

Melina Tlatelpa

Instructors may assign a portion of the Review Sheet questions using Mastering A&P™

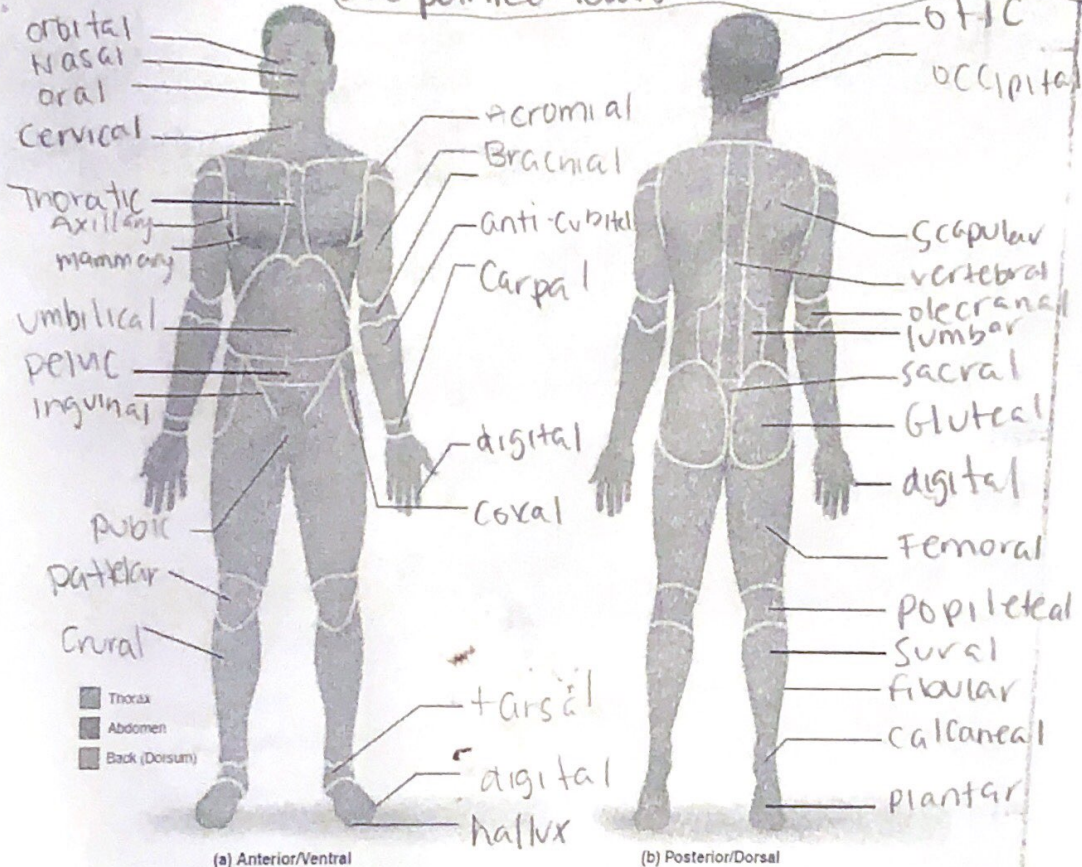
1 REVIEW SHEET

EXERCISE The Language of Anatomy

Name Melina Tlatelpa Lab Time/Date _____

Regional Terms

1. Describe completely the standard human anatomical position. The anatomical position is when the body is straight and the feet are slightly apart. The head and toes are pointed forward.



1 The Language of Anatomy

12 Review Sheet 1

Directional Terms, Planes, and Sections

3. Define plane: A plane is used to describe the location of body parts

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	

- The thoracic cavity is superior to the abdominopelvic cavity.
 - The trachea (windpipe) is anterior to the vertebral column.
 - The wrist is proximal to the hand.
 - If an incision cuts the heart into left and right parts, a sagittal plane of section was used.
 - The nose is medial to the cheekbones.
 - The thumb is lateral to the ring finger.
 - The vertebral cavity is posterior to the cranial cavity.
 - The knee is inferior to the thigh.
 - The plane that separates the head from the neck is the transverse plane.
 - The popliteal region is distal to the patellar region.
 - The plane that separates the anterior body surface from the posterior body surface is the coronal plane.
5. Correctly identify each of the body planes by writing the appropriate term on the answer line below the drawing.



(a) frontal



(b) frontal



(c) Transverse

Body Cavities

- Name the muscle that subdivides the ventral body cavity: diaphragm
- Which body cavity provides the least protection to its internal structures? abdominal cavity
- For the body cavities listed, name one organ located in each cavity.
 - cranial cavity the brain
 - vertebral cavity the spinal cord

- 3. thoracic cavity the heart
- 4. abdominal cavity the liver
- 5. pelvic cavity the bladder
- 6. mediastinum the lungs

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

- 1. spleen the left hypochondric region
- 2. urinary bladder hypogastric region
- 3. stomach (largest portion) epigastric
- 4. cecum right lumbar region

10. Explain how serous membranes protect organs from infection. Serous membranes protect organs from infection because it produces a thin fluid that prevent the infection.

11. Which serous membrane(s) is/are found in the thoracic cavity? Some serous membranes that are found is the pleura and pericardium

12. Which serous membrane(s) is/are found in the abdominopelvic cavity? Some serous membranes that are found is the peritoneum serosa

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

- Key: a. middle ear cavity e. oral cavity ✓
 b. nasal cavity d. orbital cavity ✓ e. synovial cavity

- Orbital 1. holds the eyes in an anterior-facing position
- Oral 4. contains the tongue
- Middle ear 2. houses three tiny bones involved in hearing
- Synovial 5. surrounds a joint
- Nasal 3. contained within the nose

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

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 patient is having pain in the epigastric.

16. Which body cavity would be opened to perform a hysterectomy? The body cavity that would be opened to perform a hysterectomy would be the pelvic cavity

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

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

Melina Tlatepa

2 Organ Systems Overview

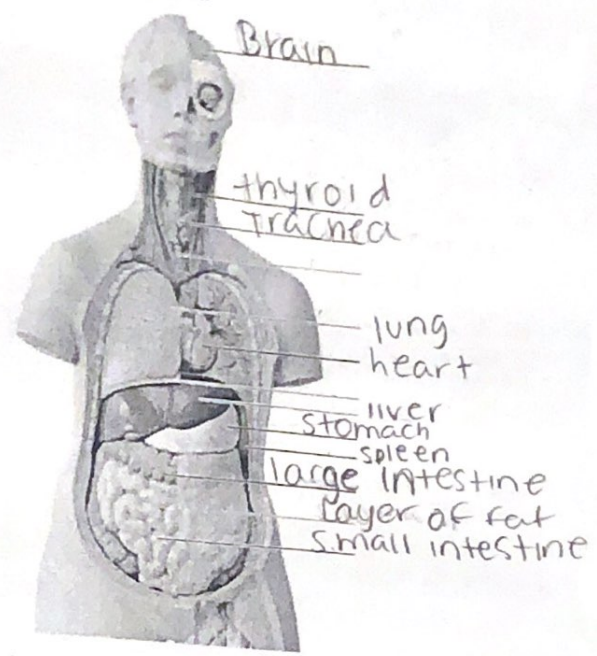
EXERCISE 2

REVIEW SHEET
Organ Systems Overview

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Name _____ Lab Time/Date _____

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



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

- | | | | |
|-----------------------------|--------------------------------------|----------------------|----------------------------------------------|
| <u>Lymphatic</u> (immunity) | 1. thymus, spleen, lymphatic vessels | <u>integumentary</u> | 3. epidermis, dermis, cutaneous sense organs |
| <u>Skeletal</u> | 2. bones, cartilages, tendons | <u>reproductive</u> | 6. testis, prostate |
| <u>endocrine</u> | 3. pancreas, pituitary gland | <u>digestive</u> | 7. liver, large intestine, rectum |
| <u>respiratory</u> | 4. trachea, bronchi, lungs | <u>urinary</u> | 8. kidneys, ureter, urethra |

3. Name the cells that are produced by the testes and ovaries. Gametes are produced by the testes and ovaries
4. List the four primary tissue types. The four primary tissue types are connective, epithelial, muscle & nervous tissue.
5. Explain why an artery is an organ. An artery is an organ because it is made of different type of tissues.
6. Name the two main organ systems that communicate within the body to maintain homeostasis. Briefly explain their different control mechanisms. One organ system is the endocrine system. The endocrine system carries information from cell to cell. The nervous system controls movement, response and helps keep the heart healthy.

7. Explain the role that the skeletal system plays in facilitating cardiovascular system function. The skeletal system provides muscle and strength to keep the heart healthy.

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. The urinary and respiratory system.

9. 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? I would mention the Cardiovascular and endocrine.

10. Individuals with asplenia are missing their spleen or have a spleen that doesn't 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. This recommendation correlates to their chronic health condition because vaccines can reduce antibodies and can lead to people getting sick.

3 EXERCISE

REVIEW SHEET The Microscope

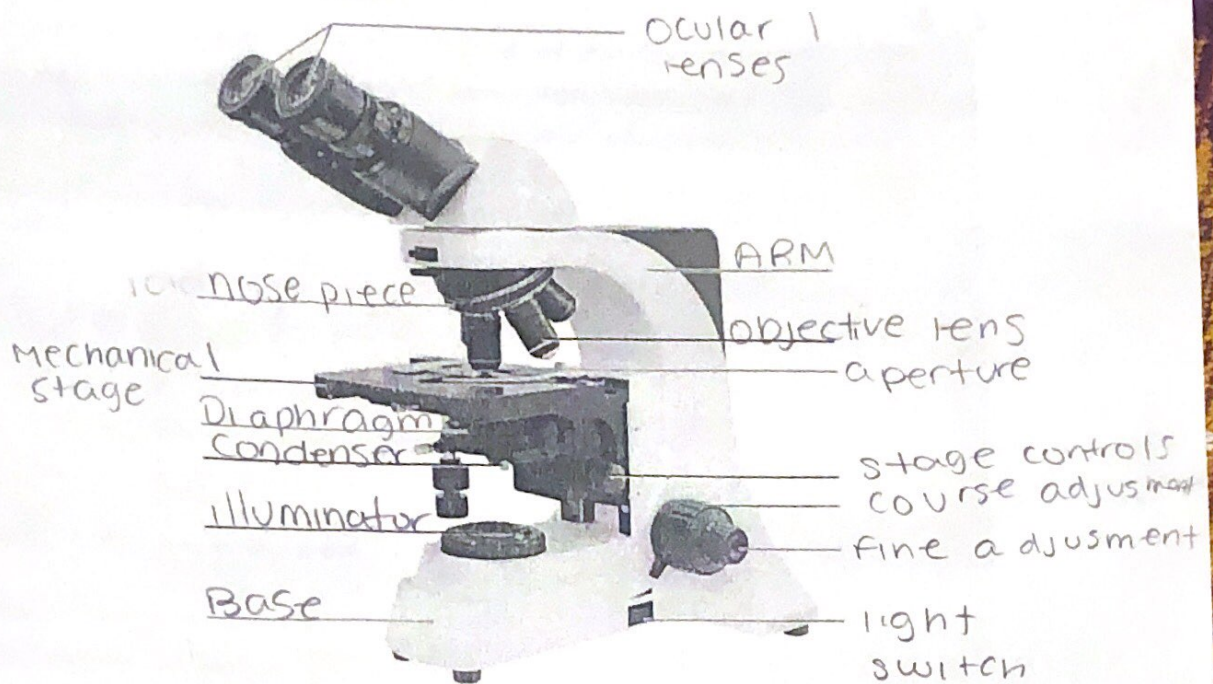
Instructors may assign a portion of the Review Sheet questions using Mastering A&P™

Name _____

Lab Time/Date _____

Care and Structure of the Compound Microscope

1. Label all indicated parts of the microscope



2. Explain the proper technique for transporting the microscope:

you should hold it up straight
with one hand on the base
and the other hand maintaining it
straight and
lightly placing
it on the
surface

3 The Microscope

3. Each of the following statements is either true or false. If true, write T on the answer blank. If false, correct the statement by writing on the blank the proper word or phrase to replace the one that is underlined.

- F _____ 1. The microscope lens may be cleaned with any soft tissue.
- F _____ 2. The microscope should be stored with the oil immersion lens in position over the stage.
- T _____ 3. When beginning to focus, use the scanning objective lens.
- T _____ 4. When focusing on high power, always use the coarse adjustment knob to focus.
- T _____ 5. A coverslip should always be used with wet mounts.

4. Match the microscope structures in column B with the statements in column A that identify or describe them.

Column A

- i _____ 1. platform on which the slide rests for viewing
- d _____ 2. used to adjust the amount of light passing through the specimen
- a _____ 3. controls the movement of the slide on the stage
- b _____ 4. delivers a concentrated beam of light to the specimen
- c _____ 5. used for precise focusing once initial focusing has been done
- f _____ 6. carries the objective lenses, rotates so that the different objective lenses can be brought into position over the specimens

Column B

- a coarse adjustment knob
- b condenser
- c fine adjustment knob
- d iris diaphragm lever
- e mechanical stage
- f nosepiece
- g objective lenses
- h ocular lens
- i stage

5. Define the following terms.

total magnification: when the object gets larger in size.

resolution: is the little distance where the specimen can be seen.

Viewing Objects Through the Microscope

6. Complete, or respond to, the following statements.

working distance

1. The distance from the bottom of the objective lens to the surface of the slide is called the _____

left 2. Assume there is an object on the left side of the field that you want to bring to the center (that is, toward the apparent right). In what direction would you move your slide? _____

field of view

3. The area of the slide seen when looking through the microscope is the _____

95 4. If a microscope has a 10x ocular lens and the total magnification is 950x, the objective lens in use at that time is 95 x.

then the contrast will increase

5 Why should the light be dimmed when looking at living (nearly transparent) cells?

parfocal

6 If, after focusing in low power, you need to use only the fine adjustment to focus the specimen

at the higher powers, the microscope is said to be _____

0.75 mm

7 You are using a 10x ocular and a 15x objective, and the field diameter is 1.5 mm. The ap-

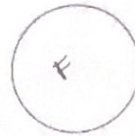
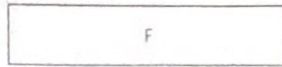
proximate field size with a 30x objective is _____ mm.

0.4 mm

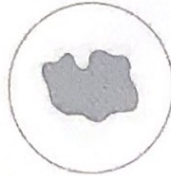
8 If the diameter of the low-power field is 1.5 mm, an object that occupies approximately a third

of that field has an estimated diameter of _____ mm

7. You have been asked to prepare a slide with the letter F on it (as shown below). In the circle below, draw the F as seen in the low-power field.



8. Estimate the length (longest dimension) of the object in μm .



Total magnification = 100x

Field diameter = 1.6 mm

Length of object = 160 μm

9. Say you are observing an object in the low-power field. When you switch to high power, it is no longer in your field of view.

Why might this occur? this might occur because high power makes the object too big while low power makes it better to see the whole object

What should you do initially to prevent this from happening?

you should test which power field works the most

10. Do the following factors increase or decrease as one moves to higher magnifications with the microscope?

resolution: increase amount of light needed: increase

working distance: decrease depth of field: decrease

11. A student has the high-power lens in position and appears to be intently observing the specimen. The instructor, noting a working distance of about 1 cm, knows the student isn't actually seeing the specimen.

How so? since the distance is 1 cm, it is too close.

3 The Microscope

36 Review Sheet 3

12. Describe the proper procedure for preparing a wet mount.

- ① Place the object in a drop of water or saline on a clean side
- ② hold the coverslip at a 45° angle
- ③ ~~carefully~~ and then lower the coverslip slowly

13. Indicate the probable cause of the following situations during use of a microscope

a Only half of the field is illuminated: Something is blocking the light path

b The visible field does not change as the mechanical stage is moved: Something is blocking the object and the objective lens

14. A blood smear is used to diagnose malaria. In patients with malaria, the protozoa can be found near and inside red blood cells. Explain why a microscope capable of high magnification and high resolution would be needed to diagnose malaria.

A microscope would be needed because you would be able to go really deep and see it really close

15. Histopathology is the use of microscopes to view tissues to diagnose and track the progression of diseases. Why are thin slices of tissue ideal for this procedure? Thin tissues are ideal because they are easy to see through.