



Physiology Exam for Nursing Students
January, 2017

A) Answer the following questions:

(5 marks each)

- 1- **Define** anemia and **enumerate** the **types** of anemia and **causes** of each type?
- 2- **Define** headache and mention its **types** and **causes** of each type?
- 3- What are the **manifestations** of lesion in the cervical sympathetic chain?
- 4- **Enumerate** the factors affecting the rate of diffusion through the cell membrane.

B) Answer the following questions:

(5 marks each)

Put true (✓) or false (X) for each of the following sentences and **rewrite** it again:

1- About the functions of plasma proteins:

- a- There are 5 main types of plasma proteins. ()
- b- Gamma globulins are essential for immunity. ()
- c- Fibrinogen is an important factor for blood clotting. ()
- d- Prothrombin is not a plasma protein. ()
- e- Buffering action is one function of plasma proteins. ()

2- About transport across the cell membrane:

- a- Na^+ - K^+ pump is an example of secondary active transport. ()
- b- Phagocytosis is an example of endocytosis. ()
- c- Osmosis is defined as the movement of water from an area of lower concentration to an area of higher concentration of a solute through a semi-permeable membrane. ()
- d- Diffusion is directly proportional with concentration gradient of the substance across the cell membrane. ()
- e- Na^+ - Glucose co-transport is an example of facilitated diffusion. ()

3- About sensory receptors:

- a- They act as detectors and transducers for energy produced by stimulation. ()
- b- All sensory receptors are of the same type. ()
- c- Each receptor is most effectively excited by one type of stimulus called the adequate stimulus. ()
- d- Adaptation is gradual decrease in the rate of discharge of impulses by repeated stimulation. ()
- e- Pain receptors are free nerve endings. ()

4- About the autonomic nervous system:

- a- Stimulation of the vagus nerve causes bradycardia (↓ heart rate). ()
- b- Stimulation of the pelvic nerve causes ejaculation of semen. ()
- c- Stimulation of the oculomotor nerve causes miosis (pupilloconstriction). ()
- d- Stimulation of sympathetic nerve supply to the abdomen stimulates glycogenolysis (hydrolysis of liver glycogen to glucose & increases blood glucose level. ()
- e- The pelvic nerve is the nerve of micturition. ()

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