

ATI TEAS 7 TEST BANK

350+ QUESTIONS AND ANSWERS

LATEST JULY 2022

1. How are carbohydrates used by the body? Choose ALL answers that apply.
 - structure
 - Communication
 - storage
 - Recognition
2. What type of immunity does a vaccine provide? Choose only ONE best answer.
 - naturally acquired passive immunity
 - Artificially acquired passive immunity
 - Naturally acquired active immunity
 - Artificially acquired active immunity
3. Which organs and/or glands are superior to the liver? Choose ALL answers that apply.
 - Lungs
 - Parathyroid gland
 - Kidneys
 - Thymus
4. Which cavity contains all of the frontal cavities? Choose only ONE best answer.
 - Dorsal
 - Thoracic
 - Abdominopelvic
 - Ventral
5. Which of the following carry oxygenated blood? Choose ALL answers that apply.
 - Pulmonary artery
 - Pulmonary vein
 - Aorta
 - Superior vena cava
6. Which of the following are disaccharides? Choose ALL answers that apply.
 - Sucrose
 - Glucose
 - Cellulose
 - Lactose
7. Which body system is responsible for the transport of dissolved oxygen from the lungs to the spleen?
 - Immune
 - Endocrine
 - Respiratory
 - Cardiovascular

8. Which condition can lead to blood clots and stroke?

- Aneurysm
- **Arrhythmia**
- Asthma
- Hypertension

9. A botanist wants to determine if environmental temperature affects root growth. In her experiment, she creates 4 rooms at temperatures that vary by 5 degrees F. Each room gets 20 seedlings of the same species, which she grows on agar plates for 60 days. Once a day, she measures the length of each seedling's root. At the end of 60 days, she compares the length of the roots with the room temperature. She finds the room with the lowest temperature produced the longest roots.

What is the independent variable in this study?

- **Temperature**
- Seedlings
- Light
- Root length

10. Which of the following can act as enzymes in the body?

- **Globular proteins**
- **Lipase**
- **Amylase**
- **Glucagon**

11. Which of the following is the carbohydrate monomer?

- Disaccharide
- Lactose
- **Monosaccharide**
- Thymine

12. Which of the following are true about water?

- **Water has polar covalent bonds.**
- **Water has a neutral pH of 7.**
- Water has a low specific heat capacity.
- **Water as a solid is less dense than water as a liquid.**

13. Hydrophobic proteins often provide which function in the body?

- Digestive enzymes
- **Provide structure**
- Carry oxygen molecules
- Store energy

14. Which of the following have a smaller genetic scale than a chromosome?

- Genome
- **Gene**
- **DNA**
- All of the above

15. What best measures the volume of a solid?

- Triple beam balance
- **Measuring wheel and mathematical formula**
- Graduated cylinder
- Measuring wheel

16. What cavities are in the ventral cavity of the human body?

- **Thoracic Cavity**
- **Abdominal Cavity**
- Cranial Cavity
- **Pelvic Cavity**

17. Which is the largest part of the airway?

- Alveoli
- Bronchi
- Bronchioles
- **Trachea**

18. Which of the following is an effect of high blood pressure?

- Smoking
- Excessive dietary salt
- **Renal vessel damage**
- Older age

19. What is the monomer for nucleic acids?

- **Nucleotide**
- Amino acid
- Phosphate group
- Ribosome

20. Consider the graph which represents a botanist's data of root growth. What is the independent variable?

Temperature (F)	Root Length (CM) after 1 Hour
28	72
32	64
40	62
46	70

- **Temperature**
- Root tissue
- Light exposure
- Root length

21. What type of tissue protects the respiratory system's trachea?

- Bone
- **Cartilage**
- Collagen
- Keratin

22. Which of the following are examples of covalent bonds?

- **H₂O**
- NaCl
- **C₆H₁₂O₆**
- MgO
-

23. Which of the following is an example of Mendelian inheritance?

- Incomplete Dominance
- Polygenic Alleles
- Combination Inheritance
- **Recessive Inheritance**

24. Which of the following are globular proteins?

- **Antibody**
- **Enzyme**
- **Hemoglobin**
- Keratin

25. What type of bond connects amino acids?

- Covalent
- **Peptide**
- Ionic
- Hydrogen

26. What is the name for a microorganism that lives on or in the human body and normally causes no disease or harm?

- Bacteria
- **Commensal Microorganism**
- Microorganism
- Host

27. of the following infectious diseases can be caused by a viral infection?

- **COVID-19**
- **Varicella**
- **Mumps**
- **Measles**

28. You are a nursing student and are triaging a patient. Which of the following is an example of quantitative data you can gather?

- The patients say he feels pain.
- The patient says he has stabbing pain in his right lower abdomen.
- **The patient's temperature is 101.7 degrees F.**
- The patient reports that he had a fever yesterday

29. Which of the following are examples of steroids in the human body?

- **Cholesterol**
- **Testosterone**
- **Cortisol**
- **Estradiol**

30. What of the following factors influence the rate of a chemical reaction?

- **Temperature**
- **Pressure**
- **Concentration of reactants and substrate**
- **Any catalysts**

31. Which of the following infectious diseases can be caused by bacteria?

- **Tuberculosis**
- **Cholera**
- **Varicella**
- **Influenza**

32. During which of the following stages does crossing over occur?

- Mitosis Prophase
- **Meiosis Prophase I**

- Meiosis Prophase II
- Interphase

33. Which of the following is correct based on anatomical terms?

- The shoulder joint is proximal to the neck.
- The elbow joint is superior to the shoulder.
- The thoracic vertebrae are superior to the cervical vertebrae.
- **The thumb is on the lateral aspect of the hand.**

34. Which of the following is a genetic condition that affects the respiratory system?

- **Asthma**
- **Cystic fibrosis**
- Mycosis
- **Surfactant Deficiency**

35. A particular atom is uncharged, and it has an electron configuration of $1s^2 2s^2 2p^6 3s^2$ and a mass number of 14. How many protons does it have?

- 14
- 6
- 8
- **12**

36. Which of the following describes the term allele?

- A base-pair substitution in DNA
- **An inheritable variation of a gene**
- A grouping of various genes
- Variations of complementary base pairs

37. Which of the following is part of the cardiovascular system?

- **Blood vessels**
- Brain
- Kidneys
- Lungs

38. Which of the following are possible effects of obesity?

- Reduced exercise
- **Joint and body pain**
- **Hypertension**
- **Diabetes**

39. Which of the following factors does not strengthen a scientific argument?

- Lack of bias.
- **Extensive use of qualitative research and data.**

- Able to be reproduced and repeated by others.
- Withstands the test of time

40. Which of the following are functions of the kidneys?

- **Make urine and maintain water homeostasis**
- **Help maintain blood pressure**
- Synthesize Vitamin D
- **Filter blood of salt, nutrients, water, and waste**

41. Which of the following correctly orders the layers of the epidermis from most superficial to deepest?

- S. spinosa, S. Basale, S. corneum, S. granulosum, S. lucidum
- **S. corneum, S. lucidum, S. granulosum, S. spinosum, S. Basale**
- S. corneum, S. spinosum, S. Basale, S. granulosum, S. lucidum
- S. Basale, S. spinosum, S. granulosum, S. lucidum, S. corneum

42. What of the following statements is true about an allergic reaction?

- An allergic reaction, like hives or wheezing breath, is the result of overactive body systems like the integumentary system and respiratory system.
- An allergic reaction is a function of overactive B-cells in the body, which release various immunoglobulins.
- **An allergic reaction is a function of overactive mast cells in the body, which are stimulated by Immunoglobulin E.**
- An allergic reaction involves proteins like histamine, keratin and collagen.

43. Alkali metals are in which group of the periodic table?

- **Group 1**
- Group 2
- Group 7
- Group 8

44. Which term refers to a molecule of DNA and structural protein?

- Lysosome
- Centrosome
- **Chromosome**
- Genome

45. If Silicon (Si) has an atomic mass of 28.1 AMU (atomic mass units), which of the following is the most likely number of neutrons an atom of Silicon would have?

- 28.1
- **14**
- 28
- 14.2

46. Which neuromuscular system controls voluntary movement?

- Autonomic
- **Somatic**
- Sympathetic
- Parasympathetic

47. Which of the following is another name for a sweat gland?

- Ceruminous
- Sebaceous
- **Sudoriferous**
- Integumentous

48. Which of the following is another name for the voice box?

- Alveoli
- **Larynx**
- Trachea
- Pharynx

49. Which term refers to the relaxation of heart muscle?

- **Diastole**
- Systole
- Asystole
- Cardiac diastole

50. What is located in the skin's dermis?

- **Blood vessels**
- **Nerve endings**
- **Collagen**
- Melanocytes

51. Fat is primarily digested in the _____, and protein is primarily digested in the _____.

- mouth; stomach
- stomach; small intestine

- small intestine; small intestine
- **small intestine; stomach**

52. Which of the following produces the first heart sound ("lub")?

- The closing of the aortic and pulmonary valves
- **The closing of the tricuspid and mitral valves**
- The opening of the aortic and pulmonary valves
- The opening of the tricuspid and mitral valves

53. Following the scientific method, which steps would be done before gathering qualitative data?

- Communicate with a scientific journal
- **Define the problem**
- **Develop a hypothesis**
- Categorize data for statistical analysis

54. Which hormone is released by the pituitary?

- Estrogen
- **Luteinizing Hormone**
- Progesterone
- Testosterone

55. Which of the following does not describe a general trait of macromolecules?

- They can be single chains.
- They can be branched.
- **They all contain carbon, hydrogen, and phosphorus.**
- They all are used by the body.

56. The kidneys reabsorb water, salts, and nutrients and return them to the body through which structure?

- Renal artery
- **Renal vein**
- Nephron
- Glomerulus

57. Which of the following best describes a group of cells working together?

- Organelle
- **Tissue**
- Organ
- Organ system

58. If a patient had a heart attack and tissue in the left ventricle lost blood flow, what would you most expect to happen?

- Blood would not flow from the lungs.
- Blood would back up in the legs.
- **Blood would not be pumped to the body.**
- Blood would not be oxygenated.

59. Which of the following immune cells are part of the innate immune response?

- B-cells
- Cytotoxic T-cells
- **Natural Killer Cells**
- Antigen-Presenting Cells

60. Which hormone is released by the ovaries to mature an egg?

- **Estrogen**
- Luteinizing Hormone
- Progesterone
- Testosterone

61. Which of the following are examples of positive correlation?

- As rainfall increases, plant stem length slows.
- **As rainfall increases, roots show longer length.**
- When plotting a comparison of rainfall to plant length, the line trends to the lower right.
- **When plotting a comparison of rainfall to plant length, the line trends to the upper right.**

62. Iron is a transition metal, which means it often forms a cation with a charge of what?

- 2- or 3-
- 1-
- **2+ or 3+**
- 1+

63. Which of the following is in DNA?

- Uracil
- **Deoxyribose**
- **Guanine**
- **Phosphate group**

64. How does renin regulate blood pressure?

- It signals the collecting ducts to expel more urine.
- **It affects the amount of water and salt stored or released by the body.**
- It signals the heart to reduce its systole contraction.
- It relaxes blood vessels.

65. Which of the following has an acidic pH?

- **Lemon juice**
- Blood
- **Urine**
- Salt water

66. Which of the following are properties of a liquid?

- High atomic attraction
- **Fixed volume**
- Low pressure
- **Takes shape of container**

67. Which cavity is primarily lined by the peritoneum?

- **Abdominal**
- Dorsal
- Ventral
- Thoracic

68. A veterinarian student designs a study to examine the nutritional qualities of dog food. She believes that a grain-free diet can affect dog health. She selects 3 of the top-selling dog food brands for her study. From a local humane society, she selects several chihuahua puppies under the age of 1 year. She will track these puppies for the next year and assess their health, include weight, complete blood count, and paw size. Three puppies will be fed nothing but brand #1 dog food, 10 puppies will only be fed Brand #2, and 10 puppies will only be fed Brand #3.

How the researcher best improves this experiment?

- The experiment should include 7 more dogs for the Brand #1 group.
- The daily serving size of kibble should be controlled.
- The experiment needs a clearly defined control of puppies.

- **All of the above are ways to improve the experiment.**

69. Which of the following is changed during a scientific investigation?

- The dependent variable.
- The control.
- The hypothesis.
- **The independent variable.**

70. Which of the following are true about the dependent variable?

- A factor that remains constant during the experiment
- A factor with data typically plotted on the x-axis
- **A factor that is measured during an experiment**
- **A factor with data typically plotted on the y-axis**

71. Which two types of elements will most likely form an ionic bond?

- Two elements that are in the same period.
- Two elements that are non-metals and have p orbitals.
- One element that is a transition metal with d orbitals and one element that is a metal with s orbitals.
- **One element that is a metal with s orbitals and one element that is a non-metal with p orbitals.**

72. Which of the following is in the pelvic cavity?

- The kidneys
- **The colon**
- **The bladder**
- **The rectum**

73. Water is considered a universal solvent due to its _____.

- Cohesion
- **Adhesion**
- Molarity
- Dilution

74. What best measures the volume of a cube?

- Triple beam balance
- **Measuring wheel and mathematical formula**
- Graduated cylinder
- Measuring wheel

75. How many pairs of chromosomes are in a human cell?

- 46
- **23**
- 64

76. Which of the following are true about Noble gasses?

- **They are non-reactive.**
- They are highly reactive.
- **They have 8 valence electrons.**
- They have 7 valence electrons.

77. Which of the following macromolecules will always contain nitrogen?

- Fatty acid
- **Protein**
- Lipid
- Carbohydrate

78. DNA has both a "sense" and "antisense" strand. What is true about the antisense strand?

- It runs 5' to 3'.
- **It runs 3' to 5'.**
- **It is used in replication.**
- It is the direction DNA is stored

79. Which of the following best defines the anatomical term medial?

- Being face down
- On the front of the body or limb
- **Near to the midline of the body**
- Above or on top of lungs

80. Which of the following is not a biological macromolecule?

- Glycoproteins
- DNA

- Phospholipid
- **Glucose**

81. Which of the following is a property of water?

- **Water has a neutral pH.**
- Water has a low specific heat capacity.
- **Water has polar covalent bonds.**
- **Water can dissolve almost any solid, liquid, or gas.**

82. Which of the following is the strongest scientific argument?

- Scientific Hypothesis
- **Scientific Law**
- Scientific Study Conclusion
- Scientific Theory

83. In which type of cell would you expect to find a high concentration of lysosomes?

- Cardiac cells
- Glandular cells
- **Immune cells**
- Muscle cells

84. What are the general functions of proteins in the body?

- **Increase reaction rates**
- **Provide immunity**
- **Provide transport**
- **Provide structure**

85. Which means of calculating concentration depends on pressure?

- ppm
- ppb
- **molarity**
- molarity, ppb, and ppm

86. A veterinarian student designs a study to examine the nutritional qualities of dog food. She believes that a grain-free diet can affect dog health. She selects 3 of the top-selling dog food brands for her study.

From a local humane society, she selects several chihuahua puppies under the age of 1 year. She will track these puppies for the next year and assess their health, include weight, complete blood count, and paw size. Three puppies will be fed nothing but Brand #1 dog food, 10 puppies will only be fed Brand #2, and 10 puppies will only be fed Brand #3.

What is the independent variable in this experiment?

Time

Dog weight

Dog species

Dog food type

87. A scientist wants to conduct qualitative research. Which method should she use?

- **Collecting patient narratives**
- Tracking the dosage of a drug and its blood levels in the patient
- **Observing a patient's physical changes**
- **Writing journal notes about the research experience**

88. Which of the following are functions of the kidney?

- Release cortisol
- **Maintain water homeostasis**
- **Filter blood of salt, nutrients, water, and waste**
- Store urine (waste from digestive system from protein breakdown)

89. Which of the following is a role of follicle-stimulating hormone?

- Triggers the production of testosterone
- **Stimulates development of ova**
- **Stimulates development of sperm**
- Triggers ovulation

90. What type of bond connects amino acids?

- Covalent
- **Peptide**
- Ionic
- Hydrogen

91. Which organ makes insulin and glucagon?

- Salivary Glands
- Liver
- Gallbladder
- **Pancreas**

92. If an atom has 32 neutrons, 17 protons and 19 electrons, what is its charge?

- Positive
- **Negative**
- Neutral

- Cannot be determined.

93. How does AIDS cause a failure in the immune system?

- **Helper T-Cells can't activate Cytotoxic T-Cells or B-Cells.**
- IgE makes mast cells release too much histamine.
- IgE makes mast cells release too little histamine.
- Helper T-Cells trick the body into attacking itself.

94. A scientist wants to conduct quantitative research. Which method should she use?

- Collecting patient narratives.
- **Tracking the dosage of a drug and its blood levels in the patient.**
- Observing a patient's physical changes.
- Writing journal notes about the research experience.

95. Which of the following is NOT true about DNA?

- DNA contains the nucleotides A, T, C, G and is read 5' to 3'.
- DNA contains genetic information and is tightly coiled with protein to form chromosomes.
- **DNA contains the nucleotides A, T, C, G and is read 3' to 5'.**
- DNA is a double-stranded molecule that is connected by hydrogen bonds.

96. Which region of the small intestine is the primary site of absorption?

- Duodenum
- **Jejunum**
- Ileum
- Cecum

97. What some examples of proteins in the human body?

- **Keratin**
- **Hemoglobin**
- **Enzyme**
- Chitin

98. What step of the scientific method must come before generating a hypothesis?

- Collecting and organizing data.
- Communicating the results in a scientific journal.
- Conducting an experiment.

- **Researching previous studies for background.**

99. An FBI agent has spent her career studying individual serial killers. From this data, she creates a theory about the traits of these killers. What type of reasoning has she used?

- Deductive Reasoning
- Conductive Reasoning
- Quantitative Reasoning
- **Inductive Reasoning**

100. Which of the following is not true about the relationship between the gastrointestinal system and the endocrine system?

- Hormones signal to your body if you are hungry or full.
- Hormones regulate the amount of glucose in your blood.
- Hormones stimulate digestive enzymes and peristalsis when you've eaten and need to digest all the food.
- **All of the above are true.**

101. Where is keratin?

- It is a protein-digesting enzyme released by the stomach.
- It is released in the neuromuscular junction.
- It is a protein found in the hypodermis.
- **It is a protein found in hair.**

102. Sulfur has an atomic number of 16 and an atomic mass of approximately 32. How many neutrons and electrons could a negative ion of Sulfur have?

- 16 neutrons, 16 electrons
- **16 neutrons, 17 electrons**
- 17 neutrons, 16 electrons
- 17 neutrons, 17 electrons

103. is the function of the Vas Deferens?

- Makes fluid to increase sperm mobility
- Site where the egg matures

- Helps control urine flow
- **Connects each testis to the urethra**

104. Dysentery is an infectious disease caused by what type of microbe?

- Helminth
- Bacteria
- **Protozoan**
- Fungus

105. Consider the graph which represents a botanist's data of root growth. What is the independent variable?

Temperature (F)	Root Length (CM) after 1 Hour
28	72
32	64
40	62
46	70

Choose

- **Temperature**
- Root tissue
- Light exposure
- Root length

106. Which of the following best describes the relationship among density, volume, and mass?

- As volume increases, density increases.
- **As volume decreases, density increases.**
- An object's mass does not affect its density.
- As volume decreases, mass increases.

107. Which term refers to the mechanical act of breathing?

- Diffusion
- Perfusion
- Respiration
- **Ventilation**

108. What do lacteals absorb?

- Carbohydrates
- **Lipids**
- Proteins
- Nonpolar nutrients

109. Which of the following indicates the body's draining of clear fluid throughout the body in order to protect it from infection?

- Pulmonary Loop
- Systemic Loop
- **lymphatic System**
- Immune System

110. Which of the following is a pathology caused by a virus?

- Asthma
- Cystic Fibrosis
- Epiglottitis
- **Influenza**

111. A botanist wants to determine if environmental temperature affects root growth. In her experiment, she creates 4 rooms at temperatures that vary by 5 degrees F. Each room gets 20 seedlings of the same species, which she grows on agar plates for 60 days.

Once a day, she measures the length of each seedling's root. At the end of 60 days, she compares the length of the roots with the room temperature. She finds the the room with the lowest temperature produced the longest roots.

Which of the following is best identified as a hypothesis?

- **The environmental temperature can affect the growth of a plant's root.**
- Plants need light to grow.
- A colder environment produces longer roots.
- Plants need 60 days in order to grow their roots.

112. Which of the following is another name for a sweat gland?

- Ceruminous
- Sebaceous
- **Sudoriferous**
- Integumeous

113. Which of the following often contains a carboxyl group?

- Carbohydrate
- Glycolipids
- **Amino Acid**