

**A&P 102 FINAL EXAM IVY TECH 2 LATEST VERSIONS
(VERSION A AND B) 2023-2024 ACTUAL EXAM 400
QUESTIONS AND CORRECT DETAILED ANSWERS WITH
RATIONALES|ALREADY GRADED A+**

VERSION A

Describe the pathway of the cardiac conduction system. - ANSWER-
The cardiac cycle begins in the right atrial wall at the sinoatrial node (SA node). After the SA node conducts an impulse, there is a very brief period before it is sent to the atrioventricular (AV) node. From the AV node, the impulse is sent down the interventricular septum to the Bundle of His, which conducts the impulse down the right and left bundle branches to the Purkinje fibers which travel from the apex to the outer sides of the heart.

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Describe an EKG. What is occurring within the heart during each part of the EKG? - ANSWER- A recordable tracing of the electrical activity of the heart that the production and conduction of action potentials in the heart produces.

What types of cells provide our immunity? - ANSWER- T cells and B cells

What is the function of lymph? - ANSWER- filters the blood by removing toxins

How does stress affect immunity? - ANSWER- With chronic stress, the immune system stays in low gear, leaving the body vulnerable to infection and disease. Basically, it suppresses it.

Compare and contrast passive versus active immunity. - ANSWER- immunity that results from the production of antibodies against a foreign antigen

state of permanent resistance

duration: long

immunity that results from transfer of antibodies from one individual to another

immunity only provides temporary protection

duration: short

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Compare and contrast primary versus secondary immune responses. - ANSWER- primary: body is first exposed to antigen, lymphocyte is activated.

secondary: same antigen is encountered at a later time. It is faster and of greater magnitude.

Describe a lymphatic vessel. - ANSWER- Fine, thin-walled, transparent valved channels distributed through most tissues. They have 3 walls: intima, media, and adventitia.

How is interleukin-1 used? - ANSWER- It helps activate T cells.

Describe the roles of IgG, IgD, IgE, IgA, and IgM. - ANSWER- IgG- is in plasma and tissue fluids and is effective against bacteria, viruses, and toxins and it activates complement proteins.

IgA- is in breast milk, tears, nasal fluid, gastric juice, intestinal juice, and urine and it is an exocrine gland secretion.

IgM- is a type of antibody produced in plasma in response to contact with certain antigens in foods or bacteria.

IgD- is on the surfaces of most B cells and acts as an antigen receptor and is important in activating B cells.

IgE- appears in exocrine secretions with IgA. It is associated with allergic reactions.

Compare and contrast innate barriers versus adaptive immunity. -

ANSWER- 1. Physical

2. Cellular

3. Chemical

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Adaptive: Acquired immunity that develops in response to antigens. It is SPECIFIC to the antigen. Specificity is determined by B-cells and T-cells.

Describe the different glands associated with the lymphatic system.

What are their functions? - ANSWER- Thymus gland - where T cells mature.

Bone marrow - where B and T cells are created.

Lymph nodes - clean and filter lymph and act as immune surveillance.

Spleen - consists of white pulp (packed with lymphocytes) and red pulp (blood, lymphocytes, and macrophages that fill venous sinuses).

Tonsils & adenoids - trap pathogens humans breathe in.

How does an autoimmune disease work? - ANSWER- An autoimmune disease arises when the body's cells lose their ability to distinguish between self and non-self antigens. When this happens, the body mounts an immune response against what is really healthy tissue, (but they think is a foreign particle), and the body attacks itself causing tissue, organ, and joint damage as well as pain, fever, and swelling.

What is pus? - ANSWER- dead neutrophils

Describe differences between T cells and B cells - ANSWER- --B cells are most effective in fighting bacteria. Major function is to produce antibody. There are memory B cells that stay in the body for long periods of time and when same antigen enters the body, they can make antibody very quickly. They start in the bone marrow as undifferentiated cells and then somehow are altered to have surface antigens that identify them as B cells. The fully mature B cell is a plasma cell that has the ability to make antibody.

--T cells are a type of white blood cell that is of key importance to the immune system and is at the core of adaptive immunity, the system that tailors the body's immune response to specific pathogens. The T cells are like soldiers who search out and destroy the targeted invaders.

What can be found in (normal) feces? - ANSWER- electrolytes.