

Health Science 2020-2021

Name: \_\_\_\_\_

1 and 2 Odd

## **Anatomy and Physiology Packet**

**Directions:** Use the Diversified Health Occupations textbook to answer **circled** questions only. We are in a bit of a time crunch so I have compacted the material to focus mainly on structure and function. You are more than welcome to complete the entire packet, but only the circled questions will be included on the final test.

There will be one large comprehensive test given at the end of week two.

# CHAPTER 7:3 INTEGUMENTARY SYSTEM

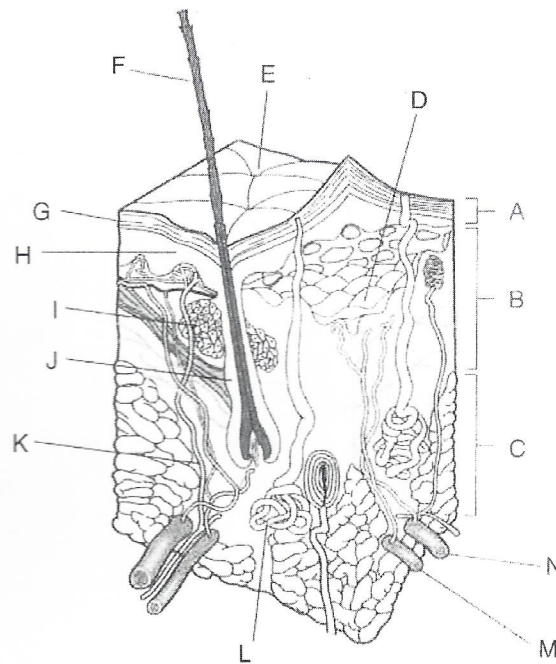
## ASSIGNMENT SHEET

Grade \_\_\_\_\_ Name \_\_\_\_\_

**INTRODUCTION:** The integumentary system consists of the skin and all its parts. This assignment will help you review the main facts of this system.

**INSTRUCTIONS:** Read the information on the Integumentary System. In the space provided, print the word(s) that best completes the statement or answers the question.

1. Label the following diagram of a cross-section of the skin.



A.  
B.  
C.  
D.  
E.  
F.  
G.

H.  
I.  
J.  
K.  
L.  
M.  
N.

2. What are papillae?

How do they provide a method of identification?

3. What is the proper name for sweat glands?

Name three (3) substances found in perspiration.

4. What is the proper name for oil glands?

What are the functions of oil glands?

5. What is alopecia?

6. List seven (7) functions of the skin.

7. What happens when blood vessels dilate? How does this regulate temperature?

What happens when blood vessels constrict? How does this regulate temperature?

8. Define the following words, and give one cause for each discoloration.

a. erythema:

b. jaundice:

c. cyanosis:

9. Identify the following skin eruptions.

- a. blisters or sacs full of fluid:
- b. firm raised areas on the skin:
- c. areas of dried pus and blood:
- d. sacs filled with pus:
- e. flat spots on the skin:
- f. itchy, elevated areas with an irregular shape:
- g. deep loss of skin surface that may extend into dermis:

10. Briefly describe the following skin diseases.

- a. impetigo:
- b. verrucae:
- c. dermatitis:
- d. acne vulgaris:
- e. athlete's foot:
- f. psoriasis:
- g. ringworm:
- h. basal cell carcinoma:
- i. melanoma:

*only*

# CHAPTER 7:6 NERVOUS SYSTEM

## ASSIGNMENT SHEET

Grade \_\_\_\_\_ Name \_\_\_\_\_

**INTRODUCTION:** The nervous system coordinates all the activities of the body. This assignment will help you review the main facts about this system.

**INSTRUCTIONS:** Read the information on the Nervous System. In the space provided, print the word(s) that best completes the statement or answers the question.

1. Some of the Key Terms are hidden in the following puzzle. Can you find the following terms?

autonomic nervous system

brain

central nervous system

cerebellum

cerebrospinal fluid

cerebrum

medulla oblongata

meninge

midbrain

nerve

neuron

parasympathetic

peripheral nervous system

pons

spinal cord

sympathetic

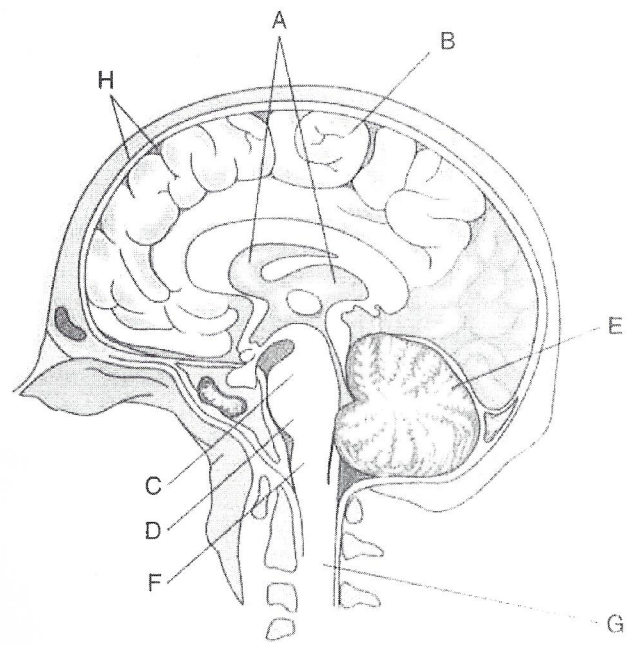
ventricle

S E T P A R A S Y M P A T H E T I C M I U B E M S D  
A V N E M R U R E N T H E C M R S E D T I C F I L W  
T X Q R Z D E I U T E L C I R T N E V X L O V D E S  
A I D I U L F L A N I P S O R B E R E C M M E B R F  
G L O P Y D J O S E S H A R O L U O U I S F X R W T  
N A N H N I A M A R K A R E C E R E B R U M C A E R  
O E C E R E B E L L U M B R U M O S Y S T O M I T H  
L I S R I S C R A Z E N A N D I N A M N O T S N U R  
B E W A H Y I A M D O E I M G I D R O C L A N I P S  
O T B L U T Y G U E S R S H A V U N R I C T K E O X  
A C E N T R A L N E R V O U S S Y S T E M W O G N U  
L L D E U N D E R B L E O O D L Y M P H E R Y N S P  
L S B R A I N P I C I T E H T A P M Y S N A L I C O  
U R D V N A T O P H Y S I O L E G E E R T S D N M I  
D D I O V E R S I O C C F E D I P A Y T I O N E L I  
E X A U T O N O M I C N E R V O U S S Y S T E M M H  
M C A S Y S T E M N Y O U F I N D T H E W O R D S I

2. The basic structural unit of the nervous system is the \_\_\_\_\_. It consists of a cell body that contains the \_\_\_\_\_, nerve fibers called \_\_\_\_\_, which carry impulses toward the cell body, and a single nerve fiber called a/an \_\_\_\_\_, which carries impulses away from the cell body. Many axons have a lipid covering called a/an \_\_\_\_\_, which increases the rate of transmission of a/an \_\_\_\_\_, and \_\_\_\_\_ and \_\_\_\_\_ the axon.

3. What is a synapse?

4. Identify all the parts of the brain shown on the diagram. Briefly state the function of each part.



- A.
- B.
- C.
- D.
- E.
- F.
- G.
- H.

5. Name the three (3) layers of the meninges.

What is the function of the meninges?

6. List two (2) functions of cerebrospinal fluid.

7. The peripheral nervous system consists of the \_\_\_\_\_ and the \_\_\_\_\_ nervous systems. The somatic nervous system consists of 12 pairs of \_\_\_\_\_ and 31 pairs of \_\_\_\_\_.

8. State the actions that the sympathetic and parasympathetic nervous systems have on the following functions of the body.

Sympathetic

Parasympathetic

heart rate

respirations

blood pressure

digestive activity

9. What is homeostasis?

10. Briefly describe the following diseases of the nervous system.

a. paraplegia:

b. encephalitis:

c. hydrocephalus:

d. neuralgia:

e. cerebrovascular accident:

f. epilepsy:

g. cerebral palsy:

h. Parkinson's disease:

i. amyotrophic lateral sclerosis:

# CHAPTER 7:7 SPECIAL SENSES

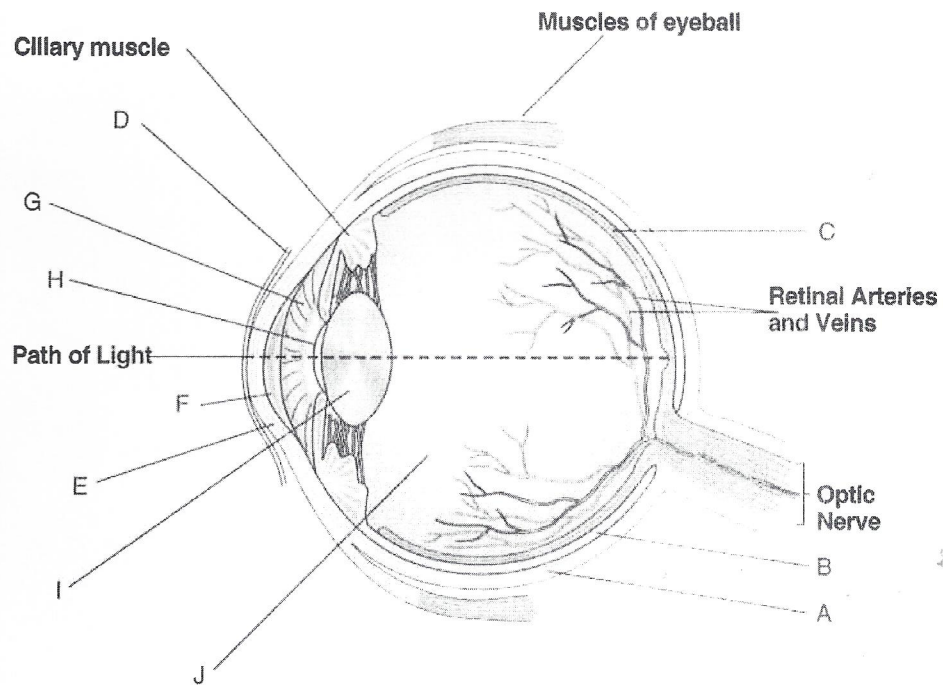
## ASSIGNMENT SHEET

Grade \_\_\_\_\_ Name \_\_\_\_\_

**INTRODUCTION:** Special senses allow the human body to react to the environment. This assignment will help you review the main facts about these senses.

**INSTRUCTIONS:** Read the information on Special Senses. In the space provided, print the word(s) that best completes the statement or answers the question.

1. Special senses occur because the body has organs that receive \_\_\_\_\_, nerves that carry the message to the \_\_\_\_\_, and a brain that \_\_\_\_\_ and \_\_\_\_\_ to sensory messages.
2. Label the following diagram of the eye and briefly state the function of each part.



- A.
- B.
- C.
- D.
- E.

- F.
- G.
- H.
- I.
- J.



3. List four (4) structures that protect the eye.

4. Name five (5) parts of the eye that light rays pass through to focus on the retina.

What happens if these parts do not refract the light rays correctly?

5. Name the following eye diseases.

- a. an abnormal shape or curvature in the cornea that causes blurred vision:
- b. increased intraocular pressure caused by an excess amount of aqueous humor:
- c. nearsightedness:
- d. crossed eyes resulting from a weakness in eye muscles:
- e. lens become cloudy or opaque:
- f. contagious inflammation of conjunctiva:
- g. farsightedness caused by a loss of elasticity in the lens:
- h. a disease of the central and most sensitive section of the retina that is a major cause of vision loss and blindness:

6. What is cerumen? What is its function?

7. What is the correct name for the eardrum? What does it do?

8. Name the three (3) bones or ossicles of the middle ear.

9. What is the eustachian tube? What does it do?

10. State the function of the following parts of the inner ear.

- a. vestibule:
- b. cochlea:
- c. organ of Corti:
- d. semicircular canals:

11. An infection of the middle ear is \_\_\_\_\_. A hearing loss caused by lack of movement of the stapes is \_\_\_\_\_. If sound waves are not being conducted to the inner ear, this causes a/an \_\_\_\_\_ hearing loss or deafness. Damage to the inner ear or auditory nerve causes a/an \_\_\_\_\_ hearing loss or deafness.

12. List the four (4) main tastes. Where are they located on the tongue?

13. What determines the sense of smell?

14. Name four (4) general sense receptors located throughout the body.

# CHAPTER 7:8 CIRCULATORY SYSTEM

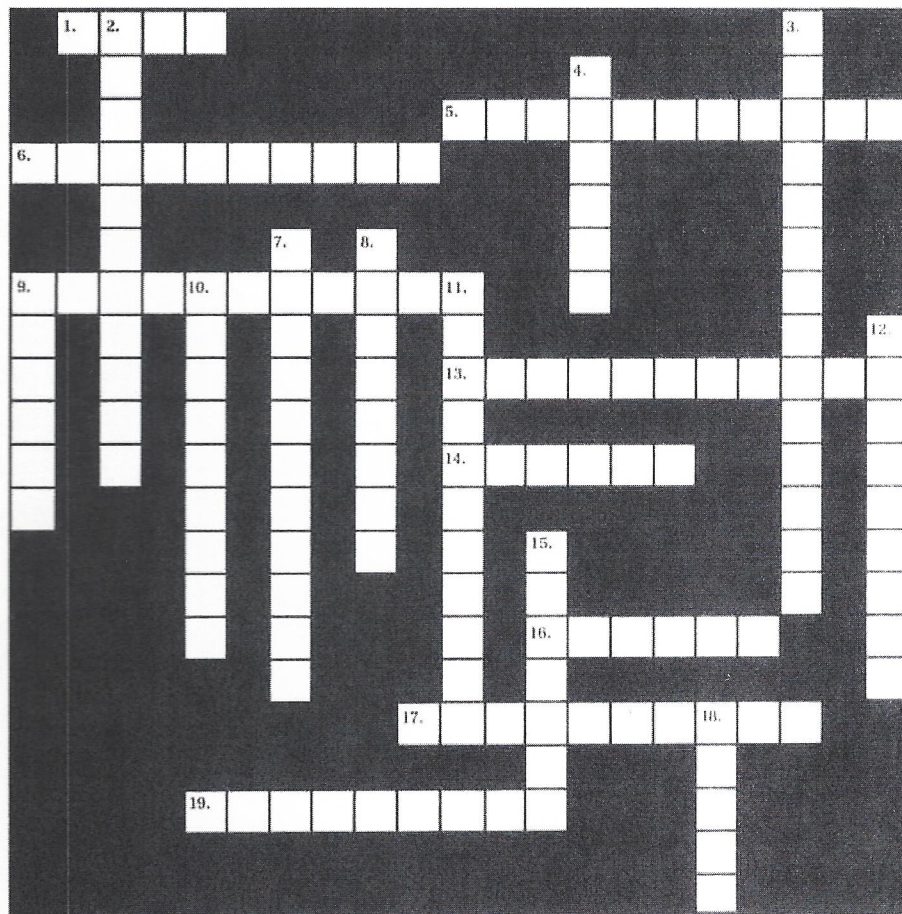
## ASSIGNMENT SHEET

Grade \_\_\_\_\_ Name \_\_\_\_\_

**INTRODUCTION:** The circulatory system is often called the transportation system of the body. This assignment will help you review the main facts on this system.

**INSTRUCTIONS:** Read the information on the Circulatory System. In the space provided, print the word(s) that best answers the question or completes the statement.

1. Use the Key Terms to complete the crossword puzzle.



**ACROSS**

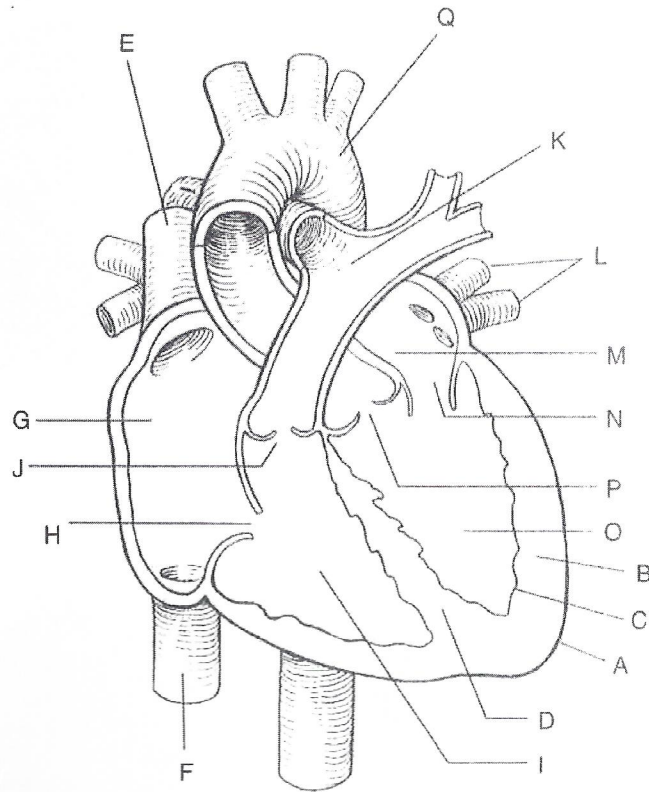
1. Blood vessel that carries blood back to the heart
5. Valve between the left ventricle and aorta
6. Muscular middle layer of the heart
9. Double-layered membrane on the outside of the heart
13. Blood cell required for the clotting process
14. Blood vessel that carries blood away from the heart
16. Muscular wall that separates the heart into a right and left side
17. Complex protein on red blood cells
19. Lower chamber of the heart

**DOWN**

2. Smooth layer of cells lining the inside of the heart
3. Valve between the right ventricle and pulmonary artery
4. Upper chamber of the heart
7. Blood cell that carries oxygen and carbon dioxide
8. Brief period of rest in the heart
9. Fluid portion of blood
10. Blood vessel that connects arterioles with venules
11. Valve between the left atrium and left ventricle
12. Blood cell that helps fight infection
15. Period of ventricular contraction in the heart
18. Tissue that flows through the circulatory system

2.

Label the following diagram of the heart.



- A.
- B.
- C.
- D.
- E.
- F.
- G.
- H.
- I.

- J.
- K.
- L.
- M.
- N.
- O.
- P.
- Q.

3. Describe what happens in the heart during diastole.

4. Describe what happens in the heart during systole. State where each ventricle sends the blood.

5. List the parts of the conductive pathway for electrical impulses in the heart. List the parts in correct order.

6. What is arrhythmia? How is it diagnosed?

7. Identify the following blood vessels:

- a. blood vessels that carry blood away from the heart:
- b. blood vessels that carry blood back to the heart:
- c. blood vessels that connect arterioles with venules:
- d. largest artery in the body:
- e. two largest veins in the body:
- f. vessels that allow oxygen and nutrients to pass through to cells:
- g. smallest branches of arteries:
- h. smallest branches of veins:
- i. vessels that contain valves to prevent backflow of blood:
- j. most muscular and elastic blood vessels:

8. List six (6) substances transported by the blood.

9. List six (6) substances that are dissolved or suspended in plasma.

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10. Name the three (3) main types of blood cells. State the normal count and the function of each type.

Blood Cell

~~Normal Count~~

Function

~~Per Cubic Millimeter of Blood~~

11. What gives blood its characteristic red color?

12. What is hemoglobin? What is its function?

13. Identify the type of leukocyte(s) that performs the following function.

a. phagocytize bacteria:

b. provide immunity for the body by developing antibodies:

c. defend the body from allergic reactions:

d. produce histamine and heparin:

14. Name the following diseases of the circulatory system.

a. saclike formation in the wall of an artery:

b. inadequate number of red blood cells, hemoglobin, or both:

c. dilated swollen veins:

d. a fatty deposit on the walls of arteries:

e. disease characterized by failure of the blood to clot:

f. high blood pressure:

g. inflammation of the veins with formation of a clot:

h. blockage in the coronary arteries of the heart:

i. foreign substance circulating in the bloodstream:

j. malignant disease with large numbers of immature white blood cells: