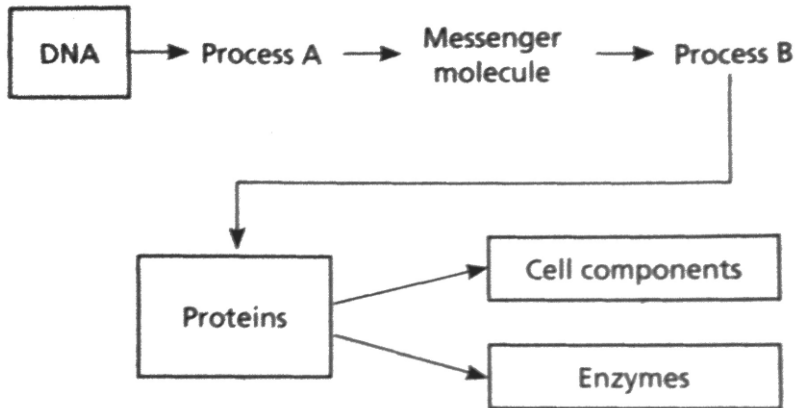


Base your answers to questions 16 and 17 on the diagram below and on your knowledge of biology.

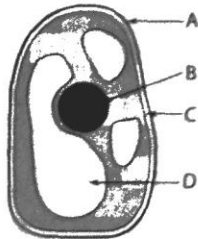


- 16.** Within which organelle does process A occur?
- (1) ribosome (3) vacuole
 (2) nucleus (4) cell membrane
- 17.** Within a living cell, which organelles are directly necessary for process B to occur?
- (1) ribosomes (3) vacuoles
 (2) mitochondria (4) cell membranes

- 18.** In all living cells, DNA controls cellular activities by
- (1) determining the order of amino acids in protein molecules
 (2) regulating the concentration of molecules on both sides of the cell membrane
 (3) varying the rates of starch synthesis
 (4) coordinating active and passive transport

19. Which cell organelle indicated in the diagram controls the synthesis of enzymes?

- (1) A
 (2) B
 (3) C
 (4) D



- 20.** The sequence of amino acids that makes up a protein molecule is determined by the sequence of
- (1) bases in DNA
 (2) glucose in DNA
 (3) ribosomes in the cytoplasm
 (4) chloroplasts in the vacuoles
- 21.** In DNA, the base represented by an A always pairs with the base represented by
- (1) A (2) T (3) C (4) G
- 22.** The presence of DNA is important for cellular metabolic activities because DNA
- (1) directs the production of enzymes
 (2) is a structural component of cell membranes
 (3) directly increases the solubility of nutrients
 (4) is a major component of the cytoplasm