

10. What are the probable genotypes of the parents in a cross that gives a 3:1 phenotype ratio?
 a) AA x Aa b) Aa x AA c) Aa x Aa d) AA x aa
 e) none of the answers is correct
11. The alleles of a given gene
 a) always occur in two copies
 b) carry information for different proteins with the same function
 c) are localized on different loci of the same chromosome
 d) occupy the same loci on homologous chromosomes
 e) none of the answers is correct
12. The nucleotide sequence of a DNA codon is GTA. A messenger RNA (mRNA) molecule with a complementary codon is transcribed from the DNA. In the process of protein synthesis, transfer RNA (tRNA) pairs with the mRNA codon. Which is the nucleotide sequence of the tRNA anticodon?
 a) CAT b) CUT c) GUA d) CAU
 e) none of the answers is correct
13. A linkage group is:
 a) a group of genes residing on one chromosome
 b) a group of genes coding for one metabolic pathway
 c) a set of characters invariably inherited together for many generations
 d) a set of chromosomes originating from one parent
 e) none of the answers is correct
14. Blood pressure in a healthy man is 125/80. The 125 indicates ____, and the 80 indicates ____.
 a) pressure in the left ventricle.....pressure in the right ventricle
 b) arterial pressure heart rate
 c) pressure during ventricular contraction.....pressure during ventricular relaxation
 d) pressure in the arteries.....pressure in the veins
 e) none of the answers is correct
15. In 1 mm³ of human blood there are:
 a) 5.10⁶ leukocytes b) 5.10⁹ erythrocytes c) 5.10⁶ lymphocytes
 d) 5.10⁵ erythrocytes e) none of the answers is correct
16. The transmission of a nerve signal at synapses is mediated:
 a) chemically, by ATP b) chemically, by a neurotransmitter
 c) mechanically, by microtubules d) by mechanical excitation of neighbouring cells
 e) none of the answers is correct
17. Which of the following foodstuffs begins to be digested in the mouth?
 a) ham b) cheese c) bread d) milk e) none of the answers is correct
18. Which of the following is the correct order for the movement of air to the lungs?
 a) nose, larynx, pharynx, trachea, bronchi
 b) nose, pharynx, larynx, trachea, bronchi
 c) nose, pharynx, larynx, bronchi, trachea
 d) nose, bronchi, larynx, bronchi, trachea
 e) none of the answers is correct
19. Any change in the position of the human body is registered by
 a) free nerve endings b) mechanoreceptors
 c) radioreceptors d) chemoreceptors
 e) none of the answers is correct

20. The _____ valves are one-way valves that prevent blood from draining from the aorta back into the left ventricle.
- a) semilunar b) bicuspid c) tricuspid d) atrioventricular
e) none of the answers is correct
21. Blood cells are produced in
- a) yellow marrow b) cartilage c) the spleen d) bone marrow
e) none of the answers is correct
- 22: Which of the following *is not* a part of the central nervous system?
- a) brain b)spinal cord c) motor nerves d) cerebellum
e) none of the answers is correct
23. The pancreas secretes insulin in response to
- a) an increase in body temperature b) hormonal signals from the anterior pituitary gland
c) a decrease in blood glucose d) an increase in blood glucose
e) none of the answers is correct
24. During embryonic development, the sperm and the ovum combine to form
- a) a morula b) a zygote c) endoderm d) a blastomere
e) none of the answers is correct
25. The structure of the neuron that conducts impulses away from the cell body is
- a) the axon b) the dendrite c) microtubules d) the terminal bouton
e) none of the answers is correct
26. Which of the following *is not* on the recommended list for maintaining good health?
- a) eat a balanced diet and eat breakfast regularly
b) avoid snacking on sweets and fatty foods
c) exercise regularly
d) smoke in moderation
e) none of the answers is correct
27. Plants are part of a group known as a
- a) genus b) family c) kingdom d) species
e) none of the answers is correct
28. Which of the following *is not* part of the body of evidence supporting the theory of evolution?
- a) the fossil record b) homologous structures c) vestigial structures
d) comparative embryology e) none of the above
29. All animal organisms inhabiting a particular region constitute:
- a) biocoenosis b) phytocoenosis c) zoocoenosis d) ecosystem
e) none of the answers is correct
30. Which of the following was regarded by Ch. Darwin as the major factor of evolution?
- a) natural selection b) mutations c) struggle for life d) migration
e) none of the answers is correct