

NDA 1 2024

BIOLOGY

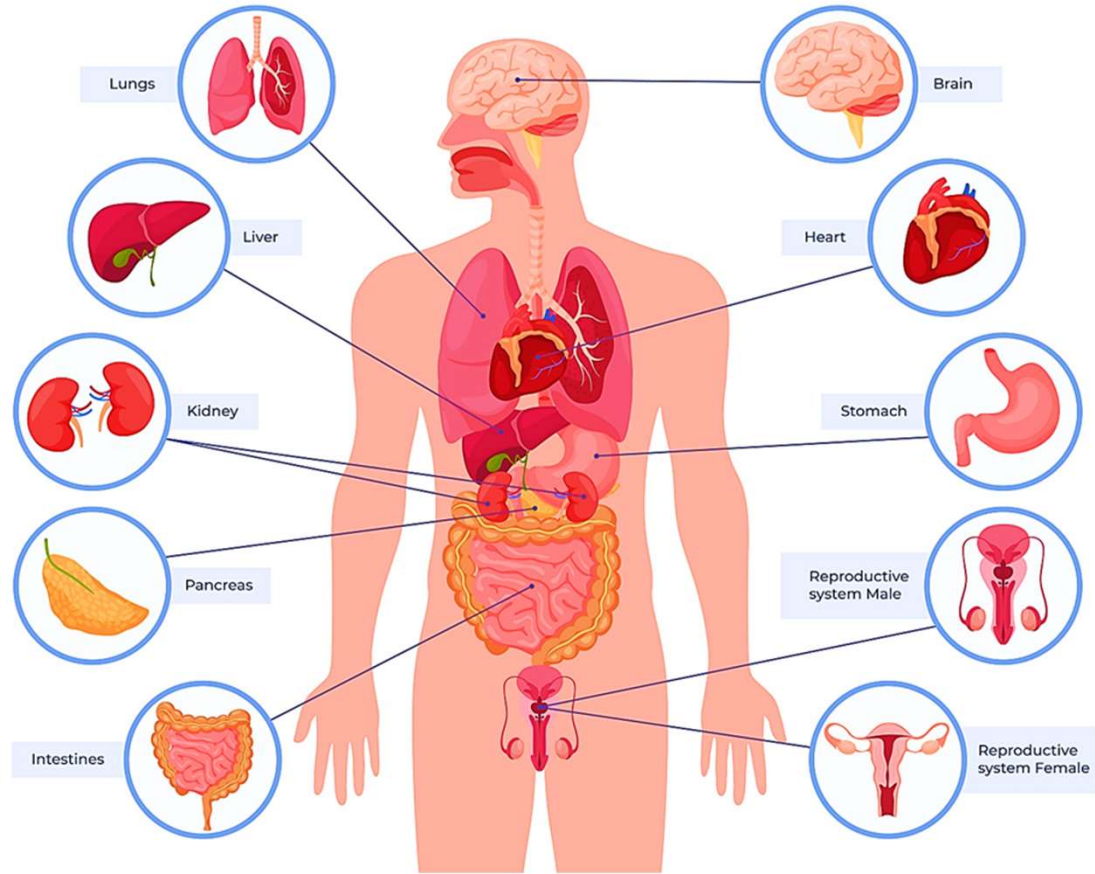
HUMAN BODY

MCQS



SHIVANGI MA'AM

THE HUMAN BODY



Q. Which Of The Following Statements Is FALSE With Reference To The Digestive System Processes In Human Beings?

- a) digestion Is The Breakdown Of Food Into Simpler Form.
- b) ingestion Is The Intake Of Food Through The Mouth.
- c) egestion Is The Removal Of Digested Food From The Body.
- d) none Of The Above.

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Q. After digestion, Protein is converted into ?

- (a) Glucose
- (b) Sucrose
- (c) Fat
- (d) Amino acid

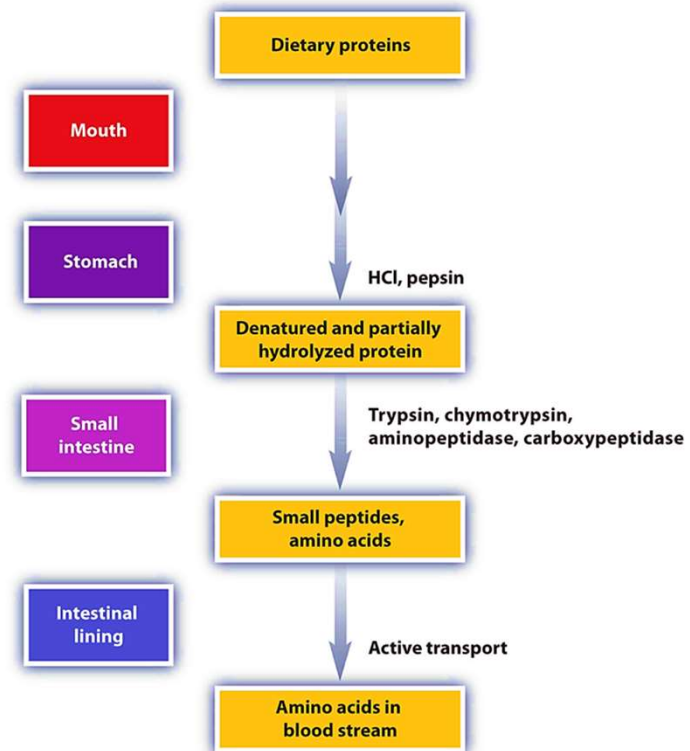
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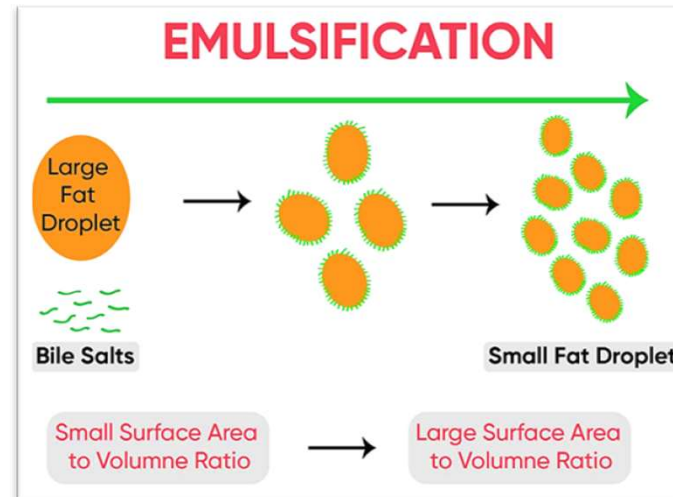


Q. Which Juice Secreted By The Organs In The Alimentary Canal Plays An Important Role In The Digestion Of Fats?

- (a) Pancreatic juice ,saliva
- (b) Hydrochloric acid ,mucus
- (c) Bile juice ,Pancreatic juice
- (d) Saliva ,Hydrochloric acid

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Q. What Happens When We Exhale During Normal Breathing?

- (a) A residual amount of air remains in the lungs
- (b) The diaphragm is flattened
- (c) The lungs are contracted
- (d) None of the above

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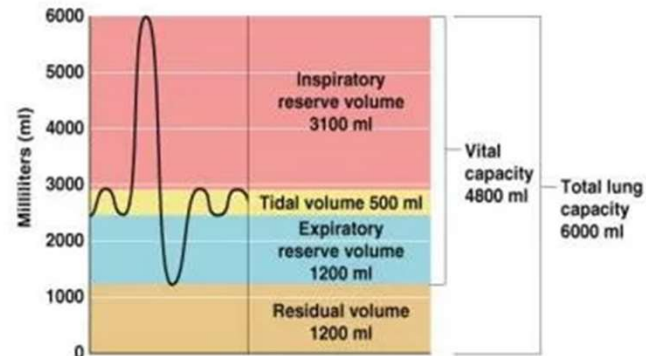
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(c) The lungs are contracted

(d) None of the above

- **Inspiratory Reserve Volume:**
Volume that can be inspired beyond a restful inspiration
- **Tidal Volume:**
Volume of a single breath, usually at rest
- **Expiratory Reserve Volume:**
Volume which can be expired beyond a restful expiration
- **Residual Volume:**
Volume remaining in the lungs after maximum expiration. This volume keeps the alveoli inflated.

Lung Volumes



- **Vital Capacity:** the maximum volume which can be ventilated in a single breath
- **VC = IRV + TV + ERV**
- VC varies with gender, age, and body build
- Measuring VC gives a device for diagnosis of respiratory disorder, and a benchmark for judging effectiveness of treatment.
- VC is reduced in restrictive disorders but not in disorders that are purely obstructive.
- **FEV₁** :the % of vital capacity (forced expiratory volume) expelled in the first second. Should be at least 75%. Reduced in obstructive disorders.

Q. If A Person's Kidney Stops Working . They Cannot Survive Unless Their Blood Is Filtered By Artificial Kidney .This Process Is Called:

- (a) Transpiration
- (b) Elimination
- (c) Excretion
- (d) Dialysis

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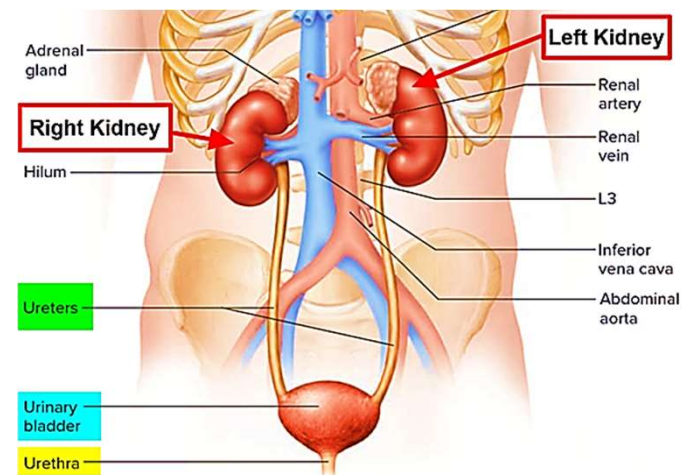


Q. The Reason Why The Right Kidney Is Slightly Lower Than The Left Is

- (a) The left kidney is bigger than right.
- (b) Considerable space occupied by heart.
- (c) Considerable space occupied by the liver on the right side.
- (d) The right kidney is bigger than the left.

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Q. What Is The Average Weight Of A Human Kidney?

(a) 40 g

(b) 100 g

(c) 120 g

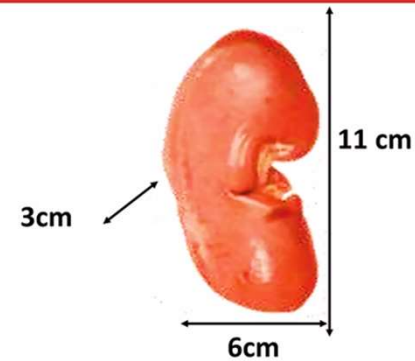
(d) 10 g

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HEIGHT & WEIGHT:

Each kidney is 11 cm (4-5") long, 6 cm (2-3") broad and 3 cm (1") thick, weight 150 g in males and 135 g in females.



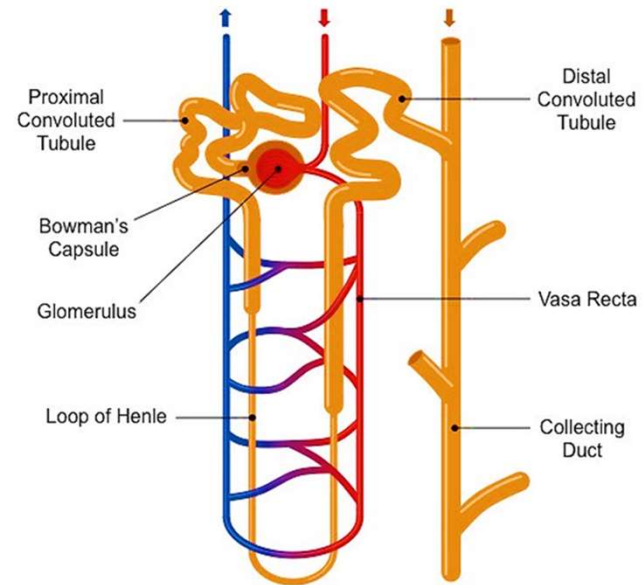
Q. Which Part Of Nephron Is Responsible For Making The Urine Concentrated

- (a) The descending limb of loop of Henle
- (b) Collecting Duct
- (c) The ascending limb of loop of Henle
- (d) Both 1&2

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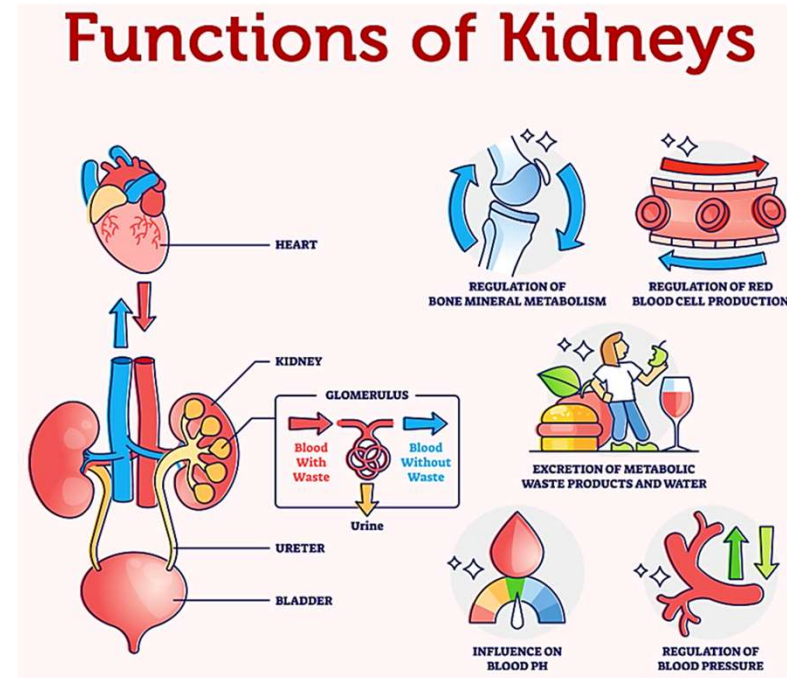
Q. Kidneys Are Vital Organs Of The Body Because They Help In

- (a) Regulation of body fluids
- (b) Regulation of acid-base balance
- (c) Removal of metabolic wastes
- (d) All of the above

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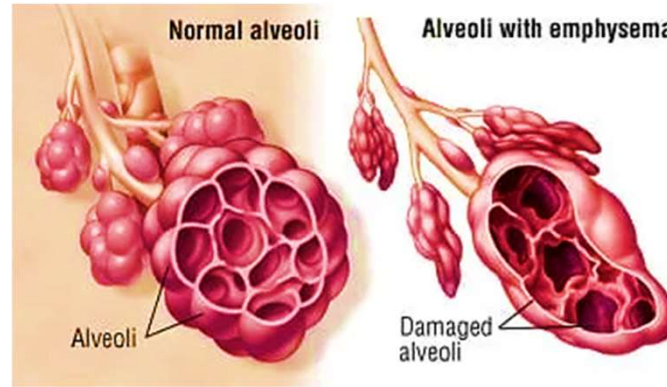


Q. Smokers Have Shorter Breath Due To

- a) Arteriosclerosis
- b) Emphysema
- c) Hypertension
- d) Cough

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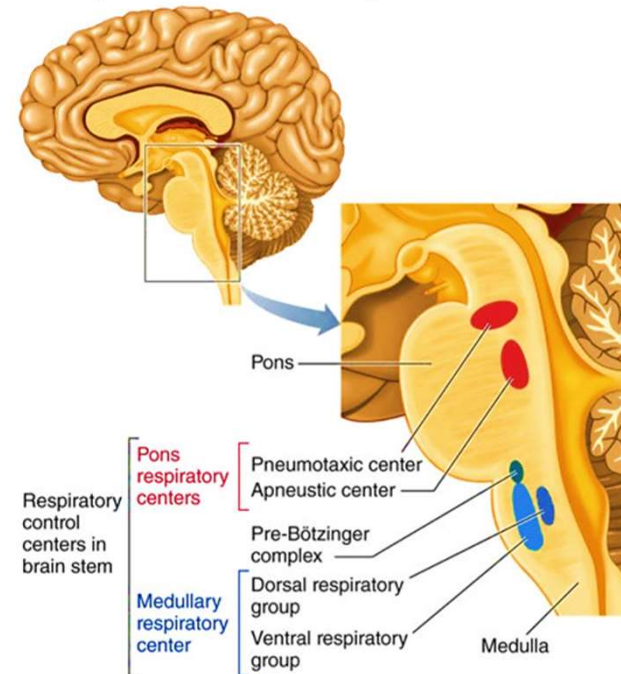
- Emphysema is a chronic disorder in which alveolar walls are damaged due to which respiratory surface is decreased. One of the major causes of this is cigarette smoking.
- The person experiences shorter breaths because of the reduced respiratory surface. The alveolar walls get damaged and over time they rupture.

Q. Respiratory Process Is Regulated By Certain Specialized Centers In The Brain. One Of The Following Centers Can Reduce The Inspiratory Duration Upon Stimulation

- a) Medullary inspiratory centre
- b) Pneumotaxic centre
- c) Apneustic centre
- d) Chemosensitive centre

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- The center present in the pons region of the brain is called pneumotaxic center.



Q. What Controls Involuntary Activities Like Coughing And Sneezing?

- (a) Medulla
- (b) Cerebrum
- (c) Pons
- (d) Cerebellum

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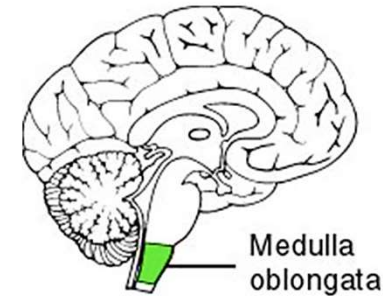
- Regulates heartbeat and respirations

(b) Cerebrum

(c) Pons

(d) Cerebellum

- Reflexes:
 - Swallowing
 - Vomiting
 - Coughing
 - Sneezing
 - Hiccuping



- The medulla plays a critical role in transmitting signals between the spinal cord and the higher parts of the brain and in controlling autonomic activities, such as heartbeat and respiration.

Q. Which One Of The Following Organs Will Not Feel Any Pain On Being Pricked By A Needle?

- a) Skin
- b) Brain
- c) Heart
- d) Eye

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- The brain is a painless organ ,so pricking or even removing a part of the brain, while a person is conscious, does not cause any pain.
- Operating brain in a conscious state is a common procedure which is known as “awake craniotomy”.

Q. Which of these is not an Axial Skeleton bone?

- a) Cranium
- b) Ethmoid
- c) Sacrum
- d) Humerus

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Human Skeleton System Anatomy



Appendicular Skeleton



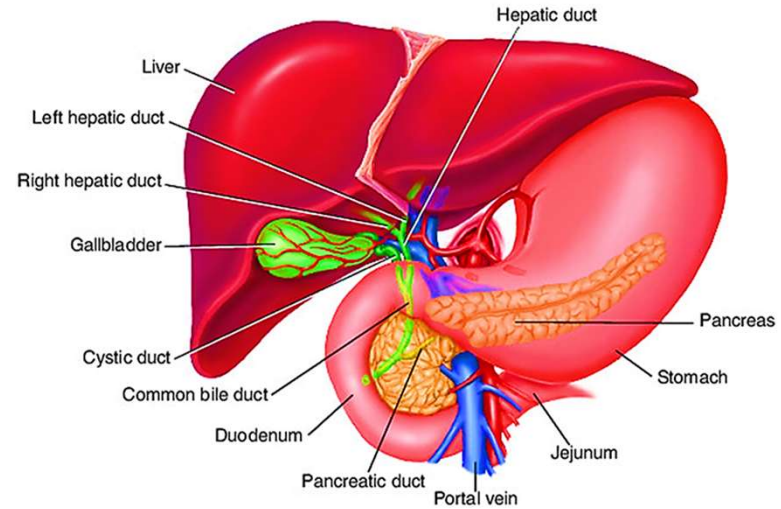
Axial Skeleton

Q. The Largest Gland In Human Body Is

- a) Pancreas
- b) Liver
- c) Salivary gland
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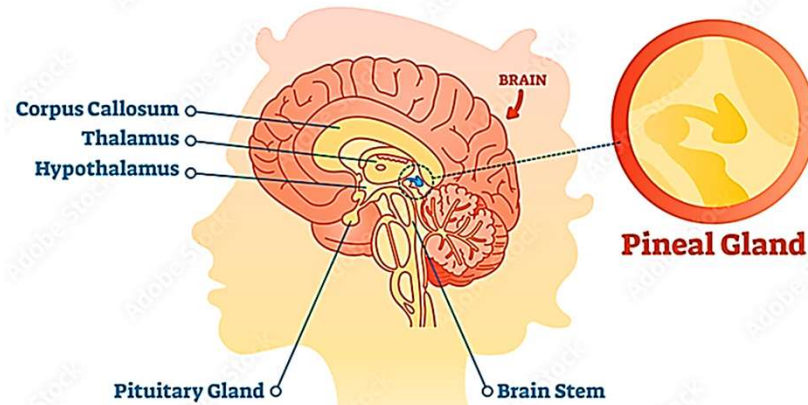


Q. Which Is The Smallest Gland In Human Body.

- a) Parotid gland
- b) Apocrine sweat gland
- c) Pineal gland
- d) Ebner's gland

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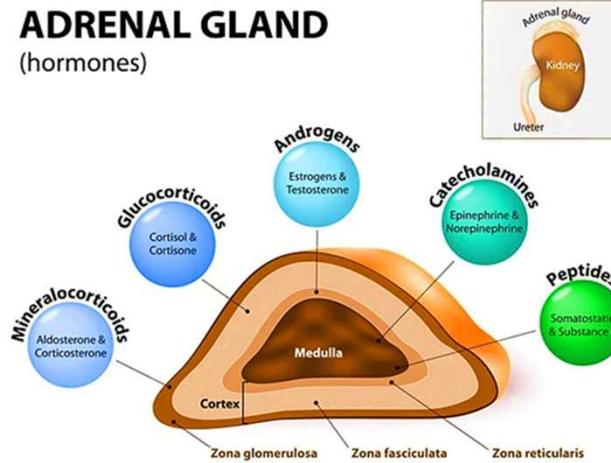
- Pineal gland is the smallest gland in the human body with a length of about 5-8 mm.

Q. Blood Pressure In Human Body Is Controlled By

- a) Adrenal gland
- b) Thyroid gland
- c) Thymus gland
- d) Corpus luteum

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Q. Which Of The Following Is NOT Correct For Cerebellum?

- (a) It lies in the posterior region of the brain.
- (b) It controls movements, speech, sight, smell, taste, hearing, intelligence.
- (c) It is a part of hind brain.
- (d) It maintains equilibrium of the body.

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CEREBELLUM = "LITTLE BRAIN"



CEREBELLUM

- * COORDINATES MOVEMENTS
- * CONTROLS POSTURE, BALANCE & FINE MOTOR MOVEMENT
- * INVOLVED IN MOTOR LEARNING

Q. Which Is The Correct Sequence Of The Components Of A Reflex Arc?

- a) Receptors → Muscles → Sensory neuron → Motor neuron → Spinal cord
- b) Receptors → Sensory neuron → Spinal cord → Motor neuron → Muscle
- c) Receptors → Spinal cord → Sensory neuron → Motor neuron → Muscle
- d) More than one of the above

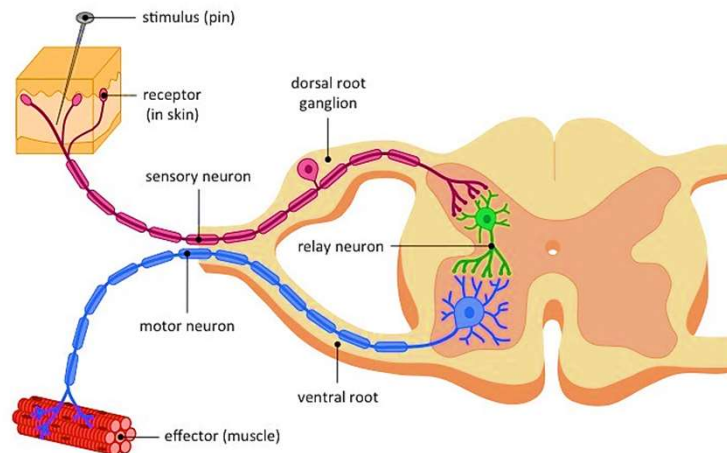
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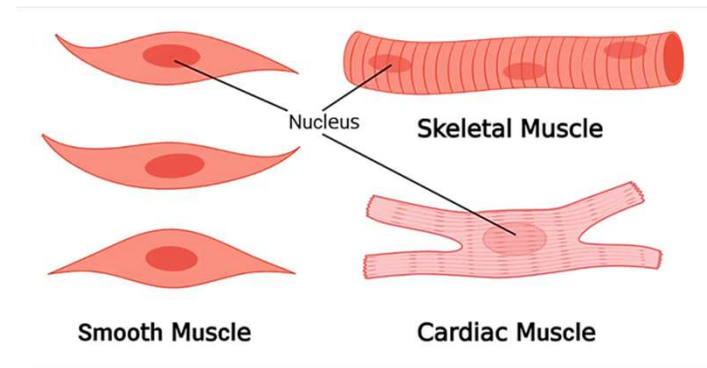


Q. False About Skeletal Muscles Is _____.

- a) Smallest functional unit is sarcomere
- b) Nuclei are peripherally placed
- c) Spindle shaped
- d) Sarcoplasmic reticulum is smooth endoplasmic reticulum

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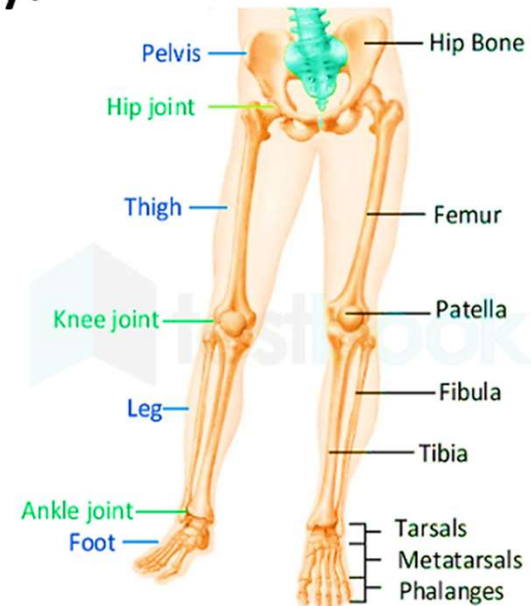


Q. Which is the largest bone in the human body?

- a) Radius
- b) Tibia
- c) Femur
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Q. Fertilization In Human Female Occurs In Which Of The Following Parts?

- (a) Ovaries
- (b) Uterus
- (c) Cervix
- (d) Fallopian Tube

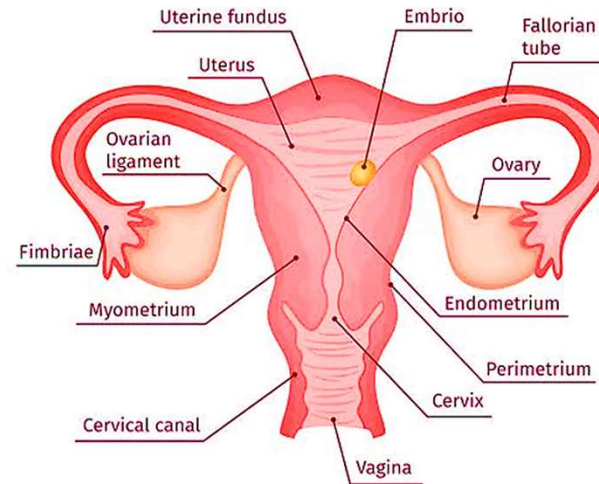
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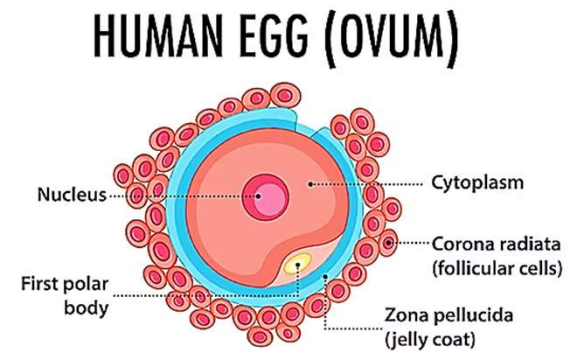


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- All the arteries carry pure blood except the pulmonary artery which carries impure blood.
- The pulmonary artery takes impure deoxygenated blood into the lungs from the right ventricle.

Q. Reptiles have a three chambered heart, EXCEPT for:

- a) Lizard
- b) Snakes
- c) Crocodiles
- d) More than one of the above

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- Crocodile is an exception in reptiles as it possesses a 4-chambered heart similar to mammals and birds, with two atrium & two ventricles. Crocodile show complete double circulation.

Q.A Structure Present In Human Heart That Prevents The Backward Flow Of Oxygenated Blood When The Ventricular Pressure Falls.

- a) Bicuspid valve
- b) Tricuspid valve
- c) Semilunar valve
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- The bicuspid valve is also known as the mitral valve. It is a two-flap valve present between the left atrium and left ventricle. Due to the bicuspid valve, the flow of blood is unidirectional from the left atrium to the left ventricle.

Q. One Can Save The Life Of Twelve People By Donating The Blood How Many Times

A Year?

- a) Three
- b) One
- c) Two
- d) Four

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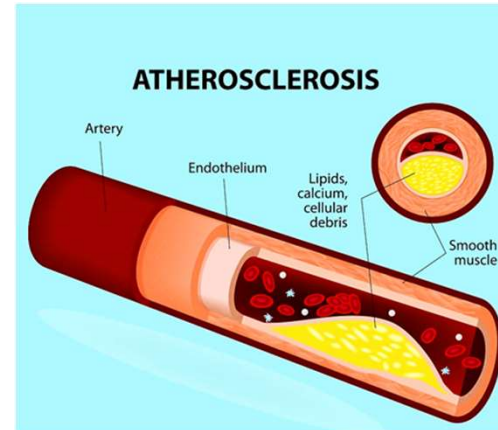
- So to save the lives of 12 people one needs to donate blood at least 4 times a year.

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- b) Cardiac arrest
- c) Atherosclerosis
- d) Angina

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- A narrowing of the coronary arteries that prevents adequate blood supply to the heart muscle is called Coronary Artery Disease (CAD). It is also known as ;Coronary Arteriosclerosis.

Q. Why Sexual Reproduction Is A Better Mode Of Reproduction, Mark The Correct Reason(s).

- I. Variation
 - II. Evolution
 - III. Adaptation
- a) 1 and 2 only
 - b) 2 and 3 only
 - c) 1,2 and 3
 - d) More than one of the above

Q. Why Sexual Reproduction Is A Better Mode Of Reproduction, Mark The Correct Reason(s).

I. Variation

- As variation as a factor of natural selection plays an important role in evolution.

II. Evolution

- It is adaptive to their environment as it results in meiosis cell division and crossing over.

III. Adaptation

a) 1 and 2 only

b) 2 and 3 only

c) 1,2 and 3

d) More than one of the above

Q. Who Operates The First Heart Transplant Procedure?

- a) William Harvey
- b) Watson
- c) Christian Bernard
- d) Khorana

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- c) Christiaan Bernard**
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- Christiaan Neethling Barnard, a South African cardiac surgeon who is regarded as the founder of heart transplantation, carried out the first successful human-to-human heart transplant on December 3, 1967.