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BS HND 2nd Semester
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Assignment : Anatomy

QUESTION : 1
Enlist 5 irregular bones in human body?
IRREGULAR BONES :

An irregular bone is one that doesnot have any easily characterized shape and therefore doesnot fit any other classification.

- These bones tend to have more complex shapes, like the vertebrae that support the spinal cord and protect it from compressive forces.

① Sacrum
② Coccyx
③ Sphenoid
④ ethmoid
⑤ Inferior nasal concha

QUESTION : 2
Name the 11 basic System in human body?
BASIC SYSTEMS IN HUMAN BODY

① Circulatory System
② Digestive system and Excretory System
③ Endocrine System
④ Integumentary system / Exocrine System
⑤ Immune system and lymphatic System

(6) muscular system
(7) nervous system
(8) Renal system and urinary system
(9) Reproductive system
(10) Respiratory system
(11) skeletal system.

QUESTION : 3
Mention five differences between sympathetic and parasympathetic ?

SYMPATHETIC :

it is the part of autonomic nervous system, located near the thoracic and lumbar regions in the spinal cord. its primary function is to stimulate the body's fight or flight response. it does this by regulating the heart rate, rate of respiration, pupillary response and more.

PARASYMPATHETIC :

it is located in between the spinal cord and the medulla. it primarily stimulates the body's "rest and digest" and "feed and breed" response

DIFFERENCES BETWEEN SYMPATHETIC & PARASYMPATHETIC

	SYMPATHETIC	PARASYMPATHETIC
①	Sympathetic system has shorter neuron pathways, hence a faster response time	① Parasympathetic has comparitively longer neuron pathways, hence a slower response time
②	The sympathetic system prepares the body for any potential danger	② The parasympathetic system aims to bring the body to a state of calm.
③	The pupil dilates to let in more light	③ The pupil contracts
④	Saliva secretion is inhibited	④ Saliva secretion increases, digestion increases.
⑤	Increases heart beat, muscles tense up	⑤ Reduces heartbeat, muscles relaxes.

QUESTION : 4

Enumerate the 12 cranial nerves ?

CRANIAL NERVES :

Cranial nerves are pairs of nerves that connect our brain to different parts of our head, neck, and trunk

1 **Olfactory nerve :**

The olfactory nerve trasmits sensory information to our brain regarding smells that we encounter

2 **Optic nerve :**

The optic nerve is the sensory nerve that involves vision.

3 **Oculomotor nerve :**

The oculomotor nerve has two different motor functions : muscle function and pupil response.

4 **Trochlear nerve :**

The trochlear nerve controls our superior oblique muscle. This is the muscle that's responsible for downward, outward and inward eye movements.

5 **Trigeminal nerve :**

The trigeminal nerve is the largest of our cranial nerves and has both sensory and motor functions.

6 **Abducens nerve :**

The abducens nerve controls another muscle that's associated with eye movement, called the lateral rectus muscle. This muscle is involved in outward eye movement

7 **Facial nerve :**

The facial nerve provides both sensory and motor functions.

8 **Vestibulocochlear nerve :**

vestibulocochlear nerve has sensory functions involving hearing and balance it consist of two parts, the cochlear portion and vestibular portion.

9 **Glassopharyngeal nerve :**

The Glassopharyngeal nerve has both motor and sensory functions.

10 **Vagus nerve :**

The vagus nerve is a very diverse nerve. it has both sensory and motor functions.

11 **Accesory nerve :**

Accesory nerve is a motor nerve that controls the muscle in our neck. These muscles allow us to rotate, flex, and extend our neck and shoulder.

12 **Hypoglossal nerve :**

Hypoglossal nerve is the 12th Cranial nerve which is responsible for the movement of most of the muscles in our tongue. it starts in the medulla oblongata and moves down into the jaw where it reaches the tongue.

QUESTION : 5
How insulin and glucagon controls blood glucose levels ?

Insulin :

The cells need glucose for energy. However most of them are unable to ule glucose without the help of insulin
Insulin gives glucose access to the cells. it attaches to the insulin receptors on cells throughout the body, instructing the cells to open up and grant entry to glucose. Low levels of insulin Constantly circulate throughout the body. A spike in insulin signals to the liver that blood glucose is also high. The liver absorbs glucose then changes it into a storage molecule called glycogen. Insulin also supports healing after an injury by delivering amino acids help build the protein that is present in muscle tissue, So when insulin levels are low, muslces may not heal properly.

Glucagon :

The liver stores glucose to power the cells during periods of low blood sugar. Skipping meal and poor nutrition can lower blood sugar. By storing glucose, the liver makes sure that blood glucose levels remain steady between meals and during sleep.
when blood glucose falls, cells in the pancrease secrete glucagon. Glucagon instruct the liver

to convert glycogen to glucose, making glucose more available in the bloodstream. From there, insulin attaches to its receptor on the body's cells and ensures that they can absorb glucose. Insulin and glucagon work in a cycle. Glucagon interacts with the liver to increase blood sugar, while insulin reduces blood sugar by helping the cells use glucose.