

Biology

Delprov A1

engelsk version

Årskurs

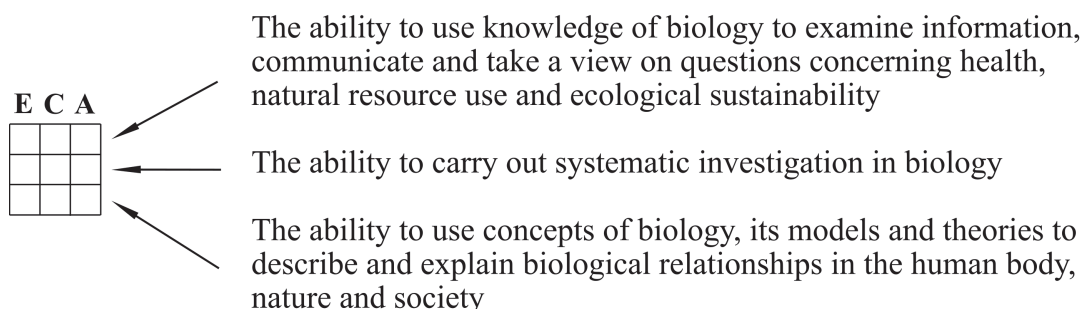
9

Elevens namn och klass/grupp

NATIONAL TEST IN BIOLOGY 2016

The national test gives you a chance to show what you know about biology. On the right of each question you will find a symbol that tells you which of three abilities you can demonstrate in your answer.

The rows in the symbol describe these different abilities.



For each row you will be able to show your knowledge at three different levels: E, C and A.

For example, the table on the right indicates that the question allows you to show that you can use concepts of biology, its models and theories to describe and explain biological relationships in the human body, nature and society at level E and C.

Your answers to the questions should be clearly written so that other persons can read your text and understand your meaning. Therefore it is important that you show all your work.

Time allowed: 75 minutes

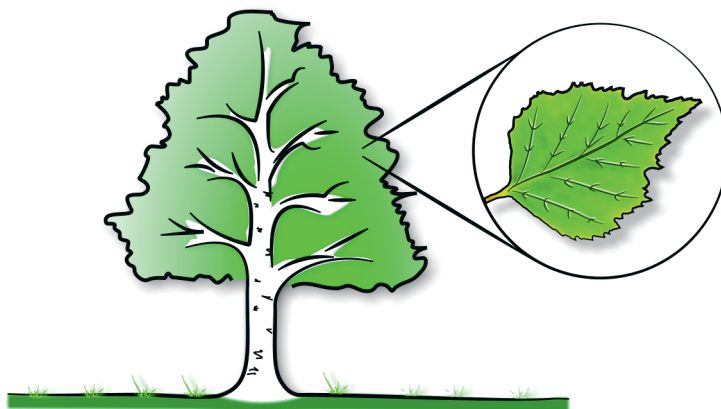
Name: _____

School: _____ Class: _____

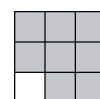
Date of Birth: Year _____ Month _____ Day _____

Your answers must be written on separate sheets of paper, NOT on the question paper. The question paper must be returned to your teacher together with your answers.

1. Photosynthesis is a chemical reaction in for example the plants' green leaves.



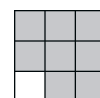
Which of the alternatives **A–D** is describing what is formed in the reaction?



- A.** Carbon dioxide and water
- B.** Carbon dioxide and glucose
- C.** Oxygen and water
- D.** Oxygen and glucose

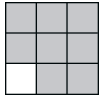
2. Humans depend on the environment and its different ecosystems. Features in the ecosystem supporting humans are called ecosystem services. One example of an ecosystem service is photosynthesis as the reaction produces substances in favour of humans.

Give one more example of an ecosystem service.

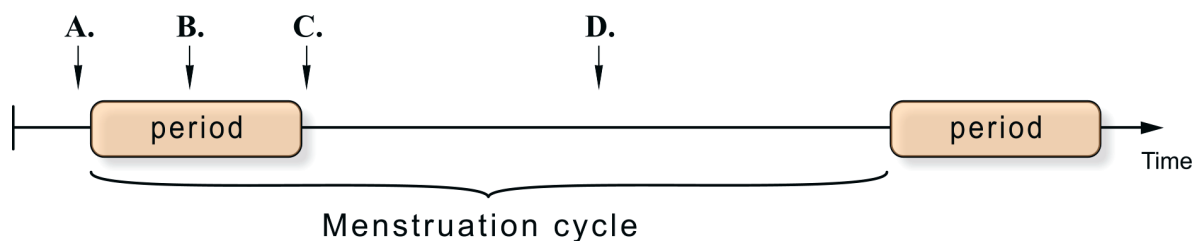


3. A menstrual cycle is the time from the first day of the period until the next period's first day.

Which of the alternatives **A–D** is best indicating the time with highest possibility for a human egg to be fertilised?

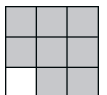


- A. Right before the period.
- B. During the period.
- C. Right after the period.
- D. In the middle between two periods.



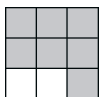
4. Through genetic engineering, it is possible to produce insulin with the help of bacteria. Insulin is used as a medical drug for people with diabetes.

Give one more example of genetic engineering and describe how it is applied.



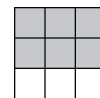
5. The biological sex of a child is decided from how the sex chromosomes are combined at fertilisation.

Use knowledge of genetics and gametes to explain how a child's biological sex is decided.

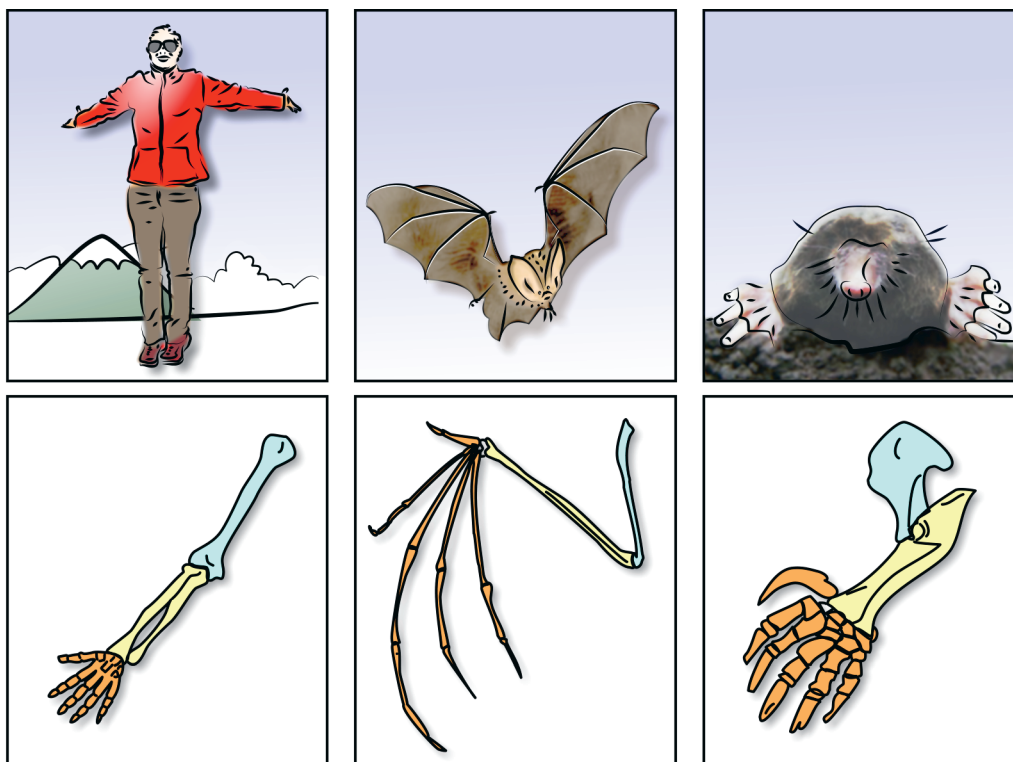


6. Tobacco smoking is addictive and affects people's health negatively in many ways.

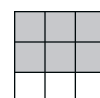
Explain how one of the body's organs and its function can be affected by tobacco smoking and what this might cause.



7. The mammals have developed from a common origin. When comparing skeleton parts from humans, bats and moles you can see that the forelegs are structured in the same way but they have different functions. They are used to grab, fly and dig. The forelegs have through evolution been adapted to different environments.



Use knowledge of evolution to explain how the forelegs have been adapted to different environments.



8. The ladybird is a beetle that eats plant lice. Birds and other insects eat the ladybirds. A few summers ago, there was an exceptional amount of ladybirds in the south of Sweden. Something had happened in the ecosystem of the ladybird resulting in so many ladybirds.



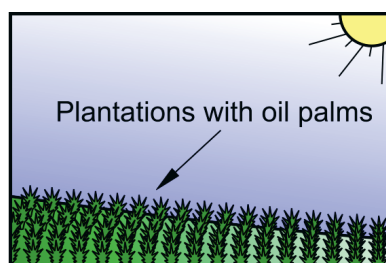
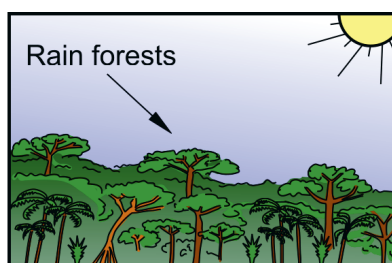
Explain what could have happened in the ladybird's ecosystem that resulted in so many ladybirds.

9. At the end of the 18th century, the Englishman Edward Jenner found that it is possible to vaccinate people against smallpox and through this they become immune to this disease. Today there exists vaccine against many different diseases.

a) Explain what happens when a vaccination gives immunity.

b) Give one example of the impact the discovery of the vaccine has had on humans' living conditions.

10. Palm oil is extracted from the pulp of the African oil palm. Palm oil is used in for example cookies, makeup, ice cream, and soap. Rain forests are felled or burnt to give space for plantations with oil palms. Today, palm oil is produced from African oil palms grown in Indonesia and Malaysia.



Reason in two steps, regarding two consequences, that cultivation of oil palms might have on the ecosystem.



Institutionen för tillämpad utbildningsvetenskap