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?

Pituaitry gland:

Are also called hypophysis, ductless gland of the endocrine system that secretes harmones directly into the bloodstream. The term hypophysis another name for the pituaitry refer's to the gland position on the underside of the brain. The pituaitry gland is also called master gland because its harmones regulate other important endocrine gland.

Harmones :

The two sections of the pituatry gland produce a number of different of harmones which act on different target gland or cell.

Antetrior pituitary:

- Adrenocorticotrophic hormone
- Thyroid stimulating hormone
- Luteinizing hormone
- Follicle-stimulating hormone
- Prolactin
- Growth harmone
- Melanocyte-stimulating hormone

Posterior pituitary:

- Anti-diuretic hormone
- Oxytocin

Disorders affecting the pituitary gland:

- Acromegaly
- Adrenal insufficiency
- Craniopharyngioma
- Crushing's syndrome
- Empty sella syndrome
- Familial isolated pituitary adrenoma
- FSH, LH tumors

Q2. What is erythrocyte erythropoiesis, erythrocytosis and erythropenia?

Erythrocyte :

Commonly known as a red blood cells , is by far the most common formed element , a single drop of element contain millions of erythrocyte and just thousands of leukocytes. Specifiacally ,males have about 5.4 million erythrocytes and female have approximately 4.8 million per ul. In fact, erythrocytes are estimated to make up about 25% percent of total cells.

Erythropoiesis :

Is the peocess in which produce red blood cells which is the development from erythropoietic stem cell to mature red blood cells… this is termed extrameduillary erythropoiesis. In vertebrates requires the presence of cells that ensure a continuous production of new cells needed to replace muture blood elements.

Erythrocytosis :

Is a condition in which your body makes too many red blood cells or erythrocytes. RBCs carry oxygen to your organs and tissues. Having too many of these cells can make your blood thicker than normal and leads to blood clots.

Erythropenia :

The presence of decreased number of erythyrocytes in the blood as occur in some forms of anaemia: also called erythropenia.

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

ANS: **platelets:**

Are the component of blood whose function is react bleeding from blood vessels injury by clumping , thereby initiating a blood clot. Platelets have no nucleus ; they are fragment of cytoplasm.

Cloting mechanism :

The cloting mechanism is broken into two stages:

Primary homeostasis:

1. Formation of weak platelet plug

Primary homeostasis is the formation of a weak platelets plug which is achieved in four phases. Vasoconstriction, platelet adhesion, platelet activation, platelet aggregation.

Secondary homeostasis:

2. Stabilizing the weak platelet plug into a clot by the fibrin network.

Secondary homeostasis involves the clotting factors acting in cascade to ultimately stabilize by weak platelet .(1) Triggering activation of clotting cloting factors,2) conversion of prothrombin to thrombin,3)and conversion of fibrinogen to fibrin.

Q4. Write a detail note on ABO system?

ABO blood group: The major human blood group system. The ABO type of a person depends on the presence or absence of two genes, A and B. These genes determines the configuration of the red blood cells surface. A person who has two A genes or an A and an O gene has red blood cells of type A. A person who has two B genes or one B and one O gene has red cells of type B.

The classification of human blood based on the inherited properities of red blood cells as the presence or absence of antigens A and B, which is carried on the surface of red blood cells . Blood containing red cells the type of A antigen on the surface has in its serum antibodies against type B red cells . if in transfusion type B blood is injected into persons with type A blood , the red cells in the injected blood will be destroyed by the antibodies in the recipient blood.

The ABO antigens are developed well before birth and remain throughout life.

Q:5 a person fell from tree and become unconscious, with bleeding from head, what will you do as a first aid?

First aid for head injury:

in cases where there is a serious head injury, always call an ambulance.

First aid when the injured person is unconscious:

The person should not be moved unless they are in immediate danger. Any unnecessary movement cause greater complication to the head injury itself, the spine or other associated injuries. A good rule is that if the head is injured, the neck may be injured too.

Your role is to protect the injured person from any potential danger at the scene. You should also monitor their airway and breathing until the arrival of an ambulance. If the person's breathing become impaired due to problem with their airway , you may need to very carefully till their head back, until normal breathing returns. If the person has no pulse cardiopulmonary resuscitation may b required.

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

ANS: when I meet with my friend who is covid positive I make assure my precaution.

- Use of gloves
- Use of mask
- Avoid hand shaking
- Use a sanitizer
- Take a bath or shower
- Change clothes
- With social distancing