DPT SEC B PHYSIOLOGY, 2ND SEMESTER

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Attempt all questions. Every question carry 10 marks.

Q1. Write a note on pituitary gland, its harmones and abnormalities?

**Answer:**

 **Pituitary Gland:**

It is located in head.It is also called master gland because it control other gland through it harmones.And it also control many body function including growth.These influences are exerted through the effect of pituitary harmones on other endocrine glands except for growth harmones which acts directly on cells.

* its weaight about 0.5 gm in adult.
* it has two lobes i.e anterior and posterior lobe.

**Hormones:**

 **Anterior lobe of pituitary gland:**

It secrete the following hormones.

* **Growth hormones:**

This hormone increases the cell division of somatic cell and promotes the growth of the body.

* **Thyroid stimulating hormones:**

 This hormone controls the development and secretion of thyroid harmone.(thyroxin)

* **Adreno-cortico-trophic hormones:**

It acts on the cortex part of adrenal gland to release the adrenal hormone.

* **Luteinising hormones:**

 It is needed for release of egg from the ovary in the female and in male it stimulate taste to produce sex hormone.

**Posterior lobe of pituitary gland:**

It secrete the following harmones.

* **Antidiuretic hormones:**

 It affect the renal tubule to reabsorb large quantity of water from glomeruler filtrate.

* **Oxytocin:**

It contract the uterus muscles during child birth.it also stimulates the flow of milk from the breasts during lactation.

**Abnormalities of pituitary gland:**

* Acromegaly.
* Adrenal insufficiency (Addison's Disease)
* Craniopharyngioma
* Cushing's syndrome
* Empty sella syndrome
* Familial isolated pituitary adenoma
* FSH and LH tumors
* GH deficiency

Q2. What is erythrocyte, erythropoiesis, erythrocytosis and erythropenia?

**Answer:**

 **Erythrocythe:(RBCs)**

A type of blood cell that is made in the bone marrow and found in the blood. Erythrocytes contain a protein called hemoglobin, which carries oxygen from the lungs to all parts of the body. Checking the number of erythrocytes in the blood is usually part of a complete blood cell (CBC) test. It may be used to look for conditions such as anemia, dehydration, malnutrition, and leukemia. Also called RBC and red blood cell.

**Erythropoiesis:**

The formation of red blood cells in blood-forming tissue. In the early development of a fetus, erythropoiesis takes place in the yolk sac, spleen, and liver. After birth, all erythropoiesis occurs in the bone marrow.

**Erythrocytosis:**

Increase in the amount of erythrocytes in the blood.It is asosiated with increased hematocrit and hemaglobin concentration.

**Erthropenia:**

Decrease in the amount of erythrocytes in the blood.it is also called erythrocytopenia.

Q3. What is platelets and write about clotting mechanism and its all steps?

**Answer:**

 **Platelets:**

Platelets are tiny blood cells that help your body form clots to stop bleeding. If one of your blood vessels gets damaged, it sends out signals to the platelets. The platelets then rush to the site of damage. they form a plug (clot) to fix the damage.

**Clotting mechanism:**

It is the process by which blood changes from a liquid to a gel, forming a blood clot. The mechanism of coagulation involves activation, adhesion and aggregation of platelets, as well as deposition and maturation of fibrin.

**Steps:**

1) Constriction of the blood vessel.

 2) Formation of a temporary “platelet plug."

 3) Activation of the coagulation cascade.

 4) Formation of “fibrin plug” or the final clot.

Q4. Write a detail note on ABO system?

**Answer:**

 **ABO system:**

ABO blood group system, the classification of human blood based on the inherited properties of red blood cells (erythrocytes) as determined by the presence or absence of the antigens A and B, which are carried on the surface of the red cells. Persons may thus have type A, type B, type O, or type AB blood.

The importance of knowing your blood type is to prevent the risk of you receiving an incompatible blood type at a time of need, such as during a blood transfusion or during surgery.

Of the eight main blood types, people with type O have the lowest risk for heart disease. People with types AB and B are at the greatest risk, which could be a result of higher rates of inflammation for these blood types. A heart-healthy lifestyle is particularly important for people with types AB and B blood.

Q5.(i) A person fell from a tree and become unconscious, with bleeding from head, what will you do as a first aid?

**Answer:**

* Secure bleeding
* secure the airways
* Hospitalise the patient
* stabilize the patient
* Do CT brain to find out the site and severity of the injury.

Q5:(ii) you have to

meet with your friend and you came to know he is covid positive, what precautionary measures will you take?

**Answer:**

* Testing is recommended for all close contacts of confirmed or probable COVID-19 patients.
* Those contacts who test positive (symptomatic or asymptomatic) should be managed as a confirmed COVID-19 case.
* Asymptomatic contacts testing negative should self-quarantine for 14 days from their last exposure (i.e., close encounter with confirmed or probable COVID-19 case)
* If testing is not available, symptomatic close contacts should self-isolate and be managed as a probable COVID-19 case.
* If testing is not available, asymptomatic close contacts should self-quarantine and be monitored for 14 days after their last exposure, with linkage to clinical care for those who develop symptoms.