

DPT SEC B PHYSIOLOGY, 2ND SEMESTER

MAM KOUSAR SHAH JEHAN

STUDENT NAME _ASIF KHAN _____ , ID ____16810_____

Attempt all questions. Every question carry 10 marks.

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

Answer No1:

Pituitary gland:

The fundamental endocrine organ. It is a little structure in the head. It is known as the ace organ since it produces hormones that control different organs and many body capacities including development. The pituitary consists of the anterior and posterior pituitary.

The Anterior pituitary is the front segment of the pituitary. Hormones emitted by it impact development, sexual turn of events, skin pigmentation, thyroid capacity, and adrenocortical capacity. These impacts are applied through the impacts of pituitary hormones on other endocrine organs aside from development hormone which acts directly on cells.

The posterior pituitary is the back segment of the pituitary. It secretes the hormone oxytocin which increments uterine constrictions and antidiuretic hormone (ADH) which builds reabsorption of water by the tubules of the kidney. Underproduction of ADH brings about a confusion called diabetes insipidus described by powerlessness to think the pee and, thusly, abundance pee driving conceivably to lack of hydration. The pee is "dull" (excessively weakened).

Hormones secreted by pituitary gland:

1. **Anterior pituitary**
 - Growth hormone
 - prolactin
 - Adrenocorticotropin hormone
 - thyrotropin hormone
 - Luteinizing hormone
 - Follicle stimulating hormone.

2. Posterior pituitary

- oxytocin
- Antidiuretic hormone

Abnormalities:

Headaches

Vision problems

Unexplained tiredness

Mood changes

Irritability

Changes in menstrual cycles in women

Infertility, which is the inability to have children

Inappropriate breast growth or production of breast milk

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

Answer No2:

Erythrocyte:

A red blood cell, which (in human) is commonly a biconcave circle without a nucleus. Erythrocytes contain the shade hemoglobin, which confers the red shading to blood, and transport oxygen and carbon dioxide to and from the tissues.

Erythropoiesis:

The arrangement of red blood cells in blood-shaping tissue. In the early advancement of an embryo, erythropoiesis happens in the yolk sac, spleen, and liver. After birth, all erythropoiesis happens in the bone marrow.

Erythrocytosis:

Erythrocytosis is a condition where your body makes such a large number of red blood cells (RBCs), or erythrocytes. RBCs convey oxygen to your organs and tissues. Having such a large number of these cells can make your blood thicker than ordinary and lead to blood clumps and different difficulties.

Erythropenia:

A decrease in the number of erythrocytes, associated with anemia.

Related terms:

- Erythropenic

Symptoms:

- Erythrocytopenia

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

Answer No3:

Platelets:

It is also called thrombocytes are a component of blood whose function is to react to bleeding from blood vessels injury by clumping, thereby initiating a blood clot.

These cells are called WBCs. Which is necessary for the human body which defends any bacteria against the body... And if there is any cut on the body it provides covering to that.

The life span of platelets is 10 days.

Clotting mechanism: Clotting means bloods change from liquid to gel.

Instantly after an injury to the blood vessel which has damaged the endothelium lining the vessel.

Clotting mechanism stops bleeding from damaged vessels maintained Homeostasis.

Steps of mechanism: The following steps are involved in clotting mechanism.

1. Adhesion:

- Injury to the blood vessel.
- Endothelium lining the vessel damage.
- Blood comes into space under endothelium
- Under lying collagen exposed to circulating platelets.

- Platelets binds with surface receptor of collagen and adhere tightly.
2. **Activation:**
- Platelets change shape.
 - Turn on receptor and secret chemical messenger to activate and invite additional platelets.
 - Activated platelets adhere tightly at injury site.
3. **Aggregation:**
- Platelets connect to each other through receptor Bridges.
 - Platelets plug formed at injury site unless the interruption is physically too large.
4. **Fibrin deposition:**
- Formation of platelets plug will ensure primary hemostasis.
 - Now fibrin deposition start and thus started secondary hemostasis.
 - Thus fibrin clot formed.
 - Now clot retraction end.

Q4. Write a detail note on ABO system?

Answer No4:

ABO system:

A system which is used to group human blood into different types, based on the presence or absence of certain markers on the surface of red blood cells.

Uses:

The ABO blood group system is used to denote the presence of one, both, or neither of the A and B antigens on erythrocytes. In human blood transfusions it is the most important of the 36 different blood type (or group) classification systems currently recognized.

Blood types:

The four main blood types are A, B, O, and AB.

Type A:

The type A blood type contains antigen A and produces antibodies B.

Type B:

The type B blood type contain antigen B and produces antibodies A.

Type AB:

The type AB blood group contain both antigens A and B and doesn't produce antibodies.

Type O:

The type O blood group contains no antigens and produces antibodies A and B.

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

Answer No5 (j):

The treatment of head injuries depend on the injury severity. Most often, mild injuries do not require treatment. However you should know the signs and symptoms that require medical attention.

- If the head injury is severe, call the ambulance immediately.
- if the injured person is bleeding , try to stop bleeding by using guaze ,or a clean cloth.
- If the wound is open don't touch or apply pressure on it.
- Cover or wrap wound with a clean piece of bandages .

- If the person is vomiting while sitting, help them to lean forward. If the person is vomiting while lying down, roll the body to the side to prevent choking.

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

Answer No5(ii):

1: we should wear face masks and gloves before meeting

2: Avoid Hand shaking and hugs

3: Wash hands for 20 seconds after meeting

4 : Sanitize hands

5: Keep atleast 6 feet's or 2 meters distance Between