrolytes which are circulation in the blood.

For example. Aldosterone function to increase the blood sodium level and also potassium level in the blood.

Glucocorticoid:

Synthesis are middle layer of the adrenal cortex.

To regulate protein, fats

Androgen:

These are also produced in thyroid gland. But small amamount.

Layers:

1.The zona glomerulosa.

2.The zona fasciculata.

3.The zona reticular is.

Q3: define and Explain Hyperthyroidism and hypothyroidism.

Answer. 3.

Hyperthyroidism:

The name indicated hyper when your body makes too much of the thyroid hormone, T4 and T3 to become overactive. If you have hyperthyroidism you may a fast heat beat,

Signs of the hyperthyroidism:

Heart beat increase

Thyroiditis etc

Hypothyroidism:

When the thyroid gland released very low thyroid hormone in the body .if the thyroid hormone are low released then the metabolic rate activity are less. Which are least to weight loss .the will be not performed a well metabolic function.

Q4: How calcium is regulated? Define Osteomalacia.

Answer. 4.

Calcium Regulated:

The regulating hormone for the calcium is parathyroid hormone. Calcitonin stimulate incorporated of calcium bone.parathyroid hormone are regulate the calcium in the body's.

As it contains 99% of the total body calcium. Calcium are very need for bone.

Osteomalacia:

These are the bone disease in which the metabolism are weake. In which the production of bone cell weake .

The production of bone is need to phosphate,calcium, and vitamin D .the weake of these minerals to lead osteomalacia.

Q5: Writ a short note on sex hormones.

Answer. 5.

Sex hormone:

Hormone are chemical substances synthesis are small amount by endocrine tissue and carry by blood stream the an author function of the target tissue or organ.

The below of the names of sex hormone .

1.Estrogens.

2.Progesterone.

3.Anti estrogens.

Sex hormone are also called sex steroid.and then interact with vertebrates steroid hormone receptors.

They are responsible for the different body function and metabolism sexx hormone are divided into two sex hormone types .

1.Male sex hormone:

These are produced in testosterone for production of sperms.

2.Female sex hormone:

Produced are ovary estrogen and other is progesterone.