

ISHABEN Patel

Exercise 1

1. Describe completely the standard human anatomical position.

The hands are by the side, and feet are together

2. Use the regional terms to correctly label the body regions indicated on the figures below.

(a) Anterior/Ventral

- | | | |
|--------------|---------------------|---------------------|
| 1. Orbital | 11. Pubic | 21. Tarsal |
| 2. Nasal | 12. Patellar | 22. Digital (Pedal) |
| 3. Oral | 13. Crural | 23. Hallux |
| 4. Cervical | 14. Acromial | |
| 5. Sternal | 15. Brachial | |
| 6. Axillary | 16. Antecubital | |
| 7. Mammary | 17. Antebrachial | |
| 8. Umbilical | 18. Carpal | |
| 9. Pelvic | 19. Digital (Manus) | |
| 10. Inguinal | 20. Coxal | |

(b) Posterior (Dorsal)

- | | | |
|--------------|-------------|---------------|
| 1. Otic | 6. Lumbar | 11. Popliteal |
| 2. Occipital | 7. Sacral | 12. Sural |
| 3. Scapular | 8. Gluteal | 13. Fibular |
| 4. Vertebral | 9. Pollex | 14. Calcaneal |
| 5. Olecranal | 10. Femoral | 15. Plantar |

3. Define Plane. When the cut is made through the body wall or through an organ, it is made with an imaginary line

4. Several incomplete statements appear below. Correctly complete each statement by choosing the appropriate anatomical term from the choices. Use each term only once.

| | | | |
|----------|----------|-----------|------------|
| Anterior | inferior | Posterior | Superior |
| distal | lateral | Proximal | Transverse |
| frontal | medial | Sagittal | |

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- 1) The thoracic cavity is superior to the abdominopelvic cavity.
- 2) The trachea (windpipe) is anterior to the vertebral column.
- 3) The wrist is proximal to the hand.
- 4) If an incision cuts the heart into left and right parts, a sagittal plane of section was used.
- 5) The nose is medial to the cheekbones.
- 6) The thumb is lateral to the ring finger.
- 7) The vertebral cavity is posterior to the ~~an~~ cranial cavity.
- 8) The knee is distal to the thigh.
- 9) The plane that separates the head from the neck is the Transverse Plane.
- 10) The popliteal region is inferior to the patellar region.
- 11) The plane that separates the anterior body surface from the posterior body surface is the frontal plane.

5. Correctly identify each of the body planes by writing ~~to~~ the appropriate term on the answer line below the drawing.

- (a) Frontal / coronal Plane
- (b) Median / midsagittal Plane
- (c) Transverse Plane

6. Name the muscle that subdivides the ventral body cavity.
Diaphragm

7. Which body cavity provides the least protection to its internal structures?

Ventral Cavity

8. For the body cavities listed, name one organ located in each cavity

(1) Cranial cavity

Brain

(2) vertebral cavity

Spinal

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~~abdominal cavity~~

- (3) Thoracic cavity Breast
- (4) abdominal cavity Small Intestines
- (5) Pelvic cavity Urinary bladder.
- (6) mediastinum. Breast Bone

9. Name the abdominopelvic region where each of the listed organs is located.

- (1) Spleen Left Hypochondriac Region
- (2) Urinary bladder Pubic Hypogastric Region
- (3) Stomach (largest portion) Epigastric Region
- (4) Cecum Right Inguinal (iliac) Region.

10. Explain how serous membranes protect organs from infection.

The serous membrane compartmentalize the various organs to prevent infection is one organ from spreading to others.

11. Which serous membrane(s) is/are found in the thoracic cavity?
lungs (Pleura), visceral Pleura, Parietal Pleura.

12. Which serous membrane(s) is/are found in the the abdominopelvic cavity?
Peritoneum.

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13. Using the key choices, identify the small body cavities described below.

key. (a) middle ear cavity (c) oral cavity (e) synovial cavity
(b) nasal cavity (d) orbital cavity

Orbital cavity 1. Holds the eyes in an anterior-facing position.

Middle ear cavity 2. Houses three tiny bones involved in hearing.

Nasal cavity 3. Contained with the nose.

Oral cavity 4. Contains the tongue

Synovial cavity 5. Surrounds a joint.

14. Name the body region that blood is usually drawn from.

Epigastric Region.

15. A patient has been diagnosed with appendicitis. Use anatomical terminology to describe the location of the person's pain.

Assume that the pain is referred to the surface of the body above the organ.

The location of the person's pain would be the Right Inguinal (iliac) Region.

16. Which body cavity would be opened to perform a hysterectomy?

Pelvic cavity

17. Which smaller body cavity would be opened to perform a total knee joint replacement?

Dorsal Body Cavity.

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18. An abdominal hernia results when weakened muscles allow the protrusion of abdominal structures. In the case of an umbilical, parts of a serous membrane and the small intestine form the bulge. Which serous membrane is involved?

Peritoneum.

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Exercise 2

1. Label each of the organs at the end of the supplied leader lines.

- | | | |
|-------------|---------------|----------------------|
| (1) Brain | (6) Heart | (11) Large intestine |
| (2) Pharynx | (7) Diaphragm | (12) Greater Omentum |
| (3) Larynx | (8) Liver | (13) Small intestine |
| (4) Trachea | (9) Stomach | |
| (5) Lungs | (10) Spleen | |

2. Name the organ system to which each of the following sets of organs or body structures belongs.

- | | |
|-------------------|---|
| Lymphatic | 1. thymus, spleen, lymphatic vessels |
| Skeletal | 2. Bone, cartilages, tendons |
| Endocrine | 3. Pancreas, pituitary gland |
| Respiratory | 4. Trachea, bronchi, lungs |
| Muscular | 5. epidermis, dermis, cutaneous, sense organs |
| Male Reproductive | 6. Testis, Prostate |
| Digestive | 7. Liver, large intestine, rectum |
| Urinary | 8. kidneys, ureter, urethra. |

3. Name the cells that are produced by the testes and ovaries.

Sperms & eggs

4. List the four primary tissue types.

- Epithelial
- Muscular
- Nervous
- Connective

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5. Explain why an artery is an organ.

An artery is an organ because it is composed of three tissues that perform a specific function which is to carry blood away from the heart.

6. Name the two main organ systems that communicate within the body to maintain homeostasis. Briefly explain their different control mechanisms.

* Nervous system - Takes in information through the senses, then processes the information, and then the body reacts.

* Cardiovascular system - Preserve the internal milieu of cells, tissues and organs within a narrow range.

7. Explain the role that the skeletal system plays in facilitating cardiovascular system function.

The role that the skeletal system plays in facilitating cardiovascular system function is that the skeletal system supports and protects the internal organs.

8. Untreated diabetes mellitus can lead to a condition in which the blood is more acidic than normal. Name two organ systems that play the largest role in compensating for acid-base imbalances.

Urinary system

Respiratory system

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9.5 The mother of a child scheduled to receive a thymectomy (removal of the thymus gland) asks you whether there will be any side effects from the removal of the gland. Which two organ systems would you mention in your explanation?

Endocrine system

Lymphatic system

10. Individuals with asplenia are missing their spleen or have a spleen that does not function well. It is recommended that these patients talk to their doctor about vaccines that are indicated for their health condition. Explain how this recommendation correlates to their chronic health condition.

The removal of the spleen can increase the risk of infections and the vaccine helps stay away from diseases such as Pneumonia, Meningococci, and influenza.