Preface

This Test Bank was developed to accompany *Human Anatomy & Physiology*, Seventh Edition, by Elaine N. Marieb and Katja Hoehn. Each chapter contains a variety of questions, including:

- Matching Questions
- True/False Questions
- Multiple-Choice Questions
- Fill-in-the-Blank/Short Answer Questions
- Clinical Questions

Since it is often difficult to measure student understanding of conceptual ideas, especially in physiology, emphasis is placed on the proper design of multiple-choice questions. Because multiple-choice questions test comprehension as well as recall, a large number of these questions are provided. Additionally, objective questions lend themselves well to machine scoring, which is often necessary with large classes.

For each question in this Test Bank, the following information is provided:

**Answer:** Correct answer. The essay questions include short answers that may be expanded upon by the instructor or student.

**Diff:** Level of difficulty. Noted as 1 (relatively easy; requires a thorough knowledge of vocabulary), 2 (harder; requires greater in-depth understanding of vocabulary and basic concepts), and 3 (hard; requires a thorough understanding of vocabulary and concepts as well as analysis of this information).

**Page Ref:** Reference to the page(s) where the vocabulary or concept can be found, and may include relevant figure and table numbers.

This Test Bank is intended as a complete question source to accompany the text, but it can also be used to supplement any existing questions an instructor may already be using. The Test Bank is formatted so that an instructor can cut and paste questions for preparation of an exam. An interactive Macintosh and Windows CD-ROM version of this Test Bank is available, which will allow you to easily alter the questions provided or add new questions to fit your class. Visit the Addison Wesley/Benjamin Cummings catalog page to download the electronic version of this printed Test Bank and other available instructor supplements at www.aw-bc.com.

Since testing is an integral part of any course, and science courses in particular are an ideal arena to explore logical thought processes, we hope this Test Bank will serve as a nucleus for developing critical thinking in students and will enhance the learning experience for both students and instructors.

We are always looking for new questions to add to this Test Bank, so please feel free to suggest questions you would like to see added to the next edition.

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Chapter 1  The Human Body: An Orientation

Matching Questions

Figure 1.1

Using Figure 1.1, match the following cavities:

1) Thoracic cavity.
   Answer: C
   Diff: 1  Page Ref: 15–17; Fig. 1.9

2) Cranial cavity.
   Answer: A
   Diff: 1  Page Ref: 15–17; Fig. 1.9
3) Abdominal cavity.

   Answer: D  
   Diff: 1 Page Ref: 15–17; Fig. 1.9

4) Vertebral cavity.

   Answer: B  
   Diff: 1 Page Ref: 15–17; Fig. 1.9

![Image of human abdomen]

**Figure 1.2**

*Using Figure 1.2, match the following regions:*

5) Umbilical region.

   Answer: C  
   Diff: 1 Page Ref: 18; Fig. 1.11

6) Right hypochondriac.

   Answer: B  
   Diff: 1 Page Ref: 18; Fig. 1.11
7) Hypogastric (pubic) region.  
Answer: D  
Diff: 1  Page Ref: 18; Fig. 1.11

8) Epigastric region.  
Answer: A  
Diff: 1  Page Ref: 18; Fig. 1.11

9) Right iliac (inguinal) region.  
Answer: E  
Diff: 1  Page Ref: 18; Fig. 1.11

Match the following systems:

10) Directly causes mechanical motion.  
Diff: 1  Page Ref: 5; Fig. 1.3  
A) Muscular

11) Responds to environmental changes by transmitting electrical impulses.  
Diff: 1  Page Ref: 5; Fig. 1.3  
B) Nervous

12) Provides support and levers for muscles to work on.  
Diff: 1  Page Ref: 5; Fig. 1.3  
C) Skeletal

13) Protects underlying organs from mechanical damage and synthesizes vitamin D.  
Diff: 2  Page Ref: 5; Fig. 1.3  
D) Integumentary

Match the following systems:

14) Controls the body with chemical molecules called hormones.
   Diff: 2   Page Ref: 7; Fig. 1.3
   A) Endocrine

15) Delivers oxygen and nutrients to the tissues.
   Diff: 1   Page Ref: 6–8; Fig. 1.3
   B) Immune

16) Produces antibodies that neutralize foreign substances.
   Diff: 1   Page Ref: 7; Fig. 1.3
   C) Lymphatic

17) Removes and filters excess fluid from tissues.
   Diff: 1   Page Ref: 7; Fig. 1.3
   D) Cardiovascular

14) A  15) D  16) B  17) C

Match the following examples of feedback mechanisms:

18) Blood glucose levels
   Diff: 1   Page Ref: 10
   A) Positive feedback

19) Blood pressure
   Diff: 3   Page Ref: 10
   B) Negative feedback

20) Blood clotting
   Diff: 2   Page Ref: 10

21) Delivering a baby
   Diff: 2   Page Ref: 10

18) B  19) B  20) A  21) A
Match the following systems:

22) Arteries, veins, heart.  A) Urinary
   Diff: 1  Page Ref: 6; Fig. 1.3
   B) Cardiovascular

23) Trachea, bronchi, alveoli.  C) Respiratory
   Diff: 1  Page Ref: 6, 7; Fig. 1.3

24) Adrenal glands, pancreas, pituitary.  D) Endocrine
   Diff: 1  Page Ref: 6; Fig. 1.3
   E) Digestive

25) Esophagus, large intestine, rectum.  F)
   Diff: 1  Page Ref: 5–7; Fig. 1.3

26) Kidneys, bladder, ureters.  
   Diff: 1  Page Ref: 8; Fig. 1.3


Match the following cavities:

27) Stomach.  A) Abdominopelvic
   Diff: 1  Page Ref: 15; Fig. 1.9
   B) Thoracic

28) Heart.  C) Cranial
   Diff: 1  Page Ref: 15; Fig. 1.9

29) Uterus.
   Diff: 1  Page Ref: 15; Fig. 1.9

30) Brain.
   Diff: 1  Page Ref: 15; Fig. 1.9

31) Lungs.
   Diff: 1  Page Ref: 15; Fig. 1.9

Match the following technical terms:

32) Arm.  
   Diff: 1  Page Ref: 14; Fig. 1.7  
   Ref: 14; Fig. 1.7  
   A) Patellar  
   B) Thoracic  

33) Buttock.  
   Diff: 1  Page Ref: 14; Fig. 1.7  
   C) Gluteal  

34) Head.  
   Diff: 1  Page Ref: 14; Fig. 1.7  
   D) Brachial  

35) Knee (anterior aspect).  
   Diff: 1  Page Ref: 14; Fig. 1.7  
   E) Cephalic  

36) Chest.  
   Diff: 1  Page Ref: 14; Fig. 1.7  

32) D  33) C  34) E  35) A  36) B

Match the following terms:

37) The bridge of the nose is ______ to the left eye.  
   Diff: 2  Page Ref: 12-13; Tbl. 1.1  
   A) Medial  
   B) Anterior  

38) The upper arm is ______ to the forearm.  
   Diff: 2  Page Ref: 12-13; Tbl. 1.1  
   C) Superior  
   D) Distal  

39) The heart is ______ to the stomach.  
   Diff: 2  Page Ref: 12-13; Tbl. 1.1  
   E) Proximal  

40) The fingers are ______ to the wrist.  
   Diff: 2  Page Ref: 12-13; Tbl. 1.1  

41) The stomach is ______ to the spine.  
   Diff: 2  Page Ref: 12-13; Tbl. 1.1  

37) A  38) E  39) C  40) D  41) B
True/False Questions

1) Positive feedback mechanisms tend to increase the original stimulus.
   
   Answer: TRUE
   Diff: 1  Page Ref: 10-11

2) Imaging is useful in discovering obstructed blood supplies in organs and tissues.
   
   Answer: TRUE
   Diff: 1  Page Ref: 20

3) The anatomical position means the body is standing at attention with the palms facing forward and the thumbs pointing away from the body.
   
   Answer: TRUE
   Diff: 1  Page Ref: 12; Fig. 1.7

4) The elbow is proximal to the shoulder.
   
   Answer: FALSE
   Diff: 1  Page Ref: 13; Table 1.1

5) The serous membrane that lines the peritoneal cavity wall is called visceral peritoneum.
   
   Answer: FALSE
   Diff: 2  Page Ref: 17

6) A major function of serous membranes is to decrease friction.
   
   Answer: TRUE
   Diff: 1  Page Ref: 17

7) The right hypochondriac region contains the majority of the stomach.
   
   Answer: FALSE
   Diff: 1  Page Ref: 18; Fig. 1.11

8) Lungs carry out an excretory function.
   
   Answer: TRUE
   Diff: 2  Page Ref: 8

9) Embryology concerns the structural changes that occur in an individual from conception through old age.
   
   Answer: FALSE
   Diff: 1  Page Ref: 2

10) A tissue consists of groups of similar cells that have a common function.
    
    Answer: TRUE
    Diff: 1  Page Ref: 3
11) It is important for any organism to maintain its boundaries, so that its internal environment remains distinct from the external environment surrounding it.

Answer: TRUE

Diff: 1 Page Ref: 5

12) Without some sort of negative feedback mechanism, it would be impossible to keep our body chemistry in balance.

Answer: TRUE

Diff: 1 Page Ref: 10

13) Regardless of the variable being regulated, all homeostatic control mechanisms have at least three interdependent components.

Answer: TRUE

Diff: 2 Page Ref: 9

14) In a negative feedback mechanism, ADH is the equivalent to the "thermostat" in your home heating system.

Answer: FALSE

Diff: 2 Page Ref: 10; Fig. 1.5

15) The epigastric region is located superior to the umbilical region.

Answer: TRUE

Diff: 1 Page Ref: 18; Fig. 1.11

Multiple-Choice Questions

1) Histology would be best defined as a study of_______.
   A) cells          B) tissues
   C) cell chemistry D) the gross structures of the body

Answer: B

Diff: 1 Page Ref: 2

2) The study of the heart may incorporate many aspects of anatomy but as a whole you would say it is _______ anatomy.
   A) microscopic    B) gross
   C) developmental  D) systemic

Answer: B

Diff: 1 Page Ref: 2
3) An increased rate of breathing as a result of an increased buildup of carbon dioxide in the bloodstream would be best described as an example of ________.
   A) maintaining boundaries
   B) excretion of metabolic waste
   C) responsiveness
   D) metabolism

Answer: B
Diff: 2  Page Ref: 8

4) Normal body temperature is ________ degrees centigrade.
   A) 98
   B) 68
   C) 47
   D) 37

Answer: D
Diff: 1  Page Ref: 8

5) If you consider your home air conditioner in terms of homeostasis then the wall thermostat would be the ________.
   A) control center
   B) receptor
   C) effector
   D) variable

Answer: A
Diff: 2  Page Ref: 9; Fig. 1.4

6) The main, general purpose of negative feedback is ________.
   A) to control all body system tissues
   B) to maintain homeostasis
   C) to keep the body's sugar high
   D) to regulate excretion

Answer: B
Diff: 2  Page Ref: 10

7) ________ is the specific name for the hip region.
   A) Manus
   B) Inguinal
   C) Pedal
   D) Coxal

Answer: D
Diff: 1  Page Ref: 14; Fig. 1.7

8) An oblique cut is one that ________.
   A) is cut horizontal right and left
   B) is cut diagonally between the vertical and horizontal
   C) is cut vertical right and left
   D) is cut perpendicular to vertical and horizontal

Answer: B
Diff: 2  Page Ref: 15
9) The heart lies in the _______ cavity.
   A) superior mediastinal  B) pleural
   C) dorsal  D) pericardial

Answer: D
Diff: 1  Page Ref: 15; Fig. 1.9

10) The cavities housing the eyes are called _______ cavities.
   A) frontal  B) cranial  C) nasal  D) orbital

Answer: D
Diff: 1  Page Ref: 19

11) A structure that is composed of two or more tissues would be _______.
   A) a complex tissue  B) an organ system
   C) an organ  D) a complex cell

Answer: C
Diff: 1  Page Ref: 3

12) _______ cavities are spaces within joints.
   A) Nasal  B) Synovial  C) Orbital  D) Oral

Answer: B
Diff: 2  Page Ref: 19

13) Which of the following would not be functional characteristics of life?
   A) movement  B) responsiveness to external stimuli
   C) maintenance of boundaries  D) decay

Answer: D
Diff: 2  Page Ref: 4-8

14) _______ means toward or at the back of the body, behind.
   A) Anterior  B) Lateral  C) Distal  D) Dorsal

Answer: D
Diff: 1  Page Ref: 13

15) The single most abundant chemical substance of the body, accounting for 60 to 80% of body weight, is _______.
   A) oxygen  B) protein  C) water  D) hydrogen

Answer: C
Diff: 1  Page Ref: 8
16) The posterior side of the patella would be called ________.
   A) sural        B) crural        C) antecubital    D) popliteal
   Answer: D
   Diff: 2        Page Ref: 14; Fig. 1.7

17) Which of the following statements is true concerning feedback mechanisms?
   A) Positive feedback mechanisms always result in excessive damage to the host.
   B) Negative feedback mechanisms tend to increase the original stimulus.
   C) Negative feedback mechanisms work to prevent sudden severe changes within the body.
   D) Blood glucose levels are regulated by positive feedback mechanisms.
   Answer: C
   Diff: 2        Page Ref: 10

18) The anatomical position is characterized by all of the following except ________.
   A) body erect        B) arms at sides
   C) palms turned posteriorly        D) thumbs pointed laterally
   Answer: C
   Diff: 1        Page Ref: 12

19) A good example of a positive feedback mechanism would be ________.
   A) body temperature regulation        B) regulating glucose levels in the blood
   C) enhancement of labor contractions    D) blood calcium level regulation
   Answer: C
   Diff: 1        Page Ref: 10-11

20) A parasagittal plane is ________.
   A) a transverse cut just above the knees
   B) two cuts dividing the body into left and right halves
   C) any sagittal plane except the median
   D) any cut dividing the body into anterior and posterior
   Answer: C
   Diff: 2        Page Ref: 15

21) Which of the following organs or structures would be found in the left iliac region?
   A) appendix        B) stomach        C) liver        D) intestines
   Answer: D
   Diff: 2        Page Ref: 18; Fig. 1.11
22) The parietal pleural would represent a serous membrane _______.
   A) covering individual lungs          B) lining the thoracic cavity
   C) covering the heart                 D) lining the abdominal cavity

   Answer: B
   Diff: 2       Page Ref: 17

23) Which one of the following systems responds to environmental stimuli
   A) endocrine          B) lymphatic          C) immune          D) nervous

   Answer: D
   Diff: 2       Page Ref: 4, 6-7; Fig. 1.3

24) Choose the anatomical topic and definition that is not correctly matched.
   A) Gross anatomy: study of structures visible to the eye.
   B) Microscopic anatomy: study of structures too small to be seen by the naked eye.
   C) Cytology: study of the structures in a particular region.
   D) Embryology: study of the changes in an individual from conception to birth.

   Answer: C
   Diff: 1       Page Ref: 2

25) Homeostasis is the condition in which the body maintains _______.
   A) the lowest possible energy usage
   B) a relatively stable internal environment, within limits
   C) a static state with no deviation from preset points
   D) a dynamic state within an unlimited range

   Answer: B
   Diff: 2       Page Ref: 9-10

26) The lungs are located in the following cavities _______.
   A) pleural, ventral, and thoracic          B) mediastinum, thoracic, and ventral
   C) pleural, dorsal, and abdominal         D) pericardial, ventral, and thoracic

   Answer: A
   Diff: 1       Page Ref: 15, 17; Fig. 1.9
27) Choose the following statement that is not completely correct regarding serous membranes.

A) Serosa are very thin, double-layered structures.
B) Serous membranes are divided into parietal and visceral membranes with a potential space between the two.
C) Visceral pericardium covers the surface of the heart, and parietal pericardium lines the walls of the heart.
D) Serous membranes secrete a watery lubricating fluid.

Answer: C
Diff: 2 Page Ref: 17-18

28) Place the following in correct sequence from simplest to most complex:

1. molecules
2. atoms
3. tissues
4. cells
5. organ

A) 1-2-3-4-5 B) 2-1-4-3-5 C) 2-1-3-4-5 D) 1-2-4-3-5

Answer: B
Diff: 2 Page Ref: 3-4; Fig 1.1

29) Which of the following imaging devices would best localize a tumor in a person's brain?

A) X ray B) DSA C) PET D) MRI

Answer: D
Diff: 2 Page Ref: 20-21

30) Which of these is not part of the dorsal cavity?

A) cranial cavity B) thoracic cavity
C) spinal cord D) vertebral cavity

Answer: B
Diff: 1 Page Ref: 15

31) The stomach is located in which abdominopelvic quadrant?

A) right upper B) right lower C) left upper D) left lower

Answer: C
Diff: 2 Page Ref: 19; Fig. 1.12
32) Which of the following statements is most correct of homeostatic imbalance?
   A) It is considered the cause of most diseases.
   B) The internal environment is becoming more stable.
   C) Positive feedback mechanisms are overwhelmed.
   D) Negative feedback mechanisms are functioning normally.
   Answer: A
   Diff: 3  Page Ref: 11

33) Subdivisions of anatomy include ________.
   A) gross, macroscopic, visual, and microscopic
   B) gross, regional, dissection, and surface
   C) regional, surface, visual, and microscopic
   D) gross, regional, systemic, and surface
   Answer: D
   Diff: 2  Page Ref: 2

34) The term pollex refers to the ________.
   A) great toe  B) calf  C) fingers  D) thumb
   Answer: D
   Diff: 1  Page Ref: 14; Fig. 1.7

35) The dorsal body cavity is the site of which of the following?
   A) intestines  B) brain  C) lungs  D) liver
   Answer: B
   Diff: 1  Page Ref: 15; Fig. 1.9

36) Select the statement that is most correct.
   A) The immune system is closely associated with the lymphatic system.
   B) Organ systems operate independently of each other to maintain life.
   C) The endocrine system is not a true structural organ system.
   D) Organ systems can be composed of cells or tissues, but not both.
   Answer: A
   Diff: 2  Page Ref: 7; Fig. 1.3