

This practice test is designed to help you determine what concepts you DO know and more importantly what concepts you DO NOT know!

Go through the practice test THREE times:

(1) On your own (2) With your notes (3) With another student

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Each time, if you cannot answer a question, draw a circle around it to identify that you should review this concept when preparing for the test.

Multiple Choice. Choose the BEST answer (1 mark each)

- _____ 1. Which structure controls what enters and leaves a cell?
- Nucleus
 - Cell membrane
 - Ribosome
 - Mitochondria
- _____ 2. Which base does thymine always pair with?
- Adenine
 - Cytosine
 - Guanine
 - Thymine
- _____ 3. Which of the following best describes binary fission?
- A form of asexual reproduction in which spores are created.
 - The transfer of genetic material directly from one cell to another.
 - The fusing together of two cells to form one.
 - A form of asexual reproduction through cell elongation and then division.
- _____ 4. Reproduction by vegetative propagation occurs when
- Amoebas divide in half
 - Planaria are cut in half and grow back the missing parts
 - A tree produces new green shoots in springtime
 - Yeast cells produce new smaller cells that break off and float away
- _____ 5. The stage of mitosis during which the nucleolus and nuclear membrane disappear is
- Anaphase
 - Prophase
 - Telophase
 - Metaphase

Short Answers.

1. Write out the complementary sequence of the following DNA strand (*1 mark*)

Strand 1: C C A T G G T C A

Strand 2:

2. Draw and label the 3 parts of a nucleotide (*3 marks*)

3. What are 2 advantages and 1 disadvantage of asexual reproduction? (*3 marks*)

Advantage 1:

Advantage 2:

Disadvantage 1:

4. What method does a planarian (flatworm) use to reproduce asexually? Describe this method of reproduction (*2 marks*)

Method:

Description:

5. What stage does a cell spend most of its life cycle in? What is it doing during this time? (*2 marks*)

6. Describe what is happening to DNA during the 4 phases of mitosis (*4 marks*)