Physiology II Summer Theory

Final term paper(50 marks)

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Q1.write a note on ABO blood group system?

**ABO BLOOD GROUP SYSTEM;**

It is a system to group human blood into different types. This differentiation is done on bases of presence and absence of certain markers on the surface of red blood cells.

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 38 different blood types.

The ABO blood types were first discovered by an Austrian Physician Karl Landsteiner working at the Pathological-Anatomical institute of the university of Vienna.

In 1990’s he found that red blood cells would clump together if they get mixed in test tubes with sera from different persons

Q2. A patient is AB +, he need blood ,which blood group people can give blood to him?

The patient with AB+ ,if need blood so the following blood group people can give them blood;

A+

A-

B+

B-

O+

O-

AB+

AB-

All the following blood groups can donate blood to patient of AB+.

Q3.write a detail note on CVS with diagram?

The CVS (cardiovascular system) consists of the heart, blood vessels, and blood.

This system has three main functions;

Transport of nutrients

Oxygen Transportation.

Hormones to cells throughout the body

Removal of metabolic wastes (carbon dioxide, nitrogenous wastes)

This system is also called as circulatory system. As this system moves the blood throughout the body so, cells receive oxygen and nutrients.

There are two major organs that is the heart and the lungs in this system. Cardiovascular disease includes all heart and circulatory diseases, including coronary heart disease, hypertension, heart attack, congenital heart disease, stroke and vascular dementia. It's also known as heart and circulatory disease

Q4.what is the difference between active and passive immunity?

**ACTIVE IMMUNITY;**

It is a type of immunity ,which results from the production of antibodies by the immune system in response to presence of an antigen.

Active immunity is the response to a pathogen . it relies on the body making antibodies, which take time to mount an attack against bacteria or viruses.

**PASSIVE IMMUNITY;**

Passive immunity occurs when the antibodies are introduced rather then made. Here the immune response occurs immediately.

It can stop the Malicious foreign body in various ways. It can provide a barrier that prevents harmful substances from gaining access of the organism.

It can even be an untrained cell , which attacks invaders directly.

**DIFFERENCE;**

The main difference between active immunity and passive immunity is that active immunity is against direct antigen or bacteria while on the other hand passive immunity does not need any direct contact with the antigen or bacteria.

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| Active immunity | Passive immunity |
| It is usually permanent | It lasts for few weeks |
| It produces an immunological memory. | It does not produce immunological memory. |
| There are no side effects | It may cause reaction |
| Immunity does not take place immediately | Immunity develops immediately |

Q5.write a note on lymphatic system in detail?

LYMPHATIC SYSTEM;

It is a system of delicate tubes through out the body .

It drains fluids that has leaked from the blood vessels inside the tissues and empties it back into the bloodstream through the lymph nodes.

The main roles of lymphatic system are as following;

Managing the fluid levels in the body.

Reacting to bacteria.

Dealing with the cells of cancer.

Absorbing some fats from out diet from the intestine.

The lymph nodes and the other lymphatic structures like the spleen and thymus hold special white blood cells, which are known as lymphocytes.

They can rapidly multiply and release antibodies in response to bacteria, viruses, and a range of other stimuli from dead or dying cells and abnormally behaving cells such as cancer cells.

They transfer clean fluids back to the blood

Drains excess fluids from tissue.

Remove debris from cells of body.