

## DPT SEC B PHYSIOLOGY, 2<sup>ND</sup> SEMESTER

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Attempt all questions. Every question carry 10 marks.

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

Ans) **PITUITARY GLAND :**

The pituitary , also referred to as the hypophysis, it is a small, pea-sized gland located at the bottom of our brains. It is mentioned because the “master gland” of the physical body , because it releases a spread of hormones that circulate our system and aid in maintaining our internal homeostasis. The pituitary is named the master gland of the system . this is often because it controls many other hormone glands within the body.

**HORMONES :**

pituitary organ delivers the following hormones and discharges them into the circulatory system:

- \*adrenocorticotrophic hormone, which animates the adrenal organs to discharge steroid hormones, primarily cortisol
- \*development hormone, which directs development, digestion and body arrangement
- \*luteinising hormone and follicle animating hormone, additionally referenced as gonadotrophins. They follow up on the ovaries or testicles to invigorate steroid creation, and egg and sperm development
- \*prolactin, which invigorates milk creation
- \*thyroid invigorating hormone, which animates the thyroid to discharge thyroid hormones. hostile to diuretic hormone (likewise called vasopressin), which controls water equalization and pulse
- \*oxytocin, which animates uterine compressions during work and milk emission during breastfeeding.

**ABNORMALITIES:**

- \*Acromegaly.
- \* Insufficiency (Addison's Disease)
- \*Craniopharyngioma.
- \*Cushing's Syndrome.
- \*Empty Sella Syndrome.
- \*Familial Isolated Pituitary Adenoma.
- \*FSH & LH Tumors.
- \*GH Deficiency.

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

Ans) **ERYTHROCYTE:**

Human erythrocytes or red blood cells (RBCs) are the first cellular component of blood. They are involved in oxygen transport through the body and have features that distinguish them from every other type of human cell. A normal count in adults is usually considered to be 4.35 to 5.65 million red blood cells per microliter (mcL) of blood for men and three .92 to 5.13 million red blood cells per mcL of blood for women.

**ERYTHROPOIESIS:**

: Erythropoiesis is that the technique which produces red platelets, which is that the occasion from erythropoietic vegetative cell to develop red platelet . it's animated by diminished  $O_2$  available for use, which is identified by the kidneys, which at that point emit the hormone erythropoietin. Folate, vitamin B12, and iron have crucial roles in erythropoiesis.

**EYTHROCYTOSIS:**

Erythrocytosis is characterized as an expansion in red platelet (RBC) mass, generally total, and is likewise connected with an expanded hematocrit (HCT) and hemoglobin focus. Albeit some utilization the term polycythemia reciprocally with erythrocytosis, the two are not equal.

**ERYTHROPENIA:**

Erythropenia    Physiological Pathological Absolute Primary - Deficiency of - Bone marrow creation issue. Relative Secondary - Pregnancy - because of any kidney (RBC deteriorates in fluid) sickness

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

#### **PLATELETS:**

Platelets, or thrombocytes, are little, drab cell parts in our blood that structure coagulations and stop or forestall dying. Platelets are made in our bone marrow, the wipe like tissue inside our bones. Bone marrow contains immature microorganisms that form into red platelets, white platelets, and platelets .It's life span is 10days

Functions

\* stop bleeding

\*Maintain hemostasis

\*Clotting mechanism

#### **CLOTTING MECHANISM :**

Coagulation, in any case called thickening, is that the technique by which blood changes from a liquid to a gel, surrounding a blood thickening . ... The instrument of coagulation incorporates commencement, security and combination of platelets, even as declaration and improvement 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?

Ans) **ABO SYSTEM:**

The ABO blood type system is employed to denote the presence of both or neither of the A and B antigens on erythrocytes.

1] In human blood transfusions it's the foremost important of the 36 different blood group (or group) classification systems currently recognized.

[2] A mismatch (very rare in modern medicine) during this, or the other serotype, can cause a potentially fatal adverse reaction after a transfusion, or an unwanted immunologic response to an surgery.

3] The associated anti-A and anti-B antibodies are usually IgM antibodies, produced within the first years of life by sensitization to environmental substances like food, bacteria, and viruses

The ABO framework is viewed as the most significant blood-bunch framework in transfusion medication as a result of extreme hemolytic transfusion responses and, less significantly, hemolytic illness of the infant. ... ABO antigens are communicated on RBCs, platelets, and endothelial cells and are available in body liquids

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

Ans\*)we have to stay calm

\*First of all we will check his ABC ( air breathing circulation )

\*Then we will make his position in a way that his air ways get clear

\*Make his head straight or in a backward position that he can breath easily

\*After that we will try get help by calling an ambulance

\*Then try to stop the bleeding

\*Try to tie the part from where it's bleeding to prevent the bleeding

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

Ans ) if we are going to meet a covid 19 positive patient the precautions I will take are

" Wear the mask

\*Wash the hands and wear gloves

\*Try to stay in distance not get very close to him

"Avoid shake hands

\*Will not touch my face or eyes

\*Do not share food with him

\*Do not hug

\*Through the gloves in the trash after meeting is over

\*Sanitize the hands after removing the gloves

\*Take a bath after the meeting with a soap or wash ur hands and face