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FINAL TERM

HND - 2ND SEMESTER

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DEPT = HND

SUBJECT = ANATOMY

Q1) Enlist five irregular bones in human body?

Answers

Irregular bones

Irregular bones do not have a specific shape or structure and therefore do not fit into any other category.

→ five irregular bones are =

- Vertebrae
- Sacrum
- Temporal
- Sphenoid
- Ethmoid

(2)

Q2) Name the basic 11 systems in human body?

Answer: BASIC BODY SYSTEMS

→ 11 basic body systems are:-

- Respiratory system
- Digestive system
- Circulatory system
- Reproductive system
- Urinary system
- Nervous System
- Skeletal system
- Muscular system
- Endocrine system
- Integumentary or Exocrine system.
- Lymphatic system.

Q3) Mention any five differences between Sympathetic and parasympathetic nervous system?

Answer:-

DIFFERENCE BETWEEN SYMPATHETIC-PARASYMPATHETIC NERVOUS SYSTEM.

SYMPATHETIC	PARASYMPATHETIC
1- Sympathetic nervous system prepares the body for intense physical activity referred as "fight-or-flight" response	Parasympathetic system does the opposite and relaxes the body and slows down high energy functions referred to as "rest and digest"
2- It has shorter neuron pathways and hence a faster response time	It has longer neuron pathways and hence slower response time.
3- Heart beat is increased, muscles tense up	Heartbeat is reduced and muscles also relax.
4- Blood flow is directed to arms and legs and pupil dilates	Blood flow is directed to internal organs and pupil contracts.
5- In fight-or-flight response, adrenaline is released by adrenal glands, more glycogen is converted to glucose.	In rest and digest response, saliva secretion increases, digestion increases.

Q4) Enumerate the 12 Cranial nerves?

Answer: 12 Cranial Nerves

1. Olfactory Nerve (Transmit sensory information)
2. Optic Nerve (involves vision)
3. Oculomotor Nerve (muscle function, pupil response)
4. Trochlear Nerve (controls superior oblique muscles)
5. Trigeminal Nerve (sensory and motor functions)
6. Abducens Nerve (controls lateral rectus muscles)
7. Facial Nerve (Both sensory and motor functions)
8. vestibulocochlear Nerve (hearing and balance)
9. Glossopharyngeal Nerve (sends sensory information from sinuses)
10. Vagus Nerve (motor control of muscles in throat)
11. Accessory Nerve (controls muscles in Neck)
12. Hypoglossal Nerve (controls movement of most of the muscles in tongue)

(5)

Q5) How Insulin and glucagon control blood glucose level?

Answer

REGULATION OF BLOOD GLUCOSE LEVEL BY INSULIN AND GLUCAGON:-

Pancreas secretes Insulin and glucagon. Both hormones play an important role in maintaining blood sugar level. If the level of one hormone is higher or lower than normal range, the blood glucose level may become high or drop.

Insulin and glucagon maintain a state in body called Homeostasis. Beta cells of Islets of Langerhans release Insulin while alpha cells release glucagon.

→ How insulin works +
Body converts carbohydrates into glucose. When the body does not convert enough glucose, blood sugar levels remain high. Insulin is then released by pancreas. Insulin stimulates the transport proteins of the muscles and adipose tissues to pump glucose into cell faster than it can leak out. Thus Insulin helps in providing glucose to cells for energy. A spike in insulin

(6)

signals to the liver that blood glucose is high. The liver absorbs glucose then changes it into a storage molecule called glycogen. So Insulin regulates the blood glucose level when it is higher than the normal range.

→ How glucagon works.
When blood glucose level is too low, pancreas releases glucagon. Glucagon signals the liver to convert stored glycogen into glucose, which causes blood sugar level to rise. The liver stores glycogen so that it can be used later in periods of low blood sugar. Like during fasting stored glycogen is converted into glucose with the help of glucagon to provide our body with energy.

Hence, Insulin and glucagon work in a cycle. Glucagon interacts with liver to increase blood sugar while Insulin reduces blood glucose level by helping cells use glucose.

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