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BrightRED Revision Cards

N5

BIOLOGY



BRIGHT RED REVISION CARDS

These revision cards are packed full of great National 5 Biology questions, diagrams, illustrations, answers and tips to help you to actively test your knowledge and ramp up your revision.

Each card covers a course topic which offers a mixture of multiple-choice and exam-style questions. Answers and explanations with key pointers are on the reverse.

14 CELLS, TISSUES AND ORGANS: THE ORGANISATION OF CELLS AND MULTICELLULAR ORGANISMS

QUESTIONS

- A group of similar cells carrying out the same function is called:
A an organ
B a system
C a tissue
D an organelle
- What is the basic unit of life?
- Give the name for a group of different tissues that work together to carry out a particular function.
- Give the name used to describe a group of organs that work together to carry out a particular function.

14 CELLS, TISSUES AND ORGANS: THE ORGANISATION OF CELLS AND MULTICELLULAR ORGANISMS

ANSWERS

1 C is right!

REMEMBER! Although there are some organisms that are multicellular in all living cells, the function of the cell determines the actual organelles that it needs.

REMEMBER! Unicellular organisms are often measured in micrometres (μm) because of their tiny size. Therefore, a cell of 0.01 mm would be $10 \mu\text{m}$.

REMEMBER! In unicellular organisms, the cell must be able to carry out all of the functions of living things. In multicellular organisms, there is a division of labour with each cell fulfilling a specific function.

- Organ
- System

- Answers with short explanations
- **REMEMBER!** tips to shine a light on any harder concepts or questions

HOW TO USE

You can test yourself alone or with friends and should do so at spaced intervals when you feel confident about the topics you have studied. You can use the cards in any order to vary your approach and can shuffle the pack to mix things up a little bit!

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DNA AND THE PRODUCTION OF PROTEINS

QUESTIONS

- The genetic information in DNA controls the synthesis of:
A cellulose **C** sugars
B starch **D** proteins
- The site of protein synthesis in a bacterial cell is the:
A mitochondria **C** ribosomes
B nucleus **D** plasmid
- Give the name used to describe the double-stranded spiral ladder shape of DNA molecules.
- Name the substance that carries a complementary copy of the genetic code from the DNA to the ribosomes.
- Name the part of the cell where mRNA is synthesised.

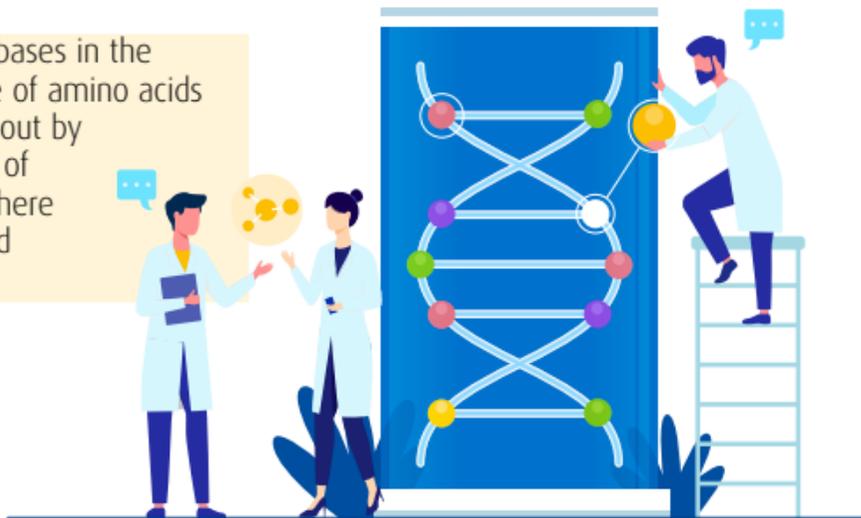


DNA AND THE PRODUCTION OF PROTEINS

ANSWERS

- 1 **D** proteins
- 2 **C** ribosome
- 3 Double helix
- 4 mRNA
- 5 Nucleus

REMEMBER! The order of the bases in the DNA determines the sequence of amino acids in a protein. This is brought about by base pairing in the production of mRNA and at the ribosome where the amino acids are assembled into a protein.



QUESTIONS

- 1 A group of similar cells carrying out the same function is called:
A an organ
B a system
C a tissue
D an organelle
- 2 What is the basic unit of life?
- 3 Give the name for a group of different tissues that work together to carry out a particular function.
- 4 Give the name used to describe a group of organs that work together to carry out a particular function.



ANSWERS

- 1 **C** a tissue

REMEMBER! Although there are some organelles that are present in all living cells, the function of the cell determines the actual organelles that it needs.

- 2 Cell

REMEMBER! Unicellular organisms are often measured in micrometres (μm) because of their tiny size. Therefore, a cell of 0.01 mm would be 10 μm .

REMEMBER! In unicellular organisms, the cell must be able to carry out all of the functions of living things. In multicellular organisms, there is a division of labour, with each cell fulfilling a specific function.

- 3 Organ
4 System



ANSWERS

1 B 2 and 3

REMEMBER!**Do not oversimplify answers.**

The graph shows the line increases and then levels off. Therefore, it is wrong to say as the glucose concentration increases the rate of sodium uptake increases.

Do not assume.

There is no plot point for 9mmol. Therefore, it is wrong to say the rate of sodium transport remains steady even though the glucose concentration is increased from 4 to 9 mmol. You cannot assume what would happen at 9mmol glucose.

- 2 4 $\mu\text{g/hr}$
follow the red arrows on the graph to work out answer.
- 3 2.2mmol
follow the green arrows on the graph to work out answer.

