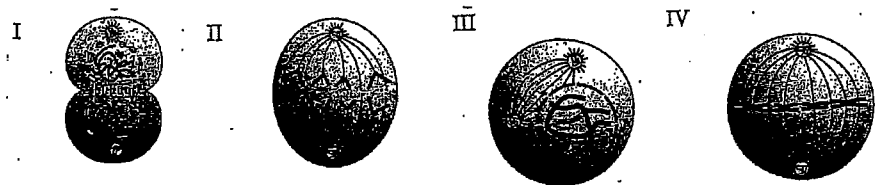


Write the best choice in the space provided.

C 1. Which of the following shows the correct order of the stages of mitosis?

- A. I, II, III, IV
- B. II, IV, III, I
- C. III, IV, II, I
- D. IV, II, I, III



D 2. What phase of mitosis must be complete before two identical cells are produced?

- A. anaphase
- B. telophase
- C. prophase
- D. interphase

C 3. Which of the following best describes metaphase?

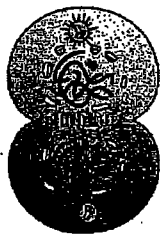
- A. nuclear material is replicated
- B. nuclear membrane begins to dissolve
- C. chromosomes line up at the middle of the cell
- D. chromatids move to opposite sides of the cell

D 4. In what stage of mitosis are replicated chromosomes formed?

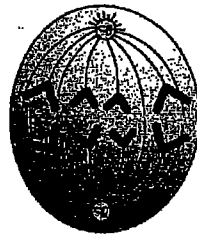
- A. anaphase
- B. telophase
- C. prophase
- D. interphase

Use the following diagram to answer #5-6

Cell 1



Cell 2



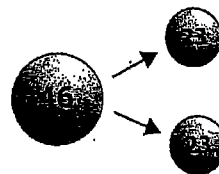
Pick A if the statement is supported by the diagram.
 Pick B if the statement is refuted by the diagram.
 Pick C if the statement is neither supported or refuted by the diagram.

A 5. The cells in the diagram are in different stages of mitosis.

B 6. Cell 1 is in the earliest stage of the cell cycle.

A 7. The diagram shows the production of cells. Which of the following is being illustrated?

- A. egg cells
- B. skin cells
- C. muscle cells
- D. plant cells



C 8. In which of the following stages do spindle fibers first appear?

- A. anaphase
- B. telophase
- C. prophase
- D. interphase

B 9. Recessive traits do not get passed on to the next generation. A. true B. false

A 10. Heredity is the study of the passing on of traits. A. true B. false

C 11. What do we call the crossing of two individuals, each showing different forms of the same trait?

- A. dominance
- B. codominance
- C. hybridization
- D. incomplete dominance

- C 12. Which of the following is homozygous dominant?
 A. kk B. Ss C. PP D. Qp
- B 13. Which of the following shows the results of the offspring of a cross between a purebred recessive short-haired animal and a purebred dominant long-haired animal?
 A. 100% short hair B. 100% long hair
 C. 50% short hair, 50% long hair D. 75% long hair, 25% short hair

For 14-20, put the letter of the description from the right in the space for the matching term on the left.

- B 14. one of several forms of the same gene A. dominant
E 15. the physical appearance of an individual B. allele
D 16. this trait can be masked C. genotype
C 17. the genetic makeup of an individual D. recessive
F 18. both of these alleles affect the phenotype E. phenotype
A 19. this trait will be expressed F. codominant
C 20. the pair of alleles possessed by an individual for a given characteristic.

For 21-24, classify each as G for genotype or P for phenotype.

- G 21. RR
P 22. a tall cat
G 23. the genes an individual organism has with respect to a specific trait
P 24. the physical appearance of an organism with respect to a particular trait
- A 25. Dominant traits always get expressed over recessive traits. A. true B. false
- B 26. A white female cat mates with a black male cat. All the offspring are white. What would be the best description of the genotype of the female parent?
 A. recessive B. dominant C. codominant D. homozygous
- D 27. Long fur (F) is dominant in a certain type of bat. If there is a 50% probability the F₁ generation will have short fur, what are the genotypes of the parents?
 A. FF x Ff B. FF x ff C. Ff x Ff D. Ff x ff
- A 28. A particular kind of lizard can be found in two colours, S for solid green and s for striped. If two Ss lizards are crossed, what would the probability be of producing a solid green lizard?
 A. 25% B. 50% C. 75% D. 100%

For 29-33, classify each as D for diploid or H for haploid.

- H 29. n
D 30. 2n
D 31. human cheek cell
H 32. human sperm cell
D 33. chick embryo