

 المدرسة الأهلية AHLIA SCHOOL BAHRAIN	END OF SEMESTER EXAMINATION FIRST SEMESTER REVISION BOOKLET
	Grade: 8
AY 2018 - 2019	Subject: Science
	Teacher: Mr. Hafiz Muhammad Ahsan Ali

Chapter 7: Human body system

1. Directions: *On the line before each question, write the letter of the correct answer.*

- _____ 1. Which system helps give the body structure and the ability to move?
- The nervous system
 - The muscular system
 - The endocrine system
 - None of the above
- _____ 2. What is an important job of the peripheral nervous system?
- To receive and process reflex signals
 - To gather information about the environment
 - To release chemical hormone messages throughout the body
 - A and B
- _____ 3. How does the speed of the endocrine system compare to the speed of the nervous system in transmitting signals?
- The nervous system is faster.
 - The endocrine system is faster.
 - The nervous and endocrine systems work at the same speed.
 - All the above
- _____ 4. Which two organ systems work together to allow the body to move?
- The skeletal system and the muscular system
 - The endocrine system and the skeletal system
 - The nervous system and the endocrine system
 - The muscular system and the endocrine system
- _____ 5. The body gathers information about the environment through the
- Muscular system.
 - Endocrine system.
 - Central nervous system.
 - Peripheral nervous system.
- _____ 6. What do the endocrine and nervous systems have in common?
- They use nerve cells.
 - They use chemical hormones.

- C. They help the body absorb nutrients.
- D. They respond to changes inside and outside the body.

- _____ 7. Where do nutrients enter the body?
- A. The mouth
 - B. The stomach
 - C. The esophagus
 - D. None of the above
- _____ 8. Which sequence describes the order in which food is processed in the digestive system?
- A. Digestion → absorption → excretion
 - B. Absorption → digestion → excretion
 - C. Excretion → absorption → digestion
 - D. Excretion and absorption
- _____ 9. Nutrients pass from the digestive system into the blood in the _____.
- A. Liver.
 - B. Small intestine.
 - C. White blood cells.
 - D. All the above
- _____ 10. Which sequence describes the correct order in which nutrients travel through the body?
- A. Stomach → esophagus → small intestine → large intestine
 - B. Stomach → large intestine → esophagus → small intestine
 - C. Esophagus → stomach → small intestine → large intestine
 - D. Esophagus → large intestine → stomach → small intestine
- _____ 11. Which substance contains enzymes that break down food after food enters the mouth?
- A. Bile
 - B. Urea
 - C. Saliva
 - D. Plasma
- _____ 12. What is the main function of the small intestine?
- A. It traps harmful substances.
 - B. It produces white blood cells.
 - C. It stores and releases antibodies.
 - D. It passes digested food into the blood.

2. Completion set 1

Directions: On each line, write the term from the word bank that correctly completes each sentence. Each term is used only once.

hormone **muscles** **neuron**
reflex **senses** **spinal cord**

1. A _____ is the basic unit of the nervous system.
2. An automatic movement in response to a stimulus is a _____.
3. A _____ is a chemical message that travels through the circulatory system.
4. The brain and _____ make up the central nervous system.
5. Bones can move because they are attached to _____.
6. People detect their environment through their five _____.

Completion set 2

Directions: On each line, write the term from the word bank that correctly completes each sentence. Each term is used only once.

antibody **homeostasis** **immunity** **lymphocyte** **plasma**

1. Protection from infection or toxins is called _____.
2. _____ is the part of the blood that carries water and nutrients.
3. The body must maintain steady internal conditions, or _____, even when external conditions change.
4. A(n) _____ protects the body by traveling through the circulatory system and removing or destroying pathogens.
5. A(n) _____ quickly attacks bacteria or viruses that have invaded the body.

3. Directions: Each of the sentences below is false. Make the sentence true by replacing the underlined word(s) with a term from the list below. Write your changes on the lines provided. NOTE: You may need to change a term to its plural form.

**Calorie
nutrient**

**detect
organ system**

**homeostasis
protein**

**immunity
vessel**

lymphocyte

1. Proteins, fats, carbohydrates, vitamins, and minerals are types of Calories.

2. Steady internal conditions when external conditions change is called immunity.

3. The esophagus, stomach, small intestine, and large intestine provide an example of a(n) immunity that works to achieve digestion.

4. Blood moves through your body in tubes called detects.

5. Proteins are a measure of the amount of energy in food.

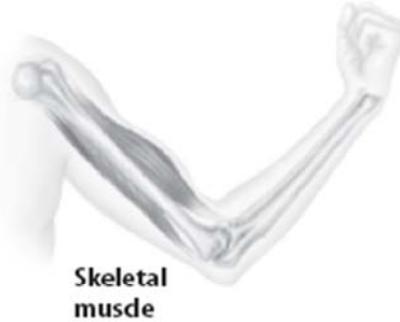
6. A(n) homeostasis is a type of white blood cell that protects the body from infection.

7. If you get chicken pox, your body produces antibodies. You then have nutrients, which will protect you from getting infected with chicken pox again.

8. Immune cells vessel viruses, bacteria, and other foreign substances that are not normally made in the body.

9. Organ systems are made up of long chains of amino acids.

4. Directions: On each line, write the term or phrase that correctly completes each sentence. Refer to the diagram of the muscular system below.

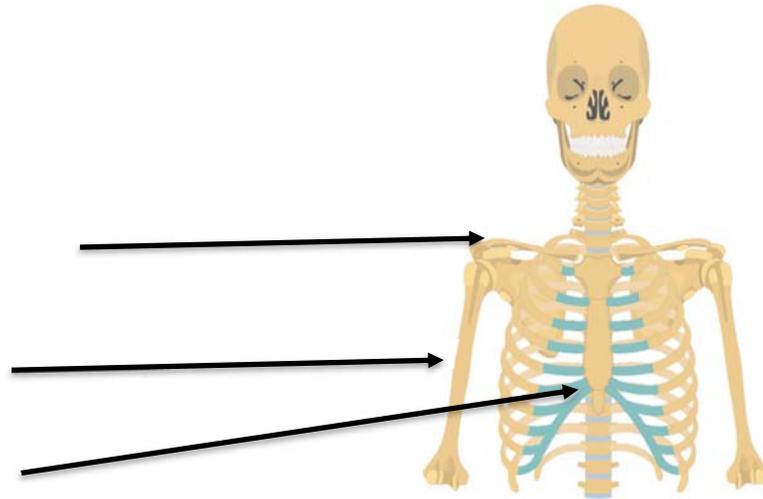


1. There are three _____.
2. The function of _____ and give the body strength to _____.
3. Cardiac muscle is only found in the _____.
4. Smooth muscle tissue is found in _____.
5. Muscle cells are found _____ in the body.
6. An example of _____ muscle tissue is the triceps.
7. Skeletal muscles are connected to bones by _____.
8. Cardiac muscle is important because it continually contracts and relaxes to _____.
9. Blood vessels have _____ muscle tissue.
10. Muscle cells make up about _____ of your body mass.

Human Body Systems

5. Label different parts pectoral girdle (upper skeleton).

1. Skull 2. pectoral/ shoulder girdle 3. Sternum 4. Humerus



6. Differentiate between joint and tendon.

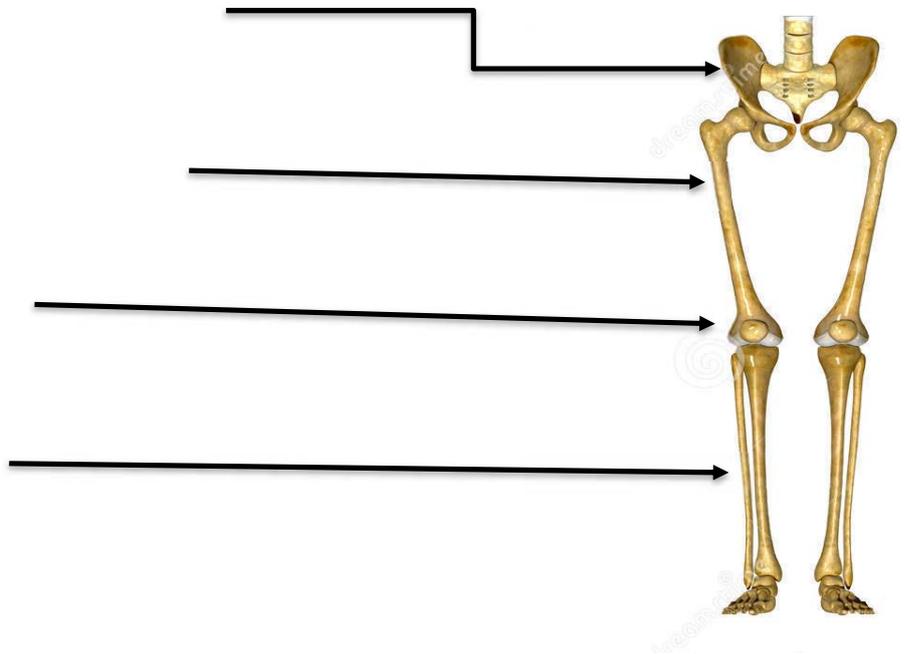
Joint	Tendon

7. Differentiate between a cartilage and hard bone with suitable examples:

Cartilage bone	Hard bone

8. Label different parts pelvic girdle (lower skeleton).

1. Pelvic bone (hip bone) 2. patella 3. Femur 4. Fibula



9. Differentiate between the axial and appendicular skeleton and mention the names of their bones.

Axial skeleton	Appendicular Skeleton
Write names of bones	Write names of bones

10. **Infer:** How are the nutrients distributed to the cells in the body?

11. **Elaborate:** Why different age groups have a different heart beat rate?

12. **Explain:** What is systolic pressure and diastolic pressure?

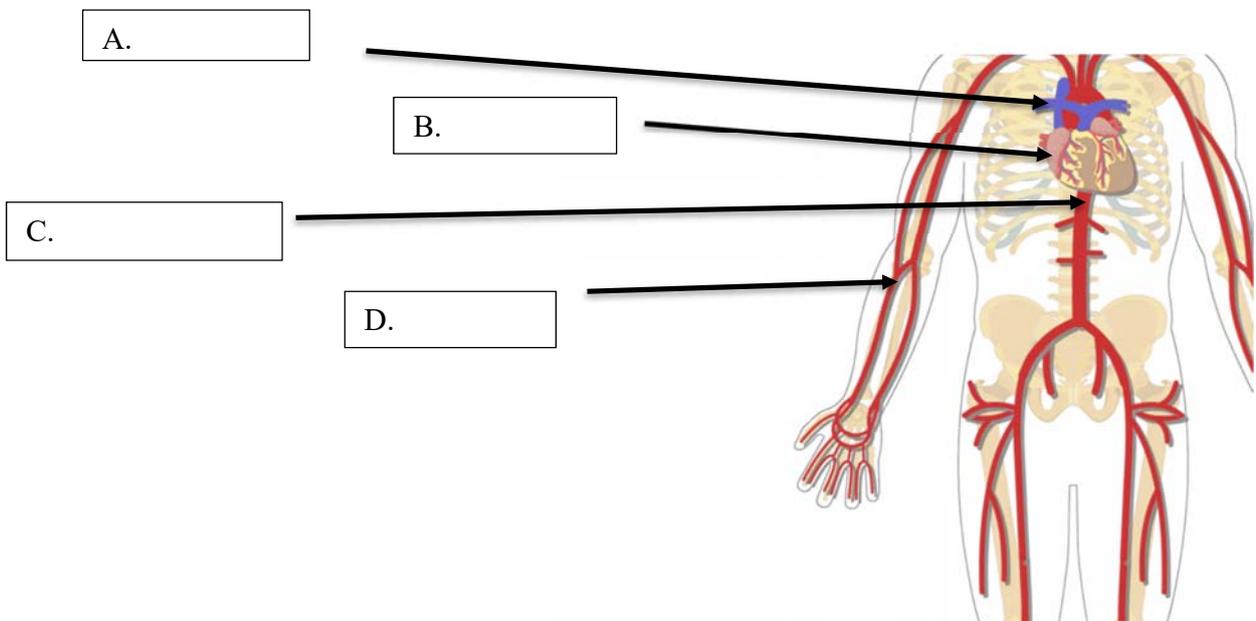
13. Use terms below to label the appropriate parts of the circulatory system of man.

Arteries

Superior vena cava

inferior vena cava

heart vessels



14. **Differentiate** between pulmonary and cardiac cycles.

Pulmonary cycle	Cardiac cycle

15. Place the stages of human development in the correct order by writing the letters *A* (first) through *E* (last) in the spaces provided.

- | | |
|----------------------|----------------------|
| _____ 1. later years | _____ 4. adolescence |
| _____ 2. infancy | _____ 5. childhood |
| _____ 3. Adulthood | |

16. Infer: What is the function of arteries and veins?

17. Elaborate: Where does the inferior and superior vena cava distribute the blood?

18. Explain: How does the heart functions?

19. Define: Pulmonary cycle and write the names of parts involve with it.

20. What do we mean by physical digestion?

21. List the order in which digestion takes place.

22. How does the saliva play its role in digestion?

23. Name the products of liver and pancreas that assist digestion.

24. How are the bacteria present in our digestive tract can be useful and harmful?

Useful	Harmful
1.	1.
2.	2.

25. Define and name a vestigial organ from human body.

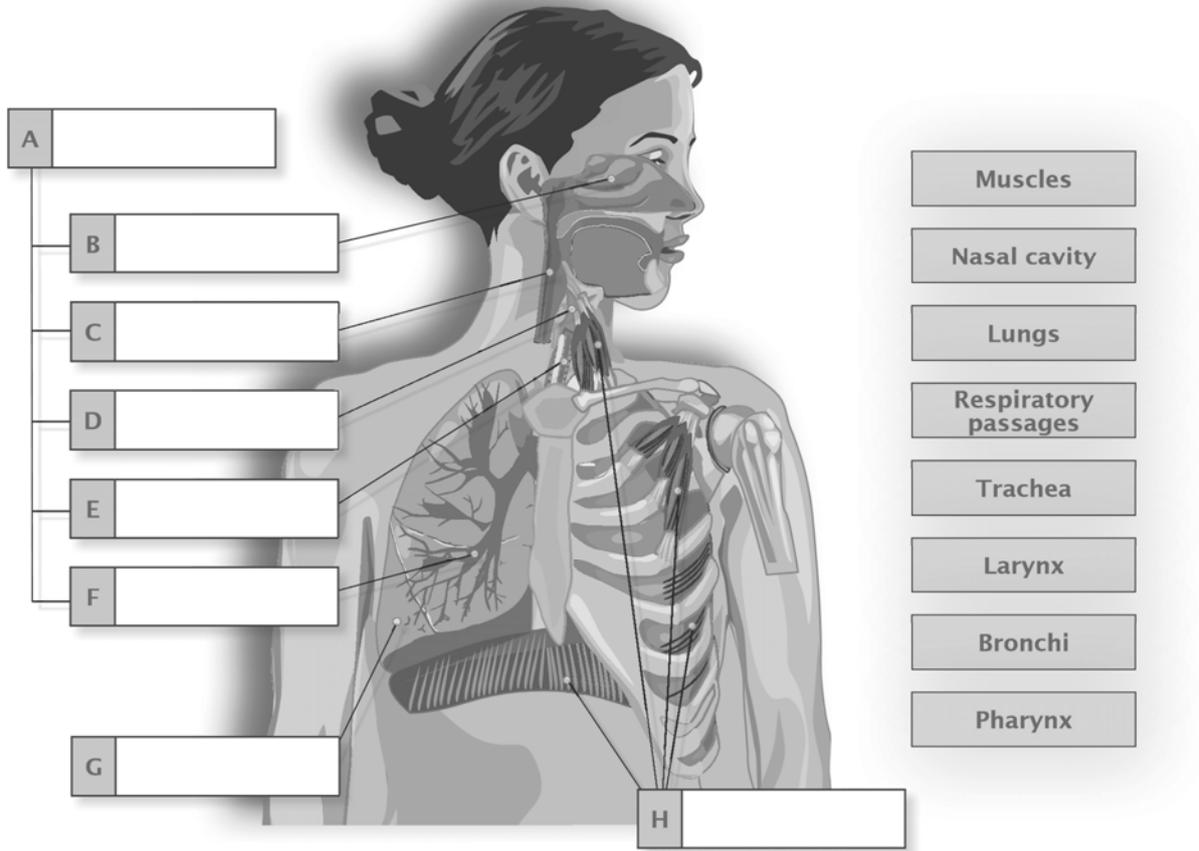
26. What happens in the small intestine?

27. How can we describe a balanced diet?

28. Name the type of food that enters the large intestine.

29. Describe chemical digestion in your own words.

30. Label the parts of respiratory tract in order starting from A to H.

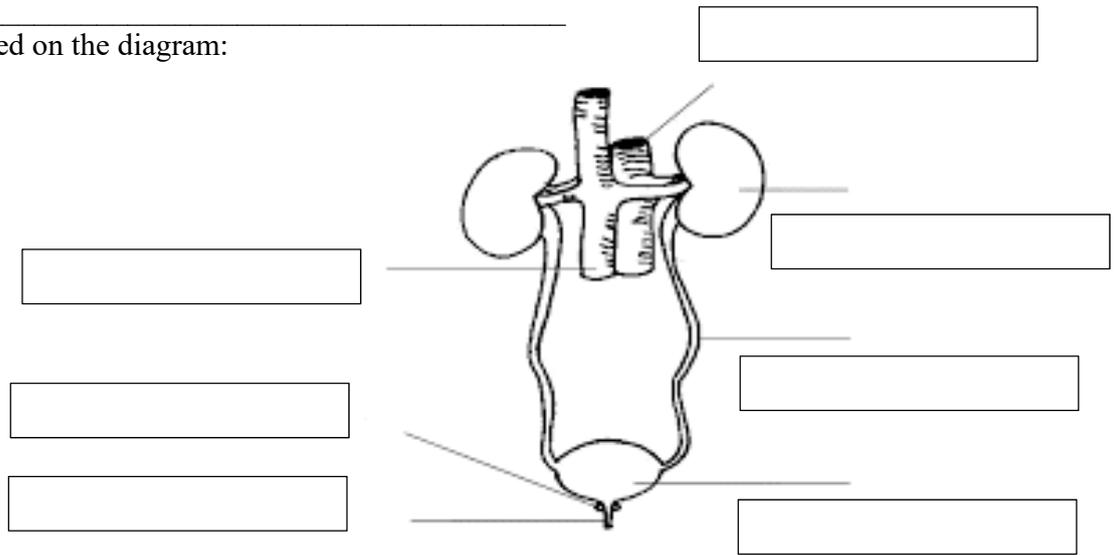


31. **Describe:** what do we mean by Cardiac cycle?

32. **Evaluate:** Which type of blood vessels carry oxygenated and deoxygenated blood? Name the organs from where they pick the type of blood associated with them.

33. Identify the following system:

Label the parts marked on the diagram:



34. What is the shape and color of kidneys?

35. How breathing and respiration are different?

Respiration	Breathing

36. Infer what happens to the diaphragm when we breathe in and out?

37. Explain the difference between the following:

Inspiration/ Inhalation	Expiration/ Exhalation

38. Elaborate the functions of the following three organs:

1. Lungs: _____

2. Kidneys: _____

3. Gall Bladder: _____

39. What is the energy source that drives photosynthesis?

40. Describe the two basic steps in the process of photosynthesis.

41. Directions: Complete the flowchart by writing the correct term from the word bank on each line.

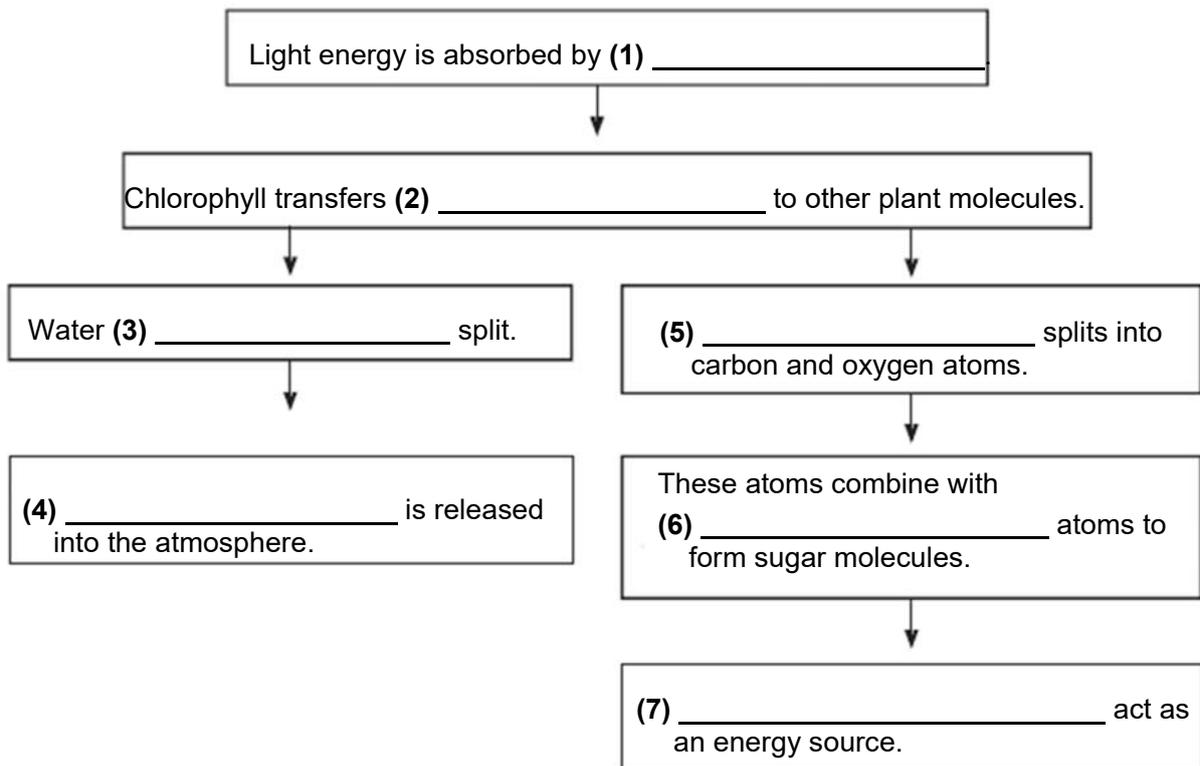
carbon dioxide
oxygen

energy
plant chlorophyll

hydrogen
sugar molecules

molecules

Photosynthesis



ANSWER KEY

Chapter 7: Human body system

1. **Directions:** *On the line before each question, write the letter of the correct answer.*

- B 1. Which system helps give the body structure and the ability to move?
A. the nervous system
B. the muscular system
C. the endocrine system
- A 2. What is an important job of the peripheral nervous system?
A. to receive and process reflex signals
B. to gather information about the environment
C. to release chemical hormone messages throughout the body
- A 3. How does the speed of the endocrine system compare to the speed of the nervous system in transmitting signals?
A. The nervous system is faster.
B. The endocrine system is faster.
C. The nervous and endocrine systems work at the same speed.
- A 4. Which two organ systems work together to allow the body to move?
A. the skeletal system and the muscular system
B. the endocrine system and the skeletal system
C. the nervous system and the endocrine system
D. the muscular system and the endocrine system
- D 5. The body gathers information about the environment through the
A. muscular system.
B. endocrine system.
C. central nervous system.
D. peripheral nervous system.
- D 6. What do the endocrine and nervous systems have in common?
A. They use nerve cells.
B. They use chemical hormones.
C. They help the body absorb nutrients.
D. They respond to changes inside and outside the body.
- A 7. Where do nutrients enter the body?
A. the mouth

- B.** the stomach
C. the esophagus
- B** 8. Which sequence describes the order in which food is processed in the digestive system?
A. digestion → absorption → excretion
B. absorption → digestion → excretion
C. excretion → absorption → digestion
- B** 9. Nutrients pass from the digestive system into the blood in the
A. liver.
B. small intestine.
C. white blood cells.
- C** 10. Which sequence describes the correct order in which nutrients travel through the body?
A. stomach → esophagus → small intestine → large intestine
B. stomach → large intestine → esophagus → small intestine
C. esophagus → stomach → small intestine → large intestine
D. esophagus → large intestine → stomach → small intestine
- C** 11. Which substance contains enzymes that break down food after foods enters the mouth?
A. bile
B. urea
C. saliva
D. plasma
- D** 12. What is the main function of the small intestine?
A. It traps harmful substances.
B. It produces white blood cells.
C. It stores and releases antibodies.
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2. Completion set 1

Directions: On each line, write the term from the word bank that correctly completes each sentence. Each term is used only once.

- | | | |
|-------------------|-------------------|-----------------------|
| 6. Hormone | 8. Muscles | 4. Neuron |
| 5. Reflex | 9. Senses | 7. Spinal cord |

4. A _____ is the basic unit of the nervous system.
5. An automatic movement in response to a stimulus is a _____.

6. A _____ is a chemical message that travels through the circulatory system.
7. The brain and _____ make up the central nervous system.
8. Bones can move because they are attached to _____.
9. People detect their environment through their five _____.

Completion set 2

Directions: On each line, write the term from the word bank that correctly completes each sentence. Each term is used only once.

5. Antibody 3. Homeostasis 1. Immunity 4. Lymphocyte 2. Plasma

1. Protection from infection or toxins is called _____.
2. _____ is the part of the blood that carries water and nutrients.
3. The body must maintain steady internal conditions, or _____, even when external conditions change.
4. A(n) _____ protects the body by traveling through the circulatory system and removing or destroying pathogens.
5. A(n) _____ quickly attacks bacteria or viruses that have invaded the body.

3. Directions: Each of the sentences below is false. Make the sentence true by replacing the underlined word(s) with a term from the list below. Write your changes on the lines provided. NOTE: You may need to change a term to its plural form.

Calorie	detect	homeostasis	immunity	lymphocyte
nutrient	organ system	protein	vessel	

- | | |
|--------------------|---|
| <u>Nutrients</u> | 1. Proteins, fats, carbohydrates, vitamins, and minerals are types of <u>Calories</u> . |
| <u>Homeostasis</u> | 2. Steady internal conditions when external conditions change is called <u>immunity</u> . |

Organ system

3. The esophagus, stomach, small intestine, and large intestine provide an example of a(n) immunity that works to achieve digestion.

Vessels

4. Blood moves through your body in tubes called detects.

Calorie

5. Proteins are a measure of the amount of energy in food.

Lymphocyte

6. A(n) homeostasis is a type of white blood cell that protects the body from infection.

Immunity

7. If you get chicken pox, your body produces antibodies. You then have nutrients, which will protect you from getting infected with chicken pox again.

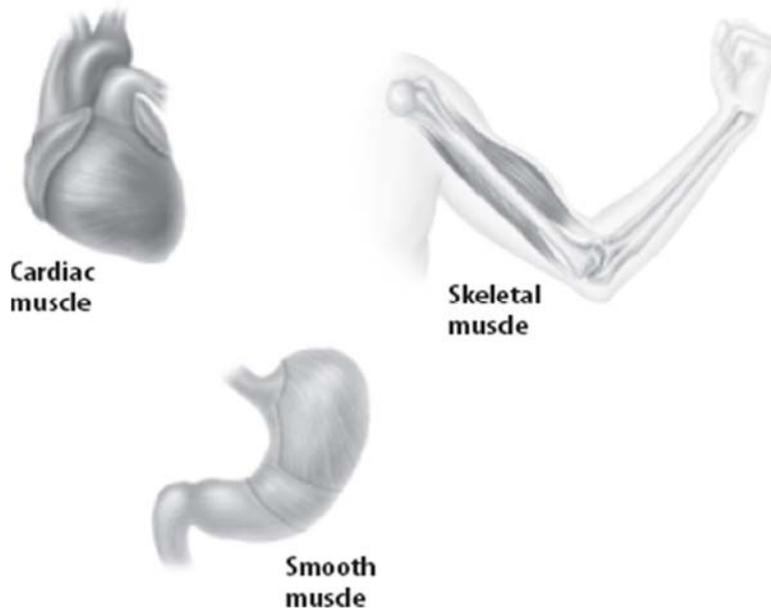
Detect

8. Immune cells vessel viruses, bacteria, and other foreign substances that are not normally made in the body.

Proteins

9. Organ systems are made up of long chains of amino acids.

4. **Directions:** On each line, write the term or phrase that correctly completes each sentence. Refer to the diagram of the muscular system below.

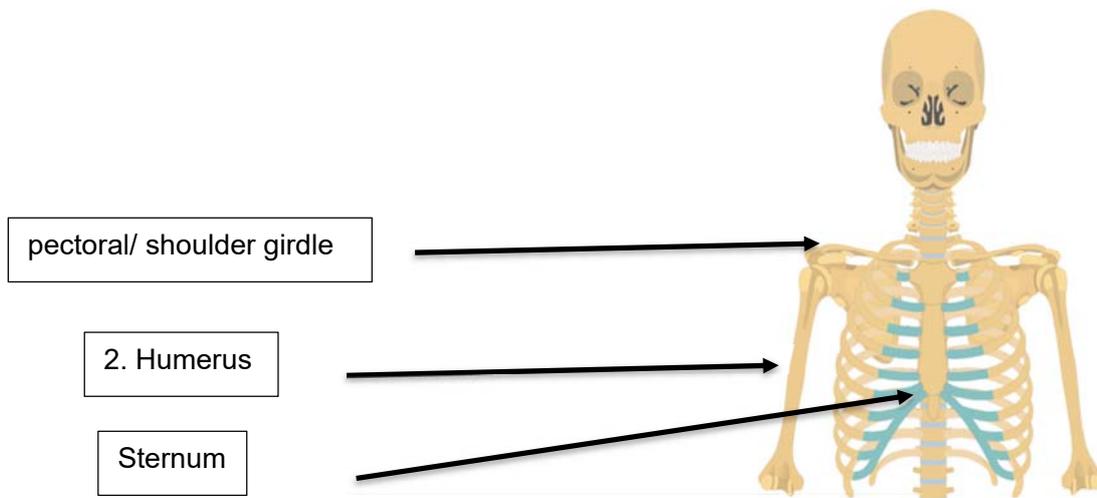


1. There are three types of muscle tissue: Cardiac Muscle, Skeletal Muscle, and Smooth Muscle.
2. The function of skeletal muscle is to give shape and give the body strength to move.

3. Cardiac muscle is only found in the Heart.
4. Smooth muscle tissue is found in Stomach.
5. Muscle cells are found attached to skeleton in the body.
6. An example of Skeletal muscle tissue is the triceps.
7. Skeletal muscles are connected to bones by Connective tissues.
8. Cardiac muscle is important because it continually contracts and relaxes to pump the blood into the body.
9. Blood vessels have Smooth muscle tissue.
10. Muscle cells make up about 40% of your body mass.

Human Body Systems

5. Label different parts pectoral girdle (upper skeleton).



6. **Differentiate** between joint and tendon.

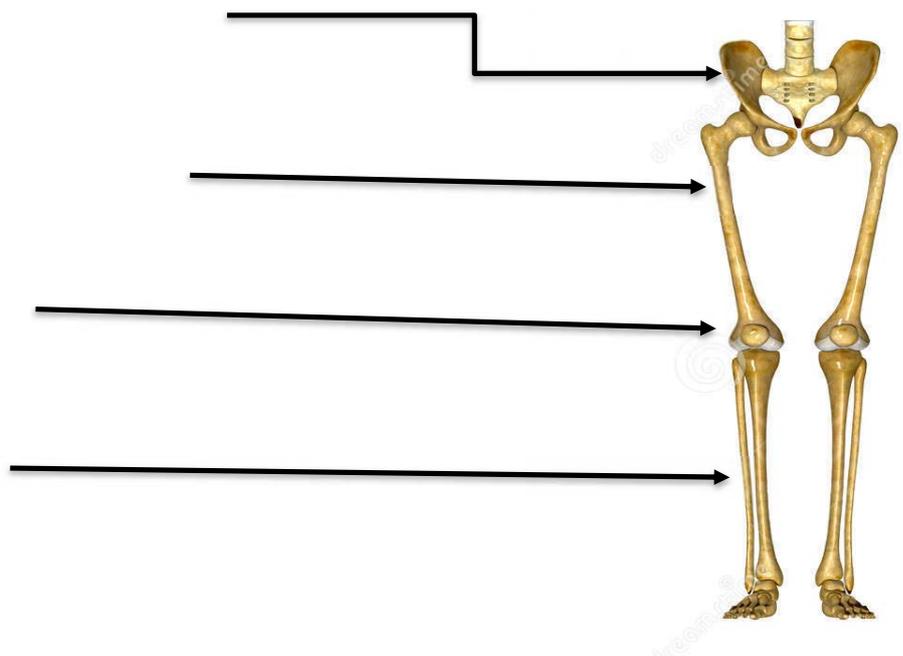
Joint	Tendon
Ligaments connect the ends of bones together in order to form a joint .	Tendons are the tough, flexible band of fibrous connective tissue that connects muscles to bones.

7. Differentiate between a cartilage and hard bone with suitable examples:

Cartilage bone	Hard bone
Cartilage is flexible	Bone is strong and nonflexible
Cartilage has a softer matrix.	Bone has a hard matrix
provides support & flexibility to body.	Bone forms the skeleton.

8. Label different parts pelvic girdle (lower skeleton).

1. Pelvic bone (hip bone) 3. patella 2. Femur 4. Fibula



9. Differentiate between the axial and appendicular skeleton and mention the names of their bones.

Axial skeleton	Appendicular Skeleton
The axial skeleton makes up our central axis and consists of the following bones:	The appendicular skeleton consists of the limbs and girdles.

Write names of bones	Write names of bones
Skull	Shoulder bones
Vertebrae	Humerus
Ribs	Ulna
Sternum	Radius

10. Infer how does the nutrients distributed to the cells in the body?

Your circulatory system, which consists of your heart, blood and blood vessels, are responsible for transporting nutrients to the cells of your body. Specifically, nutrients are transported throughout your body through your blood via capillaries, tiny blood vessels that connect arteries to veins.

11. Elaborate why different age groups have a different heart beat rate?

Normal heart rate varies from person to person, but a normal range for adults is 60

However, a normal heart rate depends on the individual, age, body size

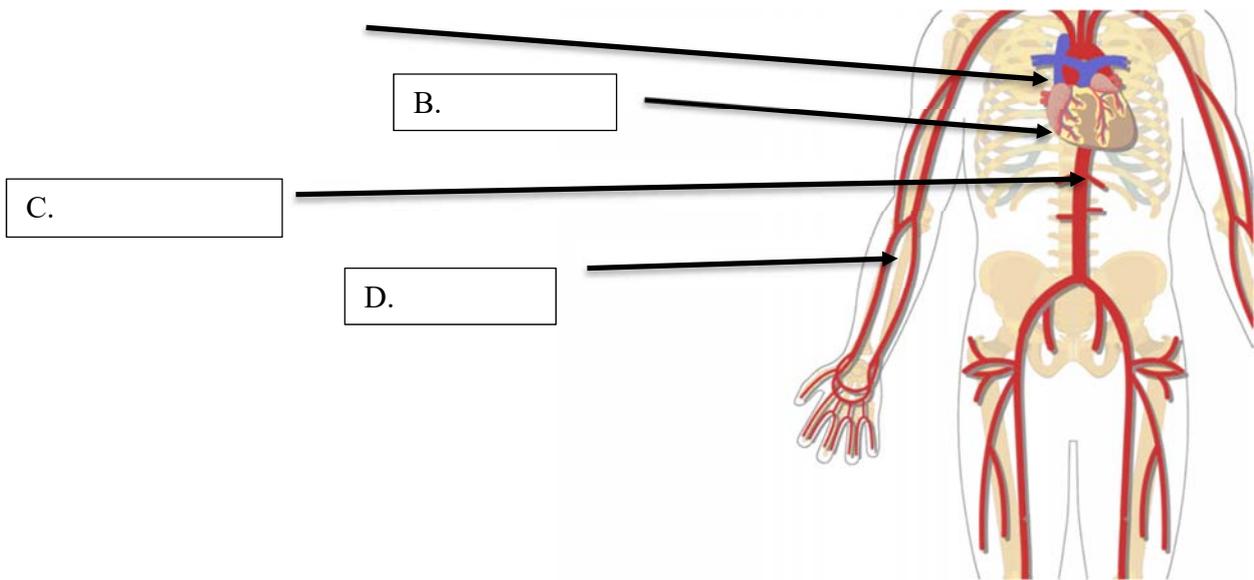
12. Explain what is systolic pressure and diastolic pressure?

From the blood pressure value, the top number refers to systolic pressure. The bottom number refers to diastolic pressure. For example, 120/80 is the normal blood pressure value for an average person. It shows both pressure value at the same time.

13. Use terms below to label the appropriate parts of the circulatory system of man.

D. Arteries A. Superior vena cava C. inferior vena cava B. heart vessels

A.



14. Differentiate between pulmonary and cardiac circulations.

Cardiac Circulation	Pulmonary Circulation
Cardiac circulation refers to the circulation of oxygenated blood from the heart to different parts of the body and bringing back deoxygenated blood to the heart.	It refers to the circulation of deoxygenated blood from the heart to lungs and oxygenated blood from the lungs to the heart.

15. Place the stages of human development in the correct order by writing the letters A (first) through E (last) in the spaces provided.

- | | | | |
|----------|----------------|----------|----------------|
| <u>E</u> | 1. later years | <u>C</u> | 4. adolescence |
| A | 2. infancy | <u>B</u> | 5. childhood |
| <u>D</u> | 3. Adulthood | | |

16. Infer what is the function of arteries and veins?

The arteries are perceived as carrying oxygenated blood to the tissues, while veins carry deoxygenated blood back to the heart. This is true of the systemic circulation, by far the larger of the two circuits of blood in the body, which transports oxygen from the heart to the tissues of the body.

17. Elaborate where does the inferior and superior vena cava distribute the blood?

The inferior vena cava carries blood from the lower half of the body whilst the superior vena cava carries blood from the upper half of the body.

18. Explain how does the heart function?

The human heart is an organ that pumps blood throughout the body via the circulatory system, supplying oxygen and nutrients to the tissues and removing carbon dioxide and other wastes.

19. Define pulmonary cycle and write the names of parts involved with it.

It refers to the circulation of deoxygenated blood from the heart to lungs and oxygenated blood from the lungs to the heart. Organs involved are, the heart, lungs and blood vessels.

20. What do we mean by physical digestion?

Physical digestion involves breaking food down into smaller pieces without making any chemical changes. Physical digestion happens in: the mouth when food is chewed.

21. List the order in which digestion takes place.

Food passes through the digestive system in the following order:

- Mouth.
- Esophagus.
- Stomach.
- The small intestine.
- Colon (large intestine)
- Rectum.

22. How does the saliva play its role in digestion?

The digestive functions of saliva include moistening food, and helping to create a food bolus, so it can be swallowed easily. Saliva contains the enzyme amylase that breaks some starches down into maltose and dextrin. Thus, digestion of food occurs within the mouth, even before food reaches the stomach.

23. Name the products of liver and pancreas that assist digestion?

Bile juice and pancreatic juice are the products of liver and pancreas that help in digestion.

24. How are the bacteria present in our digestive tract can be:

Useful	Harmful
---------------	----------------

1. bacteria help us to break down complex sugars into simple one's	1. The unwanted kinds of bacteria cause an imbalance in the human gut (digestive tract).
2. lactose conversion is also a vital role played by bacteria	2. due to the imbalance stomach gets disturbed.

25. Define and name a vestigial organ from human body?

Vestigial organs are organs of the body which are smaller and simpler than those in related species. They have lost, or almost lost their original function. Example is the human appendix.

26. What happens in the small intestine during digestion?

The small intestine is the part of the intestines where 90% of the digestion and absorption of food occurs, the other 10% taking place in the stomach and large intestine. The main function of the small intestine is absorption of nutrients and minerals from food.

27. How can we describe a balanced diet?

A balance diet is the diet that have all the necessary food requirements. A balance diet should include all the biological molecules i.e. proteins, carbohydrates, fats, lipids, vitamins etc.

28. Name the type of food that enters the large intestine?

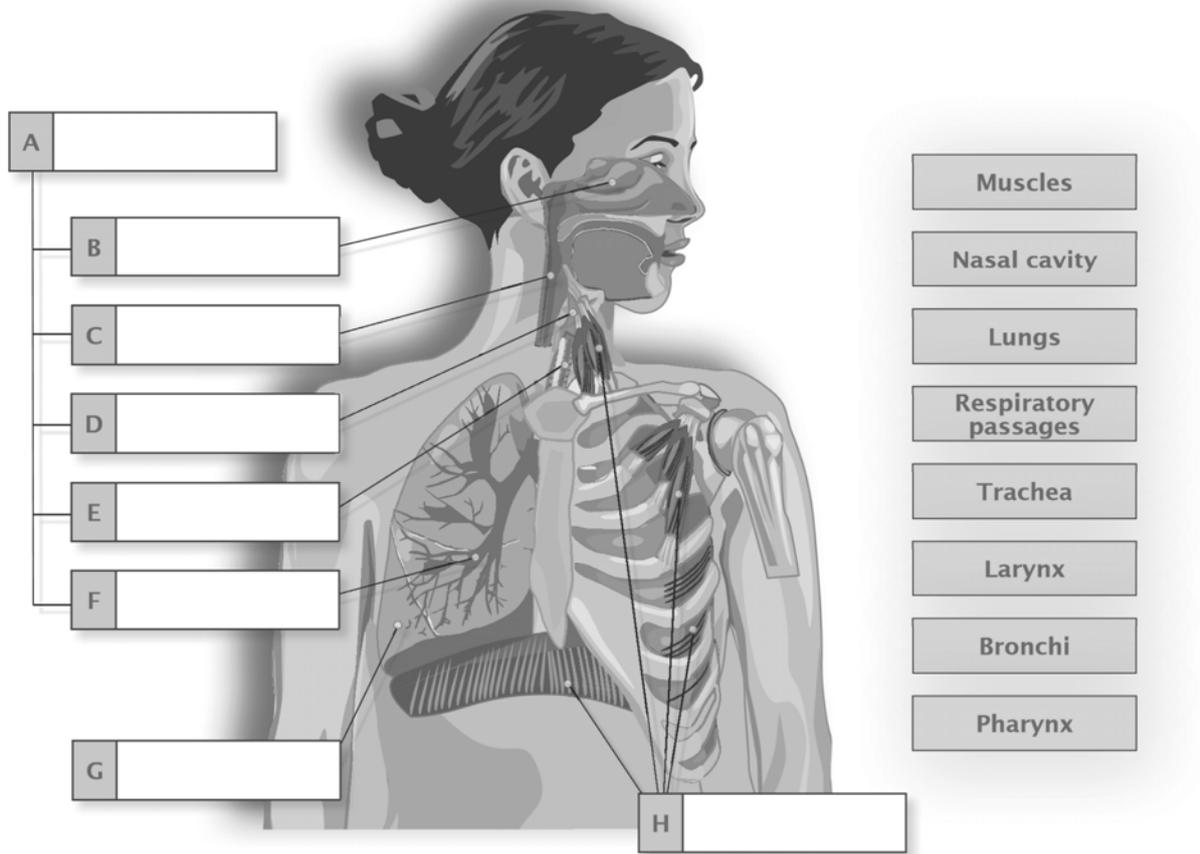
A slurry of digested food, known as chyme, enters the large intestine from the small intestine via the ileocecal sphincter. Chyme passes through the cecum where it is mixed with beneficial bacteria that have colonized the large intestine throughout a person's lifetime.

29. Describe chemical digestion in your own words?

Chemical digestion involves breaking down the food into simpler nutrients that can be used by the cells. Chemical digestion begins in the mouth when food mixes with saliva. Saliva contains an enzyme (amylase) that begins the breakdown of carbohydrates.

30. Label the parts of respiratory tract in order starting from A to H.

A. Respiratory passage B. Nasal Cavity C. Pharynx D. Larynx E. Trachea F. Bronchi
G. Lungs H. Muscles



31. Describe what do we mean by Cardiac cycle?

Cardiac cycle refers to the circulation of oxygenated blood from the heart to the different parts of the body using circulatory system and bringing back deoxygenated blood from the body to the heart.

32. Evaluate which type of blood vessels carry oxygenated and deoxygenated blood? Name the organs from where they pick the type of blood associated with them.

Arteries carry oxygenated blood from the heart to different parts of the body while veins carry deoxygenated blood from the body to the heart.

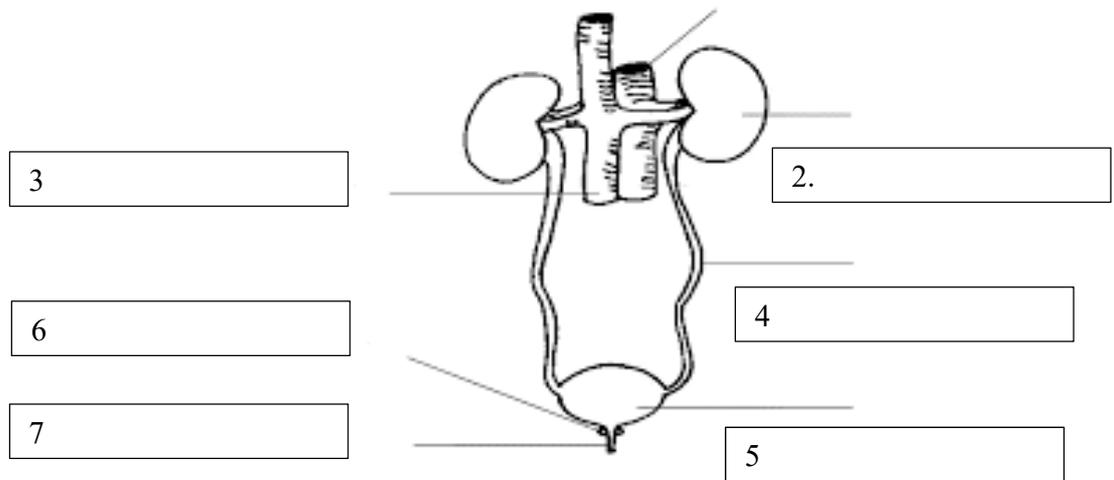
33. Identify the following system:

Excretory system

Label the parts marked on the diagram:

1. Inferior vena cava 2. Kidney 3. Renal vein 4. Ureter 5. Gall Bladder 6. Urethra 7. Urethral opening.

1



34. What is the shape and color of kidneys?

The kidneys are bean shaped and their color is reddish brown.

35. How breathing and respiration are different?

Respiration	Breathing
Respiration is a chemical process.	Breathing is a mechanical process.
In this process complex molecule like glucose is broken down into energy	During this process exchange of oxygen and carbon dioxide is done.

36. Infer what happens to the diaphragm when we breathe in and out?

During inspiration, the diaphragm contracts and pulls downward while the muscles between the ribs contract and pull upward. During expiration, the diaphragm relaxes, and the volume of the thoracic cavity decreases, while the pressure within it increases. As a result, the lungs contract and air is forced out.

37. Explain the difference between the following:

Inspiration/ Inhalation	Expiration/ Exhalation

Inspiration is when we breathe in or inhale oxygen using our oral/nasal cavity.

Expiration is when we breathe out carbon dioxide from our lungs.

38. Elaborate the functions of the following three organs:

1. Lungs: The lungs are used to exchange gases.
2. Kidneys: The kidneys are used to filter the blood.
3. Gall Bladder: the bladder is used to store urine temporarily before we urinate.

39. What is the energy source that drives photosynthesis?

Sunlight

40. Describe the two basic steps in the process of photosynthesis.

The process of photosynthesis is divided into two main parts. The first part is called the light dependent reaction. This reaction happens when the light energy is captured and pushed into a chemical called ATP. The second part of the process happens when the ATP is used to make glucose (the Calvin Cycle).

Directions: Complete the flowchart by writing the correct term from the word bank on each line.

41.

5. carbon dioxide

2. energy

6. hydrogen

3. molecules

4. oxygen

1. plant chlorophyll

7. sugar molecules

Photosynthesis

