BIOL 476S Comprehensive Exam

This document contains two previous versions of the Biology Comprehensive Review and Exam, both of which were administered during the 2022–2023 assessment cycle. The current instructor for BIOL 476S has not authorized the release of the most recent exam in order to maintain its security and prevent student access.

Name: _____

Biology Comprehensive Review & Exam
Version 1

General Biology I

1. A phosphorus shortage in soil would make it difficult for plants to produce:
   A. Cellulose
   B. Amylose
   C. DNA
   D. Starch
   Answer:

2. Matthew noticed that his house plants were wilting badly. What cell structure had most likely had contracted?
   A. Cytoplasm
   B. Cell wall
   C. Plasma membrane
   D. Vacuole
   Answer:

3. If a patient is brought into the emergency room suffering from dehydration, should a healthcare worker select an IV (intravenous fluids) of isotonic Ringer's lactate solution or sterile, distilled water for treatment?
   A. Ringer's solution should be used because water is hypertonic to the blood and would cause cell crenation.
   B. Ringer's solution should be used because water is hypotonic to the blood and would cause cell hemolysis.
   C. Water should be selected because the pH of the introduced fluid must be neutral.
   D. Water should be selected to maintain a constant level of salts and nutrients in the blood.
   Answer:

4. The equation for cellular respiration is: $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$. At what specific point in the cellular respiration process has glucose been broken down completely from a six carbon molecule to 6 molecules of CO_2?
   A. At the end of glycolysis
   B. At the end of pyruvate oxidation
   C. At the end of the Calvin cycle
   D. At the end of the Krebs cycle
   Answer:

5. If a plant's stomata were always closed, how would this affect the plant's ability to make glucose?
   A. There would be no effect on the ability of the plant to make glucose.
   B. Plants would be able to make more glucose than normal.
   C. Plants would make less glucose than normal.

D. Unable to determine with given information.

Answer:

6. If a cell was capable of bypassing metaphase and going directly from prophase to anaphase, what is the most likely consequence of this?
   A. The resulting daughter cells would not have a nuclear envelope.
   B. The resulting daughter cells would have significantly different quantities of cytoplasmic materials.
   C. The resulting daughter cells would have different numbers of chromosomes.
   D. The resulting daughter cells would be completely normal.

   Answer:

7. A geneticist examines a somatic cell from a fly during metaphase of mitosis and determines that 16 chromatids are present. If a germ-line cell from this species divides by meiosis, then at the end of meiosis I (including the first cytokinesis) each cell will contain
   A. 32 chromosomes
   B. 16 chromosomes
   C. 8 chromosomes
   D. 4 chromosomes

   Answer:

8. The DNA sequence capable of pairing with 5' CGATTAGT 3' is:
   A. 3' CGATTAGT 5'
   B. 5' GCTAATCA 3'
   C. 5' CGATTAGT 3'
   D. 3' GCTAATCA 5'

   Answer:

9. The DNA for the coding sequence of a gene that codes for a polypeptide containing 120 amino acids contains a minimum of how many nucleotides base pairs.
   A. 40
   B. 120
   C. 240
   D. 360

   Answer:

General Biology II

10. Which of the following is NOT an example of Darwin's concept of the mechanism of natural selection?
   A. Selective breeding produces a variety of corn that will survive drought conditions.
   B. Average beak size in a population of birds changes over time following their migration to an environment with larger seeds for food.
   C. Bacteria develop resistance to antibiotics.
   D. Infants tend to have birth weights between 3 and 4 kilograms, not higher or lower.

   Answer:

11. Can a virus be killed?
   A. Yes, destroying its genome kills it.
   B. No, viruses are capable of self-assembly and cannot be permanently killed.
   C. Yes, separating the genes from the capsid kills it.
   D. No, viruses are non-living and cannot die.

   Answer:

12. Which of the following scientific theories is supported by the fact that mitochondria are enclosed by a double membrane and possess their own DNA?

A. Endosymbiotic theory
B. Lamarck's theory of evolution
C. Darwin's theory of natural selection
D. Pasteur's germ theory

Answer:

13. A researcher collects what she believes to be a new species of life in a freshwater stream. Microscopic analysis shows the presence of chloroplasts, mitochondria, a defined nucleus, and a cellulous-based cell wall. Individual cells cluster to form colonies, but the colony lacks any true tissue or organ formations. This new species would most likely be categorized in which of the following kingdoms?

A. Animalia
B. Fungi
C. Protista
D. Bacteria

Answer:

14. In what way are bacteria and fungi similar?

A. Ecological function
B. Cell wall components
C. Design of the nucleus
D. Ribosome structure

Answer:

15. An insect species lays its eggs on a specific type of plant leaf. The leaves hide the insect eggs from predators and protect them from the environment. As the eggs hatch, the insect larvae feed on the leaves. Which of the following best describes the relationship between the insect and the plant?

A. Commensalism
B. Mimicry
C. Mutualism
D. Parasitism

Answer:

<u>Cell Biology</u>

16. Chromosome theory of heredity linked

A) Link chromosomal threads with cell nucleus
B) Link chromosomal threads with the hereditary factor
C) Link chromosomal threads with cytoplasm
D) Link chromosomal threads with polypeptides.

Answer:

17. The limit of resolution in light microscopy is

A) 0.1 to 0.2 nm
B) 400 to 600 nm
C) 200 to 350 nm
D) None of these

Answer:

18. The organelle most closely associated with the manufacture of proteins within the cell is the

A) ribosome
B) lysosome
C) nucleolus

D) cell wall
E) cell membrane

Answer:

19. The cell's primary site of ATP production is the
    A) mitochondria
    B) lysosomes
    C) nucleus
    D) nucleolus
    E) vacuoles

    Answer:

20. All of these are mitochondrial disorders except
    A) infants' death
    B) autism
    C) blindness
    D) deafness
    E) seizures

    Answer:

21. Vacuole in plant cell involve in
    A) Food storage
    B) Maintaining turgor pressure
    C) Reproduction
    D) Transferring message

    Answer:

22. The transfer of photoexcited electron from a molecule to a high-energy orbit in another molecule is known as-
    A) Energy transfer
    B) Photochemical reaction
    C) Energy transduction
    D) Resonance energy transfer

    Answer:

23. /novella/ALAQuizGr The organic molecules responsible for forming the bilayer of biological membranes are
    A) Phospholipids
    B) Proteins
    C) Carbohydrates
    D) Nucleic Acids
    E) Triglyceraldehydes

    Answer:

24. The ability of a microscope to determine two closely related objects as being separate objects is referred to as
    A) Magnification
    B) Resolution
    C) Contrast
    D) Refraction
    E) Clarification

    Answer:

25. The light-dependent generation of NADPH is called

A) Nitrogen fixation
B) Photoreduction
C) CO_2 fixation
D) None of those

Answer:

26. Cell membranes possess transport proteins that facilitate and regulate
A) The osmotic pressure of the cell
B) the movement of substances into and out of the cell
C) the division of cells
D) the contents of membranous RNA

Answer:

27. A permeable membrane consists of
A) Lipid, Cholesterol, and DNA
B) Phospholipids, glycolipids, and membrane proteins
C) Membrane proteins, Phospholipid, and RNA
D) Polysaccharides, Protein, and glycolipid

Answer:

Microbiology

28. /novella/ALAQuizGr Microbes that are very similar in shape, size and appearance to the bacteria, but able to live and grow in environments of very high salt concentration and temperatures above boiling belong to which of these domains?
A) Prokaryote
B) Eucarya
C) Archaea
D) Animalia
E) Protozoa

Answer:

29. /novella/ALAQuizGr Proteinaceous agents that cause several neurodegenerative diseases such as Creutzfeld-Jacob disease and Mad Cow disease are called
A) Viruses
B) Prions
C) Viroids
D) Phages
E) Plasmids

Answer:

30. /novella/ALAQuizGr *Mycobacterium* is difficult to stain because of its waxy outer coating. Which of the following stains is used to stain these microbes?
A) Gram Stein
B) Acid-fast stain
C) Counterstain
D) Simple Stain

Answer:

31. Blood agar is differential media because:
A) It inhibits bacteria that produce hemolysin
B) It encourages bacteria that produce hemolysin.
C) It grows red blood cells

D) None of the above

Answer:

32. Members of this group has chitinous cell walls
    A) Algae
    B) Protozoa
    C) Fungi
    D) Helminths

    Answer:

33. An effective vaccine should be-
    A) Safe with few side effects
    B) Ideally should be low cost
    C) Stable with longer shelf life, and
    D) Easy to administer
    E) All of the above

    Answer:

34. The fraction of whole blood volume that consists of red blood cells is
    A) Mean Cell Volume
    B) Hematocrit or packed cell volume
    C) Mean cell Hemoglobin
    D) None of the above

    Answer:

35. Parasitic infections increase
    A) Monocytes
    B) Eosinophil granulocytes
    C) Basophil granulocytes
    D) All of the above

    Answer:

36. *Helicobacter pylori* has all of the following characteristics except
    A) Spiral bacterium with sheathed flagella
    B) Gram-positive bacterium
    C) Produces powerful urease
    D) Causes long time infections
    E) Can cause stomach ulcers

    Answer:

37. All of the following are true of prokaryote structure EXCEPT:
    A) Most possess a cell wall made of peptidoglycan
    B) They possess a single circular DNA
    C) Some possess flagella for motility
    D) Do not possess ribosome in cell for protein synthesis

    Answer:

38. Population of microorganisms routinely present on the body surface of healthy human body are-
    A) Fungal growth
    B) Algal growth
    C) Normal flora
    D) None of the above

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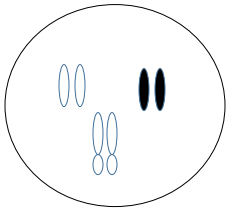
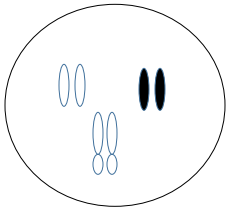
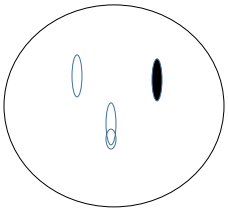
Genetics

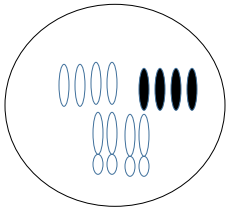
39. The cell nucleus below contains the chromosomes of a sea urchin at the two-cell stage.



Which of the followings represents the nucleus of an embryo at 64 cell stage?

A) 

B) 

C) 

D) None of the above

Answer:

40. The first offspring from the parents are called

A) P
B) F1
C) Test Cross
D) Backcross

Answer:

41. Which of the following terms is not a type of mating cross?

A) Reciprocal
B) Monohybrid
C) Dihybrid
D) Dominant

Answer:

42. If an individual has 10 gene pairs, how many different gametes can be formed if three of the gene pairs are homozygous and the remaining seven gene pairs are heterozygous?

A) 49
B) 100

C) 1024
D) 128

Answer:

43. If the parents of a family already have two boys, what is the probability that the next two offspring will be girls?
A) 1
B) ½
C) ¼
D) 1/8

Answer:

44. In some genetically engineered corn plants the dominant gene (BT) produces a protein that is lethal to certain flying insect pests that eat the corn plants. It was also found that the pollen could cause death in some flying insects. If the corn plant is heterozygous for BT, what proportion of the pollen would carry the dominant gene?
A) ½
B) ¼
C) 1/8
D) 1/16

Answer:

45. In a dihybrid cross AAbb × aaBB, what proportion of the progeny homozygous for both traits would be expected among the F_2 offspring?
A) ¼
B) $^1/_8$
C) ¾
D) None are homozygote

Answer:

46. Among the dihybrid crosses below, which will give a 1:1:1:1 ratio?
A) AABBxaabb
B) AaBbxAaBb
C) AaBbXaabb
D) AAbbxaaBB

Answer:

47. Which of the following ratios show codominance?
A) 2:1
B) 3:1
C) 1:2:1
D) 1:1

Answer:

48. A _____ results whenever the nucleotide sequence is changed.
A) Phenotype
B) Genotype
C) Mutation
D) Pleiotrophy

Answer:

49. The phenotypic ratio 9:7 may indicate
A) Complete dominant
B) Codominance
C) Epistasis

D) Complementary gene action

Answer:

Invertebrate and Vertebrate Zoology

50. Red blood cells of humans serve essentially the same function as which of the following in an insect?
    A) Malphigian tubules
    B) Digestive system
    C) Tracheal tubes
    D) Hemolymph
    E) Open circulatory system

    Answer:

51. Which of the following characteristics could most readily distinguish a marsupial from a placental mammal?
    A) Egg-laying ability
    B) Fusion of the lower jaw bones in the marsupial
    C) The presence of a layer of insulating hair in the placental
    D) Whether or not the young are nourished by their mother's milk
    E) The degree of fetal development at the time of birth

    Answer:

52. A major difference between ectotherms and endotherms is that
    A) As ambient temperature rises, ectotherms maintain nearly constant body temperature
    B) Endotherms receive most of their body heat from their surroundings
    C) Endotherms derive body heat from metabolic reactions and use energy derived from metabolic reactions to cool their bodies
    D) Ectotherms maintain their body at lower temperatures than do endotherms, therefore leading to the term "cold-blooded"
    E) Ectotherms cannot live on land because of the temperature fluctuations that can damage their organs.

    Answer:

53. In a food chain that consists of grass → grasshoppers → spiders → mice → snakes → hawks, the organism that possess the most biomass within the community is the
    A) Grass
    B) Grasshoppers
    C) Mice
    D) Snakes
    E) Hawks

    Answer:

54. Some members of the phylum of invertebrates undergo torsion during early embryonic development, resulting in a mantle cavity and anus that are right above the heads in adults:
    A) Annelida
    B) Rotifer
    C) Chordate
    D) Mollusca
    E) Cephalochordate

    Answer:

55. The earliest forms of life were most likely
    A) Unicellular autotrophs

B) Multicellular autotrophs
C) Unicellular heterotrophs
D) Multicellular heterotrophs
E) Photoautotrophs

Answer:

56. Organisms in which of the following groups lack true tissues?
A) Insecta
B) Avis
C) Porifera
D) Platyhelminthes
E) Cnidarian

Answer:

57. Identical twins can develop in humans when
A) A single egg is fertilized by two different sperm
B) Two identical eggs are fertilized by two non-identical sperm
C) Haploid eggs are fertilized by diploid sperm
D) Two different haploid eggs are fertilized by two different sperm
E) One egg is fertilized by one sperm and splits into two zygotes during development

Answer:

58. Organisms in which of the following groups possess stinging cells on tentacles?
A) Cnidaria
B) Avis
C) Porifera
D) Platyhelminthes
E) Insect

Answer:

59. Bombykol receptors on the surface of chemoreceptor cells in the male silkworm moth are used to sense the presence of a hormone called bombykol, which is released by female moths in search of a mate. This hormone would be considered a(n)
A) Histone
B) Transcription factor
C) Accommodator
D) Enhancer
E) Pheromone

Answer:

<u>Botany</u>

60. The tissue responsible for the flow of water through a plant is called _____.
A) Collenchyma
B) Xylem
C) Sclerenchyma
D) Phloem
E) Parenchyma

Answer:

61. Which of following colors of light is LEAST important in photosynthesis?
A) Red

B) Orange
C) Yellow
D) Green
E) Blue

Answer:

62. The Calvin cycle ends with the regeneration of _____.
A) Ribulose bisphosphate
B) Phosphoglyceric acid
C) Oxaloacetic acid
D) Phosphoenol pyruvate
E) Phosphoglyceraldehyde

Answer:

63. The loss of hybrid vigor in successive generations is due to _____.
A) Protoplast fusion
B) Induced mutation
C) In-breeding
D) Cross-breeding
E) Self-incompatibility

Answer:

64. Plants which grow on the floor of the rain forest would be expected to have _____.
A) Leaves with thick cuticle
B) Small, succulent leaves
C) Small, needle-like leaves
D) Large, dark green leaves
E) Large, light green leaves

Answer:

65. Which of the following is not a characteristic of monocots?
A) One cotyledon in each seed
B) Parallel leaf veins
C) Fibrous root system
D) Vascular bundles of xylem and phloem complexly arranged
E) Petals in multiples of four or five

Answer:

Ecology

66. A relationship that affects the populations of two or more species adversely is referred to as _____ competition.
A) interspecific
B) Intergeneric
C) Intermediate
D) Epistasis

Answer.

67. An organism that feeds on plant or algal tissues is referred to as a(n)
A) herbivore.
B) omnivore.
C) carnivore.

D) decomposer.
Answer:

68. A(n) _____ lives on or within the host organism for some period of its life.
A) parasite
B) Insect
C) Prokaryote
D) Fungi
Answer:

69. In a well-stratified lake, the thermocline refers to a steep and rapid decline in temperature relative to the waters above and below. Is this statement True or False?
Answer:

70. The mechanism of evolution proposed by Charles Darwin in *The Origin of Species* is
A) acclimatization.
B) natural selection.
C) acquired inheritance.
D) adaptation.
Answer:

71. An allele that completely masks the effect of another allele is considered
A) codominant.
B) dominant.
C) ineffective.
D) recessive.
Answer:

72. The area inhabited by all individuals of a particular species is known as the population's
A) geographic range.
B) density.
C) ecosystem.
D) habitat.
Answer:

73. When the conditions are favorable for a population at low density, such as when a species colonizes a new environment, population growth is typically
A) exponential.
B) logistic.
C) tangential.
D) dynamic.
Answer:

74. Animals that feed on both plant and animal tissues are referred to as
A) herbivores.
B) carnivores.
C) omnivores.
D) detritivores.

Answer:

75. The maximum sustainable population size for the prevailing environment is called the _____ capacity.

A) r
B) r^e
C) carrying
D) resource
Answer:

Name: _____ ___

Biology Comprehensive Review & Exam
Version 2

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<u>Genetics</u>

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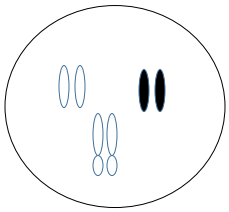
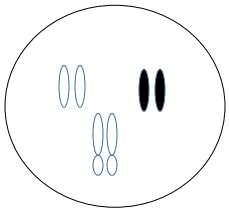
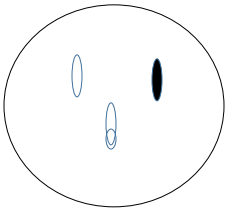


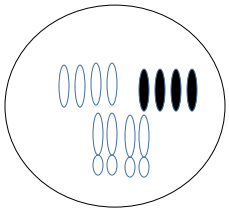
Which of the followings represents the nucleus of an embryo at 64 cell stage?

A)



B)



C) 

D) None of the above

Answer:

31. The first offspring from the parents are called
    A) P
    B) F1
    C) Test Cross
    D) Backcross
    Answer:
32. Which of the following terms is not a type of mating cross?
    A) Reciprocal
    B) Monohybrid
    C) Dihybrid
    D) Dominant
    Answer:
33. If an individual has 10 gene pairs, how many different gametes can be formed if three of the gene pairs are homozygous and the remaining seven gene pairs are heterozygous?
    A) 49
    B) 100
    C) 1024
    D) 128
    Answer:
34. If the parents of a family already have two boys, what is the probability that the next two offspring will be girls?
    A) 1
    B) ½
    C) ¼
    D) 1/8
    Answer:
35. In some genetically engineered corn plants the dominant gene (BT) produces a protein that is lethal to certain flying insect pests that eat the corn plants. It was also found that the pollen could cause death in some flying insects. If the corn plant is heterozygous for BT, what proportion of the pollen would carry the dominant gene?
    A) ½
    B) ¼
    C) 1/8
    D) 1/16
    Answer:
36. In a dihybrid cross AAbb × aaBB, what proportion of the progeny homozygous for both traits would be expected among the F_2 offspring?

A) ¼
B) $^1/_8$
C) ¾
D) None are homozygote

Answer:

37. Among the dihybrid crosses below, which will give a 1:1:1:1 ratio?
A) AABBxaabb
B) AaBbxAaBb
C) AaBbXaabb
D) AAbbxaaBB

Answer:

38. Which of the following ratios show codominance?
A) 2:1
B) 3:1
C) 1:2:1
D) 1:1

Answer:

39. The phenotypic ratio 9:7 may indicate
A) Complete dominant
B) Codominance
C) Epistasis
D) Complementary gene action

Answer:

<u>Evolution</u>

40. What term best describes when one species exhibits one or more defined phenotypes within the same species?
A) Sympatry
B) Allopatry
C) Assortative mating
D) Polymorphism

Answer:

41. What is the major difference between synonymous and non-synonymous substitution?
A) Synonymous substitution results in missense mutation and non-synonymous substitution results in nonsense mutation.
B) Synonymous substitutions do not result in amino acid changes in the protein but non-synonymous substitution do
C) Non-synonymous substitutions do not result in amino acid changes in the protein but synonymous substitution do
D) Non-synonymous substitution results in missense mutation and synonymous substitution results in nonsense mutation

Answer:

42. In Hardy-Weinberg equation what quantities are represented by the variables *p* and *q*?
A) Allele frequencies
B) Observed phenotypic frequencies
C) Genotypic frequencies
D) Expected phenotypic frequencies

Answer:

43. Which of the following variables would not be observed in a population at Hardy-Weinberg equilibrium?
A) The population has a very large number of organisms
B) Female mates with the same color males to avoid mixture of color in the population.
C) No immigrating organisms are allowed to enter in the population
D) No New mutations are appearing in the population
Answer:

44. What is the definition of "fitness" in Evolution?
A) The ability of an organism to contributes it genes into the future generations
B) The health of an organism
C) Ability to survive under environments
D) The ability of an organism to attract most mates
Answer:

45. According to the biological species concept, speciation consists of the evolution of the biological barriers to gene flow. The most important distinction is between _____ and _____.
A) Prezygotic; Postzygotic
B) Temporal; Spatial
C) Sexual selection; natural selection
D) Male; female
Answer:

46. Most examples of polyploidy speciation involve
A) Plants
B) Mammals
C) Arthropod
D) Prokaryotes
Answer:

Immunology

47. Although the complement cascade can be initiated by antibodies bound to the surface of a pathogen, complement activation is generally considered to be an innate immune response. This is because:
A) Two of the three pathways for complement activation are started by recognition molecules that directly interact with microbial surfaces
B) Complement proteins bound to the pathogen promote uptake and destruction by phagocytic cells
C) The C3 convertase is only produced when complement activation is initiated by antibody binding to a pathogen
D) When the complement cascade leads to the formation of membrane-attack complex, the pathogen is killed
Answer:

48. Epithelial surfaces provide the first line of defense against infection by the use of several types of mechanisms. One of the chemical mechanisms used by the epithelia is:
A) Secretion of antimicrobial peptides by epithelial cells
B) Joining of epithelial cells by light junctions
C) Movement of mucus by cilia
D) Peristalsis of the gastrointestinal tract
Answer:

49. The C3 convertase of the alternative complement pathway amplifies the overall magnitude of complement activation regardless of which of the three pathways initiated the the complement activation initially.
    A) True
    B) False
    Answer:
50. _____ is the coating of a pathogen with either antibodies or complement proteins.
    A) Opsonization
    B) Lectinization
    C) Proteolysis
    D) Inflammatory Response
    Answer:
51. Which of the following is found within the cytoplasm?
    A) NODs
    B) TLR1
    C) TLR7
    D) TLR 13
    Answer:
52. An infection in the skin, such as pimple, often produces pus. The major component of pus is:
    A) Dead and dying neutrophils
    B) NETs released by neutrophils
    C) Toxic oxygen molecules released by macrophages
    D) Toxic nitrogen molecules released by macrophages
    Answer:
53. Which cells can be derived from hematopoietic stem cells. Please select all correct answers.
    A) Mast cells
    B) Basophils
    C) B Cells
    D) NK Cells
    Answer:
54. Which cells can be derived from common lymphoid progenitor cells? Please select all correct answers.
    A) NK Cells
    B) T Cells
    C) Mast Cells
    D) Basophils
    Answer:

<u>Parasitology</u>

55. The following is the only protistan sexually transmitted parasite:
    A) Trichomonas vaginalis
    B) Loa loa
    C) Brugia malayi
    D) Plasmodium falciparum
    Answer:
56. The following insect is the vector for African sleeping sickness:
    A) Sandfly
    B) Blackfly
    C) Tsetse fly

D) Mosquito

Answer:

57. The method of transmission for hookworms is:

A) Ingestion
B) Penetrates skin of foot
C) Consuming tainted water
D) Bite of an insect

Answer:

58. The most anterior region of the head is the:

A) Proglottid
B) Strobilla
C) Neck
D) Scolex

Answer:

59. The second intermediate host for Clonorchis sinensus is:

A) Freshwater carp/fish
B) Aquatic vegetation
C) Crustaceans
D) Snails

Answer:

<u>Anatomy & Physiology</u>

60. Anatomy is to _____ and Physiology is to _____.

A) form; structure
B) function; form
C) structure; function
D) structure; form

Answer:

61. A person facing forward with hands at the sides and palms facing forward is the

A) supine position
B) prone position
C) anatomical position
D) frontal position

Answer:

62. Intercalated discs and striations are characteristic of

A) smooth muscle tissue
B) cardiac muscle tissue
C) Skeletal muscle tissue
D) all of the above

Answer:

63. Cells that secrete the organic components of the bone matrix are called

A) osteocytes
B) osteoblasts
C) chondrocytes
D) osteoprogenitor cell

Answer:

64. At rest, active sites on the actin are blocked by

A) myosin molecules
B) troponin molecules

C) tropomyosin molecules
D) calcium ions
Answer:

65. Platelets are
A) red cells that lacks a nucleus
B) large cells with a prominent, concave nucleus
C) tiny cells with polynucleus
D) cytoplasmic fragments of large cells
Answer:

66. Inappropriate or excessive immune responses to antigens are
A) immunodeficiency diseases
B) autoimmune diseases
C) allergies
D) signs of a weak system
Answer:

67. Most CNS neurons lack centrioles. This observation explains
A) why CNS neurons grow such long axons
B) why CNS neurons cannot regenerate
C) the ability of neurons to communicate with each other
D) the ability of neurons to produce a resting potential
Answer:

68. The white matter of the spinal cord contains
A) bundles of axons with common origins, destinations, and functions
B) sensory and motor nuclei
C) both axons and dendrites
D) bundles of dendrites with common origins, destinations, and functions
Answer:

69. Autonomic centers that control blood pressure, heart rate, and digestion are located in the
A) medulla oblongata
B) midbrain
C) diencephalon
D) cerebellum
Answer:

70. Damage to the somatic motor association area of the frontal lobe would interfere with the ability to
A) understand written words
B) understand spoken words
C) understand visual images
D) play the piano
Answer:

71. Gustatory receptors are located
A) in the eye
B) in the ear
C) on the surface of the tongue
D) on the skin
Answer:

72. The structure that overlies the organ of Corti is the
A) basilar membrane
B) tectorial membrane

C) stapedius
D) perilymph
Answer:

73. The prominent ridges in the lining of the empty stomach are called
A) cardia
B) rugae
C) papillae
D) plicae
Answer:

74. A glomerulus is
A) the expanded end of a nephron
B) a knot of capillaries within the renal corpuscle
C) the source of erythropoietin
D) attached to the collecting duct
Answer:

75. Contraction of the cremaster muscles
A) relaxes the scrotal sac
B) pulls the testes closer to the body cavity
C) propels sperm through the urethra
D) moves sperm through the ductus deferens
Answer: