Biology 110 – Final

Test Bank

1. The tracheal systems are the major site of gas exchange in _____

- (•) arthropods
- ( ) flatworms
- ( ) reptiles
- ( ) jellies

2. The major site of gas exchange in _____is skin

- ( ) mammals
- ( ) tetrapods that live on land
- ( ) birds
- (•) flatworms

3. Gills _____

- ( ) release oxygen
- ( ) absorb carbon dioxide
- ( ) decrease the surface to volume ratio
- (•) increase the surface to volume ratio

4. Birds and mammals use _____ as the respiratory surface

- ( ) their body surfaces
- (•) more complex lungs
- ( ) simple lungs
- ( ) small lungs

5. In the human respiratory system, air passes from larynx to the _____

- ( ) nasal cavity
- ( ) alveoli
- ( ) bronchi
- (•) trachea

6. The actual site of gas exchange in human is _____

- alveolai
- vocal cord
- nasal cavity
- pharynx

7. Alveoli are _____

- the site where CO2 diffuses into the blood
- having small surface area
- the site where O2 diffuses out of the blood
- having huge surface area (100m2 in humans)

8. Inhalation occurs when _____

- the diaphragm moves upward
- the diaphragm moves downward
- the rib cage contracts
- the pressure around the lungs increases

9. Smoking _____

- decreases the risk of heart attacks and strokes
- decreases the harmful types of cholesterol
- can cause lung cancer
- reduces blood pressure

10. In the body tissues, blood _____

- drops off CO_2
- drops off waste products
- picks up CO_2
- picks up O_2

11. During the transport of gases between alveoli and blood _____

- O_2 moves from the alveoli of the lungs into the blood
- CO_2 moves from the tissues into the blood
- O_2 moves from the blood into the tissues
- the tissues have more CO_2 and less O_2 than in the blood

12. The iron-containing pigment (hemoglobin) _____

- is found only in birds
- is found in Arthropods
- is found in almost all vertebrates
- is found in Mollusca

13. The heart _____

- carries food through body
- transports blood throughout the entire body
- pumps blood through body
- is network of hollow tubes

14. In the four-chambered hearts _____

- oxygen rich blood is completely separated from oxygen poor blood
- blood stays confined to vessels
- cells directly bathed in blood AND blood stays confined to vessels
- cells directly bathed in blood

15. Arteries _____

- have thicker walls
- composed of a single layer of epithelial cells
- are narrow, blood cells flows in a single file
- have one-way valves that restrict backward flow

16. The heart rate _____

- prevent the backflow of blood
- is the amount of blood/minute pumped into systemic circuit
- defined as the number of beats/minute
- is a defect in one or more heart valves

17. The AV node _____

- generates electrical signals in atria
- sets the rate of heart contractions
- is the amount of blood/minute pumped into systemic circuit
- relays electrical signals to the ventricles

18. A heart attack is defined as _____

- the death of brain tissue from blocked arteries in the head
- the force blood exerts on vessel walls
- the development of plaques inside walls of blood vessels
- the damage to cardiac muscle typically from a blocked coronary artery

19. Plasma contains fibrinogen, which is converted into fibrin that help _____

- as pH buffering
- as solvent for carrying other substance
- in blood clotting
- in defense

20. The white blood cells (leukocytes) _____

- fight cancer
- transport O_2 bound to hemoglobin
- transport CO_2
- promote clotting

21. Some athletes artificially increase their red blood cell production by injecting _____

- fibrinogen
- erythropoietin
- immunoglobulins
- sodium ions

22. the major site of gas exchange in _____ are tracheal systems

- flatworms
- arthropods
- mammals
- fish

23. Gills _____

- absorb carbon dioxide
- decrease the surface to volume ratio
- absorb oxygen
- release oxygen

24. Birds and mammals use _____ as the respiratory surface

- their body surfaces
- more complex lungs
- simple lungs
- small lungs

25. In the human respiratory system, air passes from nasal cavity to the _____

- alveoli
- pharynx
- larynx
- bronchioles

26. The actual site of gas exchange in human is _____

- larynx
- alveolai
- vocal cord
- nasal cavity

27. Alveoli are _____

- having small surface area
- the site where O2 diffuses out of the blood
- the site where CO2 diffuses out of the blood
- the site where CO2 diffuses into the blood

28. Inhalation occurs when _____

- the volume of the chest cavity increases, lowering the air pressure around lungs.
- the diaphragm moves upward
- the rib cage contracts
- air is forced out of the respiratory tract

29. Smoking _____

- reduces blood pressure
- increases the harmful types of cholesterol
- decreases the harmful types of cholesterol
- decreases the risk of heart attacks and strokes

30. In the lungs, blood _____

- picks up CO_2
- picks up O_2
- drops off O_2
- drops off urine

31. During the transport of gases between blood and tissues _____

- O_2 moves from the alveoli of the lungs into the blood
- CO_2 moves from the blood into the alveoli of the lungs
- the tissues have more CO_2 and less O_2 than in the blood
- gases in the alveoli have more O_2 and less CO_2 than gases the blood

32. The copper-containing pigment (hemocyanin) _____

- is found in Mollusca
- is found in many mammals
- is found in almost all vertebrates
- is found only in birds

33. The heart _____

- carries oxygen through body
- carries food through body
- transports blood throughout the entire body
- pumps blood through body

34. In the four-chambered hearts _____

- there are two atria and two ventricles
- blood stays confined to vessels
- heart pumps blood through open-ended vessels
- there are two atria and one ventricle

35. Veins _____

- have thicker walls
- are under more pressure
- force blood back to right heart atrium
- increases surface area for gas and fluid exchange

36. The heart valves _____

- is a defect in one or more heart valves
- define as the number of beats/minute
- is the amount of blood/minute pumped into systemic circuit
- prevent the backflow of blood

37. The AV node _____

- generates electrical signals in atria
- sets the rate of heart contractions
- is the amount of blood/minute pumped into systemic circuit
- relays electrical signals to the ventricles

38. The stroke _____

- is the death of brain tissue from blocked arteries in the head
- is the damage to cardiac muscle
- narrows the heart blood vessels
- reduces the diastolic pressure

39. Plasma contains fibrinogen, which is converted into fibrin that help _____

- in osmotic balance
- as pH buffering
- in blood clotting
- as solvent for carrying other substance

40. The white blood cells (leukocytes) _____

- function inside and outside the circulatory system
- are small fragments of cells
- promote clotting
- transport O_2 bound to hemoglobin

41. Gills _____

- release oxygen
- increase the surface area for gas exchange
- absorb carbon dioxide
- decrease the surface to volume ratio

42. Exhalation occurs when _____

- the diaphragm moves downward
- the volume of the chest cavity increases, lowering the air pressure around lungs.
- the pressure around the lungs increases
- air rushes into lungs to equalize the pressure difference

43. In the body tissues, blood _____

- picks up O_2
- drops off O_2
- drops off CO_2
- drops off waste products

44. The iron-containing pigment (hemoglobin) _____

- is found only in birds
- is found in Arthropods
- is found in many invertebrates
- is found in Mollusca

45. The blood vessels _____

- transport blood throughout the entire body
- carry O_2 to the lungs
- carry CO_2 to the body
- carry waste to body cells

46. In the four-chambered hearts _____

- blood stays confined to vessels
- the left side of the heart pumps blood from lungs to body
- heart pumps blood through open-ended vessels
- there is no answer

47. Capillaries _____

- force blood back to right heart atrium
- exchange gas and other transfers in the capillary beds
- are under more pressure
- have one-way valves that restrict backward flow

48. Atherosclerosis _____

- is the force blood exerts on vessel walls
- reduces the blood flow
- is measured as systolic pressure
- is measured as diastolic pressure

49. The platelets _____

- fight infections
- promote clotting
- fight cancer
- transport CO_2

50. The pacemaker (SA node) _____

- is the amount of blood/minute pumped into systemic circuit
- relays electrical signals to the ventricles
- sets the rate of heart contractions
- is the development of plaques inside walls of blood vessels

51. Osmoregulation means the _____

- the active regulation of the osmotic pressure of an organism fluids
- control of the gain and loss of water and solutes
- First AND Second
- the disposal of nitrogen-containing wastes

52. Animals that absorb heat from their surroundings are called _____

- Ectothermic
- Endothermic
- Endothermic AND Herbivorous
- Herbivorous

53. Endothermic animals _____

- derive body heat mainly from their metabolism
- are represented by worms and molluscs
- absorb heat from their surroundings
- absorb heat from their surroundings AND are represented by worms and molluscs

54. Animals exchange heat with the environment by _____

- Fertilization
- Pollination
- Photosynthesis
- None of the above

55. The adaptations that promote the process of thermoregulation include _____

- Behavioral responses
- Circulatory adaptations
- First AND Second
- Conduction

56. The freshwater fish _____

- [x] Excrete excess water
- [ ] Pump out excess salt
- [ ] there is no answer
- [ ] Lose water by osmosis

57. The land animals conserve water using _____

- [x] Behavior adaptations
- [ ] Lungs
- [ ] Gills
- [ ] Stomach

58. In vertebrates the excretion is primarily carried out by _____

- [ ] Gills
- [ ] Lungs
- [ ] Stomach
- [x] Skin

59. In mammals, the ureters drain urine into _____

- [ ] Inferior vena cava
- [x] urinary bladder
- [ ] All other answers are correct
- [ ] Renal artery and vein

60. The key excretory processes of the urinary system include _____

- [ ] Excretion
- [ ] Filtration
- [x] First AND Second
- [ ] Conduction

61. The nitrogenous wastes are toxic breakdown products of _____

- all not above
- Fats
- Inorganic compounds
- Nucleic acids

62. The animals dispose off nitrogenous wastes in the form of _____

- Hydrochloric acid
- uric acid
- Nitrate
- First AND Second

63. Urea Is _____

- Easier to store
- Soluble in water AND Easily disposed of by aquatic animals
- Soluble in water
- Easily disposed of by aquatic animals

64. _____ is the nitrogen-containing metabolic waste products in mammals, amphibians, sharks, and some bony fishes

- Ammonia AND Carbonate
- Carbonate
- Urea
- Ammonia

65. The kidney dialysis can be a lifesaver by _____

- Maintaining the solute concentration in the blood
- All other answers are correct
- Maintaining the toxic compounds in the blood
- Extracting a filtrate from the urine

66. Excess of CO_2 or O_2 in the plant leaves exit through _____

- Stomata
- Phloem
- Xylem
- all of the above

67. Secretion of water and its solutes by hydathodes found in the leafs epidermis of some plants is called _____

- Transpiration
- All other answers are correct
- Photosynthesis
- Guttation

68. The evaporation of water from the surface of leaves through stomata is called _____

- Guttation
- Transpiration
- All other answers are correct
- Photosynthesis

69. _____ is secretion of water and its solutes by hydathodes found in the leafs epidermis of some plants

- Transpiration
- Guttation
- Respiration
- all of the above

70. _____ is the evaporation of water from the surface of leaves through stomata

- Respiration
- Guttation
- Photosynthesis
- None of the above

71. Osmoregulation means the _____

- there is no answer
- the disposal of nitrogen-containing wastes
- maintenance of internal temperature within narrow limits
- the active regulation of the osmotic pressure of an organism fluids

72. Animals that absorb heat from their surroundings are called _____

- Photosynthetic AND Herbivorous
- Herbivorous
- Ectothermic
- Photosynthetic

73. Endothermic animals _____

- absorb heat from their surroundings
- All other answers are correct
- derive body heat mainly from their metabolism
- use water and atmospheric CO_2 to produce sugar

74. Animals exchange heat with the environment by _____

- there is no answer
- Fertilization
- Evaporation
- Pollination

75. The adaptations that promote the process of thermoregulation include _____

- Behavioral responses
- Increased metabolic heat production
- Evaporative cooling
- All of the above

76. The saltwater fish _____

- Gain water by osmosis
- Pump out excess salt
- Excrete excess water
- All other answers are correct

77. The land animals conserve water using _____

- Kidneys
- Behavior adaptations
- First AND Second
- Stomach

78. In vertebrates the excretion is primarily carried out by _____

- Gills
- Lungs
- First AND Second
- Kidneys

79. The key excretory processes of the urinary system include _____

- Conduction
- Convection
- Excretion
- None of the above

80. The nitrogenous wastes are toxic breakdown products of _____

- Fats
- there is no answer
- Inorganic compounds
- Protein

81. The animals dispose off nitrogenous wastes in the form of _____

- Hydrochloric acid AND Nitrate
- Nitrate
- Hydrochloric acid
- Urea

82. Urea Is _____

- Poisonous
- Soluble in water
- First AND Second
- Less toxic

83. _____ is the nitrogen-containing metabolic waste products in most aquatic animals (including most fishes)

- Ammonia
- Uric acid
- All other answers are correct
- Urea

84. The kidney dialysis can be a lifesaver by _____

- Removing wastes from the blood AND Maintaining the solute concentration in the blood
- Maintaining the solute concentration in the blood
- Maintaining the toxic compounds in the blood
- Removing wastes from the blood

85. Excess of CO_2 or O_2 in the plant leaves exit through _____

- Stomata
- penetrating the external cell on surfaces directly to the air
- First AND Second
- Xylem

86. The halophytes excrete the excess salts outside their body by _____

- vascular bundles
- Cortex
- Frist AND Second
- special glands

87. _____ convert excess amino acids into uric acid and Keto acids

- aquatic plants
- terrestrial plants
- All other answers are correct
- halophytes

88. Asexual reproduction _____

- unique offspring
- Can proceed via Budding, Fission, and Fragmentation
- All other answers are correct
- Two parents produce genetically identical offspring

89. Hermaphroditism _____

- there is no answer
- One individual with male and female reproductive systems
- One parent produces genetically identical offspring
- One individual with male reproductive system and the other with female reproductive systems

90. In Sexual reproduction, sperm may be transferred to the female by _____

- Wind
- Insects
- Internal fertilization
- fragmentation

91. Both sexes in humans have _____

- Carpels
- Sepals
- A set of gonads where gametes (sperms & ovum) are produced
- there is no answer

92. Human Male Reproductive anatomy has _____

- Prostate
- several glands contribute to semen AND Prostate
- The uterus opens into the vagina through the cervix
- several glands contribute to semen

93. Which of the following statement is true _____

- Oogenesis (the egg formation) Occurs in testes
- Spermatogenesis (the sperm formation) Occurs in Ovaries
- Oogenesis (the egg formation) Occurs in Ovaries
- All other answers are correct

94. Menstrual Cycles Occur about every _____ days

- 28
- 29
- 14
- None of the above

95. Fertilization is the union of _____

- sperm and egg to form a sex organ
- there is no answer
- sperm and egg to form a haploid zygote
- sperm and egg to form a diploid zygote

96. Sperm are adapted to reach and fertilize an egg via _____

- Many mitochondria provide ATP for tail movements
- Head contains an acrosome containing penetrating enzymes
- Streamlined shape moves more easily through fluids
- all of the above

97. Cleavage _____

- Embryo is getting larger
- produces a ball of cells from the zygote called Gastrula
- is a rapid series of cell divisions
- None of the above

98. Gastrula produces _____

- a four-layered embryo
- a three-layered embryo
- a two-layered embryo
- None of the above

99. Asexual reproduction _____

- there is no answer
- One parent produces genetically identical offspring
- One parent produces genetically different offspring
- Very slow reproduction

100. Hermaphroditism _____

- One parent produces genetically identical offspring
- One individual with male reproductive system and the other with female reproductive systems

- First AND Second
- One individual with male and female reproductive systems

101. In Sexual reproduction, sperm may be transferred to the female by _____

- Wind
- Internal fertilization
- fragmentation
- there is no answer

102.Both sexes in humans have _____

- Ducts for gamete transport
- All other answers are correct
- Carpels
- Sepals

103.Human Male Reproductive anatomy has _____

- Ovaries contain follicles that Nurture eggs and Produce sex hormones
- Oviducts convey eggs to the uterus where embryos develop
- several glands contribute to semen
- The uterus opens into the vagina through the cervix

104.Which of the following statement is true _____

- All other answers are correct
- Spermatogenesis (the sperm formation) Occurs in seminiferous tubules
- Oogenesis (the egg formation) Occurs in testes
- Spermatogenesis (the sperm formation) Occurs in Ovaries

105.Sperm are adapted to reach and fertilize an egg via _____

- Cubical shape moves more easily through fluids
- Head contains a diploid nucleus
- First AND Second
- Streamlined shape moves more easily through fluids

106. Cleavage _____

- produces a ball of cells from the zygote called Gastrula
- produces a ball of cells from the zygote
- is a slow series of cell divisions
- is a slow series of cell divisions AND produces a ball of cells from the zygote called Gastrula

107. Asexual reproduction _____

- Very slow reproduction
- Two parents produce genetically identical offspring
- All other answers are correct
- Very rapid reproduction

108. Which of the following statement is true _____

- Oogenesis (the egg formation) Occurs in testes
- Spermatogenesis (the sperm formation) Occurs in seminiferous tubules
- Spermatogenesis (the sperm formation) Occurs in Ovaries
- there is no answer

109. Human Male Reproductive anatomy has _____

- Seminal vesicles
- All other answers are correct
- Ovaries contain follicles that Nurture eggs and Produce sex hormones
- The vagina Receives the penis during sexual intercourse

110. Binary fission _____.

- resulted in plasma membrane growth inward at the midpoint to divide the cells
- resulted in duplication of a single circular chromosome
- First AND Second
- resulted in plasma membrane growth outward at the midpoint to divide the

111.Eukaryotic Cell Division includes _____

- mitosis
- meiosis
- mitosis AND meiosis

112.The sequence of Eukaryotic Cell Cycle is _____

- S, G1,G2, and M
- All other answers are correct
- G1, S, G2, and M
- G1, S, M, and G2

113._____ is a part of Eukaryotic Cell Cycle

- G2
- S
- G1
- All of the above

114._____ is a part of Mitosis of the Eukaryotic Cell Cycle

- Metaphase
- Prophase
- Telophase
- All of the above

115.Duplicated chromosome is made of_____

- two Sister chromosome
- two Sister chromatin
- two identical DNA molecules
- there is no answer

116.Cytoplasmic division _____

- there is no answer
- is called Cytogenesis
- is called Cytogenetic
- overlaps with telophase

117.Pairs of autosomes _____

- have the same genetic information
- have the same size AND have the same genetic information
- have different genetic information
- have the same size

118.During meiosis II _____

- The chromosome number is reduced by half
- All other answers are correct
- haploid cell is produced
- diploid cell is produced

119.In Mendel experiment, the heritable factors is now known as _____

- chromosmes
- chromatids
- genes
- First AND Second

120.Filled circle in human pedigree is symbol for _____

- affected female
- affected male
- normal female
- there is no answer

121.Which of the following is an exception to Mendels Laws?

- Pleiotropy
- Segregation
- recessiveness AND Segregation
- recessiveness

122.Which of the following is ture in bees sex determination system?

- haploid = female
- haploid = male
- triploid = male
- haploid = female AND triploid = male

123.Binary fission _____.

- Occurs in eukaryotic cells
- produces two different cells from one cell
- First AND Second
- resulted in duplication of a single circular chromosome

124.Sexual reproduction Involves _____

- inheritance of unique sets of genes from two parents
- inheritance of unique sets of genes from one parent
- All other answers are correct
- Offspring are similar to one parent

125.The Interphase of Eukaryotic Cell Cycle includes _____ phases

- G1, M, and S
- G1, and S
- G2, S, and M
- None of the above

126.G1 _____

- All other answers are correct
- first gap phase, growth and prepares for S-phase
- second gap phase,growth and preparation for division
- DNA synthesis phase, duplication of chromosomes,each becomes two sister chromatids

127._____ is (are) Chromosomes align on cells midplane on top of each other.

- Telophase
- Anaphase
- Metaphase
- First AND Second

128.Sister chromatids are joined at a narrow region called the _____

- chromatin
- there is no answer
- chromosome
- chromomer

129.Cytoplasmic division _____

- is called Cytogenesis
- overlaps with telophase
- is called Cytosol
- First AND Second

130.Pairs of autosomes _____

- different in Centromere position
- have different size
- matched in Gene locations
- have different genetic information

131.Crossing over occurs during_____

- mitosis
- meiosis II
- meiosis I
- None of the above

132.Which of the following is Heterozygous?

- ab
- aa
- Aa
- First AND Second

133._____ is referred to as Heterozygote expresses phenotypes of both homozygotes

- All other answers are correct
- Incomplete dominance
- Codominance
- Pleiotropy

134.Which of the following is ture in bees sex determination system?

- Diploid = female
- haploid = female
- Diploid = female AND haploid = male
- haploid = male

135.The sequence of Eukaryotic Cell Cycle is _____

- G1, M, G2, and S
- G1, S, G2, and M
- All other answers are correct
- G1, S, M, and G2

136._____ is a part of Eukaryotic Cell Cycle

- M
- G1 AND G2
- G1
- G2

137.The sequence of Mitotic phase of Eukaryotic Cell Cycle is _____

- Prophase, Prometaphase, Anaphase, Metaphase, and Telophase
- Prophase, Telophase, Metaphase, Anaphase, and Prometaphase
- Metaphase, Prophase, Prometaphase, Anaphase, and Telophase
- None of the above

138.Meiosis _____

- has two S phases
- has one devision AND has two S phases
- has one devision
- has one interphase

139.Which of the following statements are true

- The allele that disappear in the F_1 generation is called dominant allele
- there is no answer
- dominant allele appears in the F_1 generation
- Recessive and dominant allele disppear in the F_2 generation

140.Multiple alleles is referred to _____

- Heterozygote expresses phenotypes of both homozygotes
- there is no answer
- Heterozygote has intermediate phenotype
- The phenomenon of one gene mutation being responsible for or affecting more than one phenotypic characteristic.

141.Which of the following is ture in birds sex determination system?

- ZW = female AND ZZ = male
- ZW = male
- ZW = female
- ZZ = male

142._____ is a part of Mitosis of the Eukaryotic Cell Cycle

- Anaphase
- All other answers are correct
- G2
- G1

143.Duplicated chromosome is made of_____

- two Sister chromomer
- two Sister chromatids
- two Sister chromatin
- there is no answer