Exam

Name___________________________________

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Figure 1.1

*Using Figure 1.1, match the following cavities:*

1) Thoracic cavity. 1) _____________
2) Cranial cavity. 2) _____________
3) Abdominal cavity. 3) _____________
4) Vertebral cavity. 4) _____________
Figure 1.2

Using Figure 1.2, match the following regions:

5) Input. 6) Receptor. 7) Output. 8) Stimulus. 9) Response.

MATCHING. Choose the item in column 2 that best matches each item in column 1.

Match the following systems to their functions:

10) Directly causes mechanical motion. 11) Responds to environmental changes by transmitting electrical impulses. 12) Provides support and levers for muscles to pull. 13) Protects underlying organs from environmental damage and synthesizes vitamin D.

A) Muscular B) Nervous C) Skeletal D) Integumentary
Match the following systems to their functions:

14) Controls the body with chemical molecules called hormones.
   A) Immune
   B) Lymphatic
   C) Endocrine
   D) Cardiovascular

15) Delivers oxygen and nutrients to the tissues.
14) ______

16) Produces antibodies that attach to foreign substances.
16) ______

17) Removes and filters excess fluid from tissues.
17) ______

Match the following examples of feedback mechanisms:

18) Used for changes in blood glucose levels
   A) Negative feedback
   B) Positive feedback

19) Used for changes in blood pressure
   19) ______

20) Used for blood clotting
   20) ______

21) Used for childbirth
   21) ______

Match the following systems and organs:

22) Arteries, veins, heart.
   A) Endocrine
   22) ______

23) Trachea, bronchi, alveoli.
   B) Urinary
   23) ______

24) Adrenal glands, pancreas, pituitary.
   C) Digestive
   24) ______

25) Esophagus, large intestine, rectum.
   D) Cardiovascular
   25) ______

26) Kidneys, bladder, ureters.
   E) Respiratory
   26) ______

Match the following cavities and organs:

27) Stomach.
   A) Abdominopelvic
   27) ______

28) Heart.
   B) Crania
   28) ______

29) Uterus.
   C) Thoracic
   29) ______

30) Brain.
    30) ______

31) Lungs.
    31) ______
Match the following regional terms and common terms:

32) Arm.  
A) Cephalic  
32) _______

33) Buttock  
B) Gluteal  
33) _______

34) Head  
C) Brachial  
34) _______

35) Knee (anterior aspect)  
D) Thoracic  
35) _______

36) Chest.  
E) Patellar  
36) _______

Match the regional/directional terms and examples:

37) The bridge of the nose is _______ to the left eye.  
A) Lateral  
37) _______

38) The upper arm is _______ to the forearm.  
B) Distal  
38) _______

C) Proximal  

39) The lungs are _______ to the heart.  
D) Medial  
39) _______

E) Anterior  

40) The fingers are _______ to the wrist.  
40) _______

41) The stomach is _______ to the spine.  
41) _______

TRUE/FALSE. Write ‘T’ if the statement is true and ‘F’ if the statement is false.

42) Positive feedback mechanisms tend to enhance the original stimulus so that the response is accelerated.  
42) _______

43) Imaging is useful in discovering obstructed blood supplies in organs and tissues.  
43) _______

44) The anatomical position means the body is standing at attention with the palms facing forward and the thumbs pointing away from the body.  
44) _______

45) The elbow is proximal to the shoulder.  
45) _______

46) The part of the serous membrane that lines the peritoneal cavity wall is called visceral peritoneum.  
46) _______

47) A major function of serous membranes is to decrease friction.  
47) _______

48) The right hypochondriac region contains the majority of the stomach.  
48) _______

49) Lungs carry out an excretory function.  
49) _______

50) Embryology concerns the structural changes that occur in an individual from conception through old age.  
50) _______
51) A tissue consists of groups of similar cells that have a common function.

52) It is important for any organism to maintain its boundaries, so that its internal environment remains distinct from the external environment surrounding it.

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

54) Responsiveness or irritability is the ability to sense changes in the environment and then respond to them.

55) The epigastric region is superior to the umbilical region.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

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

57) The study of large body structures, visible to the naked eye, such as the heart is called ________
   A) gross B) microscopic C) systemic D) developmental

58) 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) responsiveness B) metabolism C) maintaining boundaries D) excretion of metabolic waste

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

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

61) What is the main, general purpose of negative feedback?
   A) to control body movement B) to regulate excretion via the kidneys C) to keep the body’s blood sugar level high D) to maintain homeostasis

62) What is the regional term for the hip region?
   A) pedal B) manus C) inguinal D) coxal

63) An oblique cut is one that is cut ________.
   A) perpendicular to vertical and horizontal planes B) vertically right and left C) diagonally between vertical and horizontal planes D) horizontally superior and inferior
64) The heart lies in the _______ cavity.
   A) pericardial  B) dorsal  C) pleural  D) superior mediastinal

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

66) A structure that is composed of two or more tissue types that work together to perform specific functions for the body is a(n) _______.
   A) complex cell  B) complex tissue  C) organ  D) organ system

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

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

69) Which term means toward or at the back of the body, behind?
   A) dorsal  B) anterior  C) distal  D) lateral

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

71) The posterior knee area is called _______.
   A) popliteal  B) crural  C) antecubital  D) sural

72) 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) Blood glucose levels are regulated by positive feedback mechanisms.
   D) Negative feedback mechanisms work to prevent sudden severe changes within the body.

73) The anatomical position is characterized by all of the following except _______.
   A) body erect  B) arms at sides  C) thumbs pointed laterally  D) palms turned posteriorly

74) A good example of a positive feedback mechanism would be _______.
   A) enhancement of labor contractions  B) body temperature regulation
   C) blood calcium level regulation  D) regulating glucose levels in the blood

75) Which of the following describes a parasagittal plane?
   A) two cuts dividing the body into left and right halves  
   B) any sagittal plane except in the midline  
   C) a transverse cut just above the knees  
   D) any cut dividing the body into anterior and posterior portions
76) Which of the following organs or structures would be found in the left iliac region?
   A) intestines     B) stomach     C) liver     D) appendix

77) The parietal pleura would represent a serous membrane ________.
   A) covering the heart     B) lining the abdominal cavity
   C) covering individual lungs     D) lining the thoracic cavity

78) Which one of the following systems responds fastest to environmental stimuli?
   A) nervous     B) muscular     C) immune     D) lymphatic

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

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

81) In which body cavities are the lungs located?
   A) pleural, dorsal, and abdominal     B) mediastinal, thoracic, and ventral
   C) pericardial, ventral, and thoracic     D) pleural, ventral, and thoracic

82) Choose the following statement that is not completely correct regarding serous membranes.
   A) Serous membranes are divided into parietal and visceral membranes with a virtual space between the two.
   B) Serosa are very thin, double-layered structures.
   C) Visceral pericardium covers the outer surface of the heart, and parietal pericardium lines the internal walls of the heart.
   D) Serous membranes secrete a watery lubricating fluid.

83) Place the following in correct sequence from simplest to most complex:
   1. molecules
   2. atoms
   3. tissues
   4. cells
   5. organs
   A) 2-1-4-3-5     B) 1-2-4-3-5     C) 1-2-3-4-5     D) 2-1-3-4-5

84) Which of the following imaging devices would best localize a tumor in a person’s brain?
   A) PET     B) MRI     C) DSA     D) X ray

85) Which of these is not part of the dorsal cavity?
   A) vertebral cavity     B) spinal cord     C) thoracic cavity     D) cranial cavity
86) In which quadrant of the abdominopelvic cavity is the stomach located?
   A) right lower quadrant  B) left lower quadrant
   C) right upper quadrant  D) left upper quadrant

87) Which of the following statements is the most correct regarding homeostatic imbalance?
   A) Negative feedback mechanisms are functioning normally.
   B) Positive feedback mechanisms are overwhelmed.
   C) It is considered the cause of most diseases.
   D) The internal environment is becoming more stable.

88) Which of the following are subdivisions of anatomy?
   A) regional, surface, visual, and microscopic
   B) gross, macroscopic, visual, and microscopic
   C) gross, regional, dissection, and surface
   D) regional, systemic, and surface

89) The term pollex refers to the______.
   A) great toe  B) thumb  C) calf  D) fingers

90) The dorsal body cavity is the site of which of the following?
   A) lungs  B) liver  C) brain  D) intestines

91) Select the most correct statement.
   A) Organ systems can be composed of cells or tissues, but not both.
   B) Organ systems operate independently of each other to maintain life.
   C) The endocrine system is not a true structural organ system.
   D) The immune system is closely associated with the lymphatic system.

92) One of the functional characteristics of life is excitability or responsiveness. This refers to______.
   A) the nervous system causing all living things to sometimes experience anger
   B) indigestible food residues stimulating the excretory system
   C) the necessity for all organisms to reproduce
   D) sensing changes in the environment and then reacting or responding to them

93) Which of the following are survival needs of the body?
   A) nutrients, water, atmospheric pressure, and oxygen
   B) water, atmospheric pressure, growth, and movement
   C) nutrients, water, growth, and reproduction
   D) nutrients, water, movement, and reproduction

94) The anatomical position is used______.
   A) as a standard reference point for directional terms regardless of the actual position of the body
   B) for proper placement of a patient or a cadaver upon an operating table in order to reach all major organs
   C) rarely, because people don’t usually assume this position during waking moments
   D) only when a body is lying down one’s back rather than stomach

95) What is a vertical section through the body, dividing it into left and right, called?
   A) transverse  B) sagittal  C) regional  D) frontal
96) What is a vertical section through the body, dividing it into anterior and posterior regions called?  
A) transverse  
B) median  
C) sagittal  
D) frontal  

97) The body cavities that protect the nervous system are located in the ____ cavity.  
A) dorsal  
B) ventral  
C) thoracic  
D) cranial  
E) vertebral  

98) Which of the following describes the operation of the heart and blood vessels?  
A) systemic physiology  
B) cardiovascular anatomy  
C) cardiovascular physiology  
D) systemic anatomy  

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.  

99) Similar cells that have a common function are called ________.  

100) What does the "principle of complementarity of structures and function" mean?  

101) The term that describes the back of the elbow is ________.  

102) The term that describes the neck region is ________.  

103) The heart is ________ to the arm.  

104) The ________ cavity contains tiny bones that transmit sound vibrations to the organ of hearing in the inner ear.  

105) ________ is explained by chemical and physical principles and is concerned with the function of specific organs or organic systems.  

106) What is a dynamic equilibrium of your internal environment termed?  

107) Which cavity contains the bladder, some reproductive organs, and the rectum?  

108) What is the serous membrane that covers the intestines called?  

109) ________ physiology concerns urine production and kidney function.  

110) What broad term covers all chemical reactions that occur within the body cells?  

111) What is the function of the serous membranes?  

112) Fully describe the anatomical position for the human body.  

113) What does gross anatomy study?  

114) Can lungs carry out excretory functions? Explain your answer.
115) The higher we go in the mountains, the greater the atmospheric pressure, resulting in an increase in available oxygen. Comment on this statement.

116) Why is anatomical terminology necessary?

117) The five unique cavities of the head are cranial, oral, nasal, middle ear, and _______.

118) The ability to sense changes in the environment and respond to them is called _______.

119) What is the single most abundant chemical substance in the body?

120) Why must a normal body temperature be maintained in order for chemical reactions to be continued at life-sustaining rates?

121) What is the pathway between the receptor and the control center in the reflex pathway called?

122) What type of homeostatic feedback reflex is the withdrawal reflex?

123) Why are the abdominopelvic cavity organs the most vulnerable to blunt deceleration in an automobile accident with seat belts?

124) What is the goal of all of the negative feedback mechanisms of the body?

125) Which feedback mechanism causes the variable to deviate further and further from its original value or range?

126) What can happen when the usual negative feedback mechanisms are overwhelmed and destructive positive feedback mechanisms take over?

127) Which body system would be most affected by a lower than normal atmospheric pressure?

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

128) A small family was traveling in its van and had a minor accident. The children in the back seats were wearing lap belts, but still sustained numerous bruises about the abdomen, and had some internal organ injuries. Why is this area more vulnerable to damage than others?

129) Steve was injured in a football accident. X-ray examination showed a fracture underlying his left brachial deformity. What part of his body was injured?

130) Judy is 16 years old and collapses on the gym floor with severe pain in her chest wall every time she takes a deep breath. She is rushed by ambulance to the emergency room. Judy is diagnosed with pleurisy and is given an anti-inflammatory drug through the intravenous route. Explain why an anti-inflammatory drug would be prescribed for someone with pleurisy.

131) Sara is giving birth to her first child. She is concerned that her labor is taking longer than she thought it would. Why does giving birth usually take time for the contractions to proceed to the point when the child is born?
132) The nurse charted: "Patient has an open wound located on lateral aspect of leg." Describe where the wound is located.
Answer Key
Testname: UNTITLED1

1) C
2) A
3) D
4) B
5) C
6) B
7) D
8) A
9) E
10) A
11) B
12) C
13) D
14) C
15) D
16) A
17) B
18) A
19) A
20) B
21) B
22) D
23) E
24) A
25) C
26) B
27) A
28) C
29) A
30) B
31) C
32) C
33) B
34) A
35) E
36) D
37) D
38) C
39) A
40) B
41) E
42) TRUE
43) TRUE
44) TRUE
45) FALSE
46) FALSE
47) TRUE
48) FALSE
49) TRUE
50) FALSE
Answer Key
Testname: UNTITLED1

51) TRUE
52) TRUE
53) TRUE
54) TRUE
55) TRUE
56) A
57) A
58) D
59) A
60) A
61) D
62) D
63) C
64) A
65) B
66) C
67) A
68) C
69) A
70) A
71) A
72) D
73) D
74) A
75) B
76) A
77) D
78) A
79) B
80) A
81) D
82) C
83) A
84) B
85) C
86) D
87) C
88) D
89) B
90) C
91) D
92) D
93) A
94) A
95) B
96) D
97) A
98) C
99) tissues
100) What a structure can do depends on its specific form, or "structure determines function."
Answer Key
Testname: UNTITLED1

101) olecranal
102) cervical
103) medial
104) middle ear
105) Physiology
106) homeostasis
107) pelvic
108) visceral peritoneum
109) Renal
110) metabolism
111) They act to reduce friction and allow the organs to slide across cavity walls.
112) The body is erect, arms hanging at the sides, palms forward, and thumbs pointed away from the midline.
113) Larger structures of the body that can be seen with the naked eye.
114) Yes, carbon dioxide is a metabolic waste the lungs excrete.
115) At high altitudes, the atmospheric pressure is less than at lower levels resulting in a decrease in oxygen levels. The lower oxygen levels may be inadequate to support cellular metabolism.
116) Anatomical terms are precise words that have limited usage, which prevents confusion when describing the location of body parts.
117) orbital
118) responsiveness or excitability
119) water
120) If body temperature is too low, chemical reactions slow and eventually stop. If body temperature is too high, chemical reactions speed up and body proteins lose their normal shape, resulting in loss of function.
121) afferent pathway
122) negative
123) The walls of the abdominal cavity are formed only by trunk muscles and are not reinforced by bone. The pelvic organs receive a somewhat greater degree of protection from the bony pelvis.
124) The goal is to prevent sudden severe changes within the body.
125) positive feedback
126) Homeostatic imbalances increase our risk for illness and produce the changes we associate with aging.
127) respiratory system
128) The abdominal organs are the least protected in the body because they are not surrounded by a bony covering such as the ribs, pelvis, or cranium.
129) His left upper arm
130) The pleural space contains a small amount of fluid that acts as a lubricant, allowing the pleurae to slide smoothly over each other as the lungs expand and contract. Pleurisy is an inflammation of the pleura around the lungs. When inflammation occurs in the pleural space, the pleurae do not slide smoothly and this causes severe pain that is more directly transmitted by the parietal than the visceral pleura.
131) Childbirth is based on the increasing levels of oxytocin that cause the uterine contractions. Under positive feedback, oxytocin levels increase which results in increasing strong contractions by the upper uterus that will ultimately result in the birth of the child. But this positive feedback needs numerous contraction cycles to overcome the muscular resistance to stretching in the lower uterus in order for the head to pass.
132) The wound is located on the outer side of the leg, the peroneal or fibular area.