

IGCSE Cambridge Topical Past Papers

BIOLOGY 9-1

0970 | Paper 2

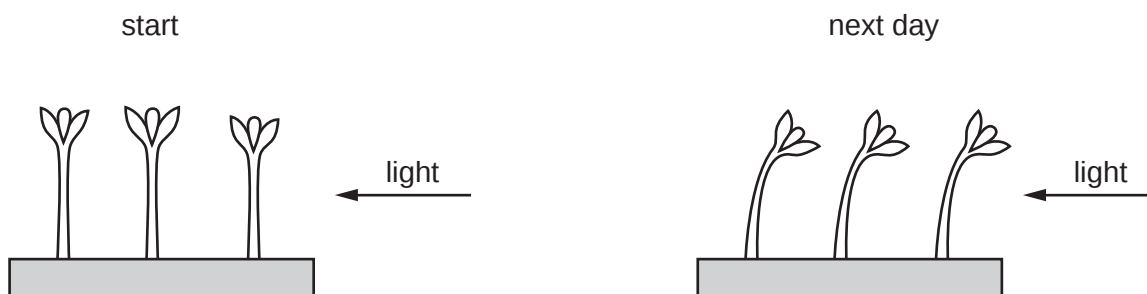
2020 — 2025

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1 - (0970/21_Summer_2020_Q1) 

The diagram shows what happened in an experiment with plant seedlings.



Which characteristic of living things made the seedlings grow towards the light?

- A excretion
- B nutrition
- C respiration
- D sensitivity

2 - (0970/21_Summer_2020_Q2) 

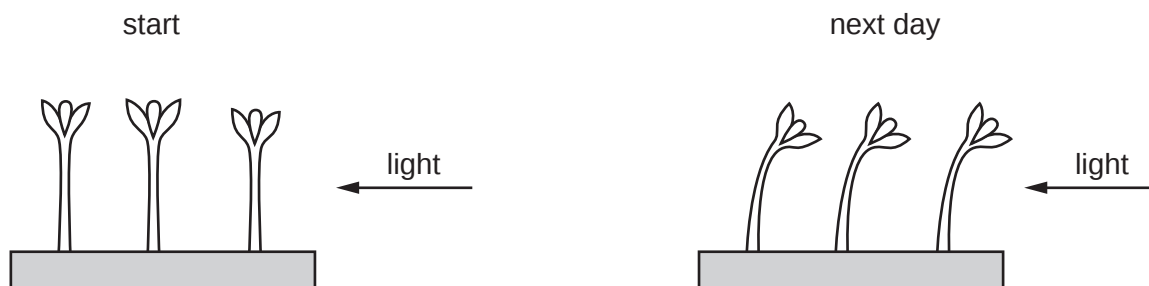
A rat has the scientific name *Rattus rattus*.

What do the two parts of this name refer to?

- A genus and species
- B kingdom and genus
- C kingdom and species
- D variety and genus

3 - (0970/22_Summer_2020_Q1) 

The diagram shows what happened in an experiment with plant seedlings.



Which characteristic of living things made the seedlings grow towards the light?

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4 - (0970/22_Summer_2020_Q2) 

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- B** kingdom and genus
- C** kingdom and species
- D** variety and genus

5 - (0970/22_Winter_2020_Q1) 

Which process is carried out by all organisms?

- A** growth
- B** photosynthesis
- C** sexual reproduction
- D** transpiration

6 - (0970/22_Winter_2020_Q2) 

What are features of the leaves of a plant that is a dicotyledon?

	broad leaves	parallel veins	
A	✓	✓	key
B	✓	✗	✓ = yes
C	✗	✓	✗ = no
D	✗	✗	

7 - (0970/21_Summer_2021_Q1) 

What is a characteristic of all living organisms?

- A** breathing
- B** circulation
- C** egestion
- D** sensitivity

8 - (0970/21_Summer_2021_Q3) 

Scientists discover a new species of animal.

It has a segmented body with two pairs of legs on each segment.

To which group of animals does this new species belong?

- A arachnids
- B crustaceans
- C insects
- D myriapods

9 - (0970/22_Summer_2021_Q1) 

What is a characteristic of all living organisms?

- A breathing
- B circulation
- C egestion
- D sensitivity

10 - (0970/22_Summer_2021_Q2) 

The bonobo and the chimpanzee are two closely related species.

What is the **most** accurate method of deciding how closely related species are?

- A compare evolutionary relationships of other species
- B compare the base sequences of their DNA
- C compare their anatomy
- D compare their morphology

11 - (0970/22_Summer_2021_Q3) 

Scientists discover a new species of animal.

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To which group of animals does this new species belong?

- A arachnids
- B crustaceans
- C insects
- D myriapods

12 - (0970/22_Winter_2021_Q1) 

All living things can remove toxic materials and other substances that are in excess of requirements.

What is this process called?

- A** egestion
- B** excretion
- C** nutrition
- D** respiration

13 - (0970/21_Summer_2022_Q1) 

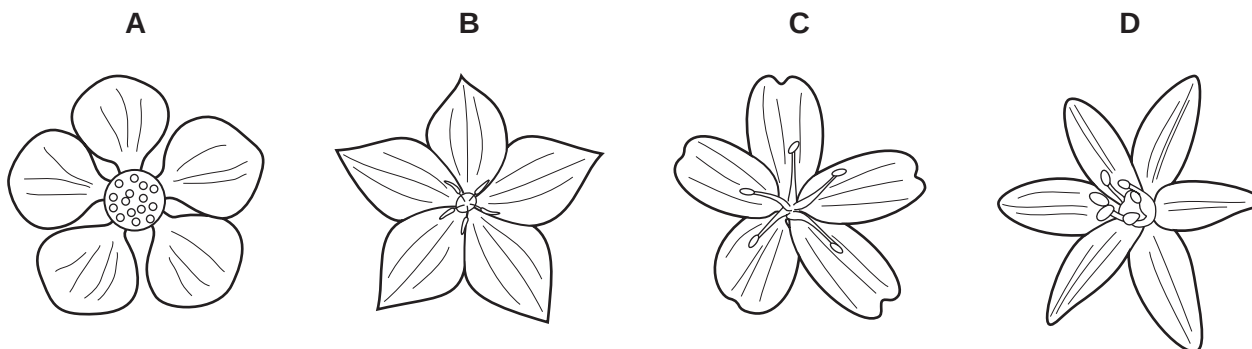
All living organisms release energy from nutrient molecules within their cells.

What is the name of this characteristic?

- A** growth
- B** nutrition
- C** respiration
- D** sensitivity

14 - (0970/21_Summer_2022_Q2) 

Which diagram shows a flower from a monocotyledon?



15 - (0970/21_Summer_2022_Q37) 

With which kingdoms do bacteria share the same genetic code?

- A** animal, plant, fungus and protocist
- B** animal, plant and fungus only
- C** animal and plant only
- D** animal only

16 - (0970/22_Summer_2022_Q1) 

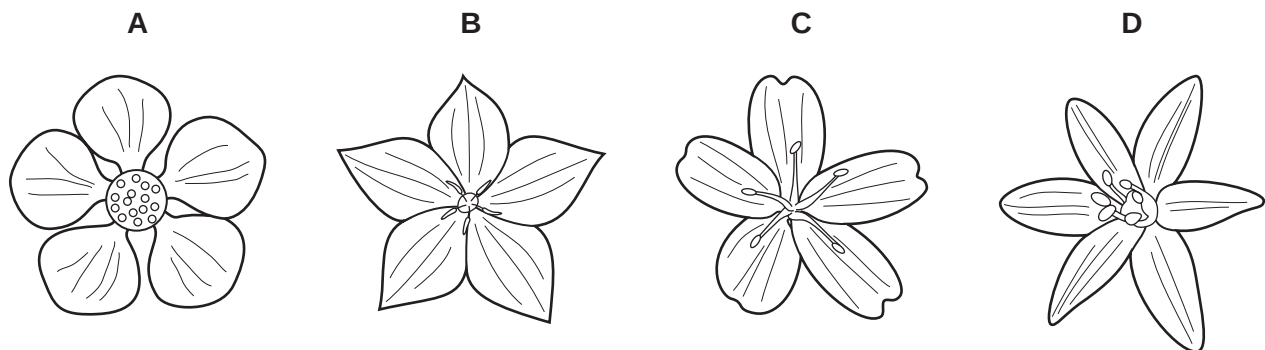
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17 - (0970/22_Summer_2022_Q2) 

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18 - (0970/22_Summer_2022_Q37) 

With which kingdoms do bacteria share the same genetic code?

- A** animal, plant, fungus and protocist
- B** animal, plant and fungus only
- C** animal and plant only
- D** animal only

19 - (0970/22_Winter_2022_Q2) 

Which name is given to a group of individuals that can reproduce to produce fertile offspring?

- A** a genus
- B** a kingdom
- C** a species
- D** an organ system

20 - (0970/21_Summer_2023_Q1) 

What are characteristics of all organisms?

- A** egestion and excretion
- B** egestion and nutrition
- C** excretion and nutrition
- D** excretion and photosynthesis

21 - (0970/21_Summer_2023_Q2) 

The scientific name for the golden eagle is *Aquila chrysaetos*.

What is the genus of the golden eagle?

- A** *Aquila*
- B** *chrysaetos*
- C** eagle
- D** golden

22 - (0970/22_Summer_2023_Q1) 

Which process occurs both in plants and in animals?

- A** excretion
- B** phagocytosis
- C** photosynthesis
- D** transpiration

23 - (0970/22_Summer_2023_Q2) 

Some statements about species are given.

- 1 Members of a species all look identical.
- 2 Members of a species belong to the same genus.
- 3 Members of a species can produce fertile offspring.
- 4 Species are named using an international system.

Which statements are correct?

- A** 1, 2, 3 and 4
- B** 1, 2 and 3 only
- C** 2 and 4 only
- D** 2, 3 and 4 only

24 - (0970/21_Summer_2024_Q1) 

A person touches a hot object and rapidly moves their hand away from the hot object.

Which characteristic of living organisms is this an example of?

- A** excretion
- B** growth
- C** reproduction
- D** sensitivity

25 - (0970/22_Summer_2024_Q1) 

Which process is carried out by all organisms?

- A** growth
- B** photosynthesis
- C** sexual reproduction
- D** transpiration

26 - (0970/22_Summer_2024_Q2) 

What is the first part of the scientific name of an organism, using the binomial system?

- A** genus
- B** group
- C** kingdom
- D** species

27 - (0970/22_Winter_2024_Q1) 

Which organisms carry out respiration, growth, movement and excretion?

- A** all animals and all plants
- B** animals only
- C** arthropods and flowering plants only
- D** plants only

28 - (0970/22_Winter_2024_Q2) 

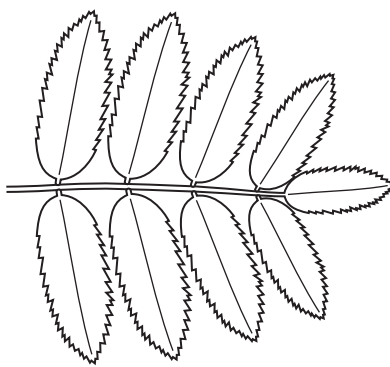
The chimpanzee belongs to the species *Pan troglodytes*.

What is the genus of this species?

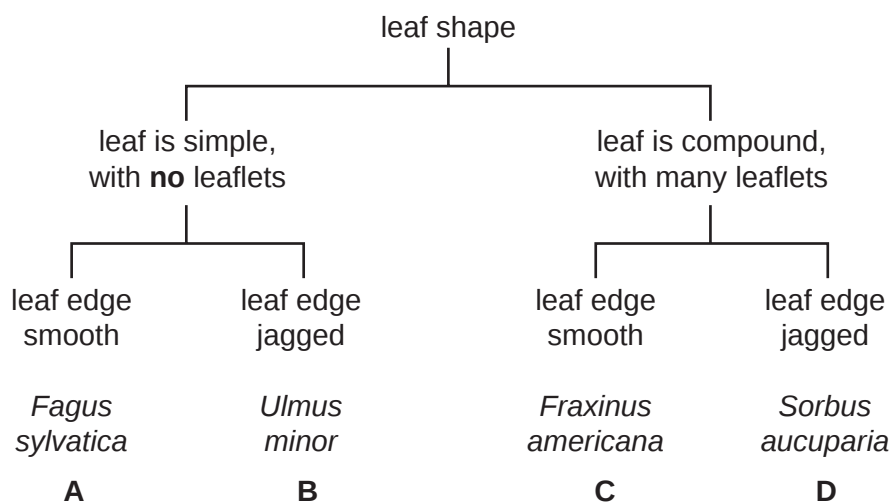
- A chimpanzee
- B *Pan*
- C *Pan troglodytes*
- D *troglodytes*

29 - (0970/22_Winter_2024_Q3) 

The diagram shows a tree leaf.



Use the key to identify the tree species to which the leaf belongs.



30 - (0970/21_Summer_2025_Q2) 

Which set of features is characteristic only of birds?

- A hair and wings
- B hard-shelled eggs and feathers
- C scales and soft-shelled eggs
- D wings and soft-shelled eggs

31 - (0970/22_Summer_2025_Q1) 

The photograph shows an animal called a margay.



Four processes that occur in the margay are listed.

- excretion
- growth
- digestion
- respiration

How many of the processes that occur in the margay are characteristics of all living organisms?

- A** 1 **B** 2 **C** 3 **D** 4

32 - (0970/22_Summer_2025_Q2) 

Part of the base sequence of DNA from four species was determined.

species 1 T C A G G A T T
species 2 T G A G C A A T
species 3 T G A G C A A G
species 4 T G A G G A T T

Which two species are the **least** closely related?

- A** 1 and 2 **B** 1 and 3 **C** 2 and 4 **D** 3 and 4

33 - (0970/22_Summer_2025_Q3) 

A single-celled organism has chloroplasts, a cell wall and a nucleus.

Which kingdom is this organism placed in?

- A fungus
- B plant
- C prokaryote
- D protocist

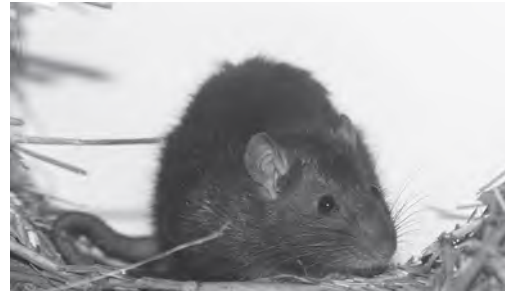
34 - (0970/22_Winter_2025_Q1) 

The photographs show two different rats.

Rattus norvegicus



Rattus rattus

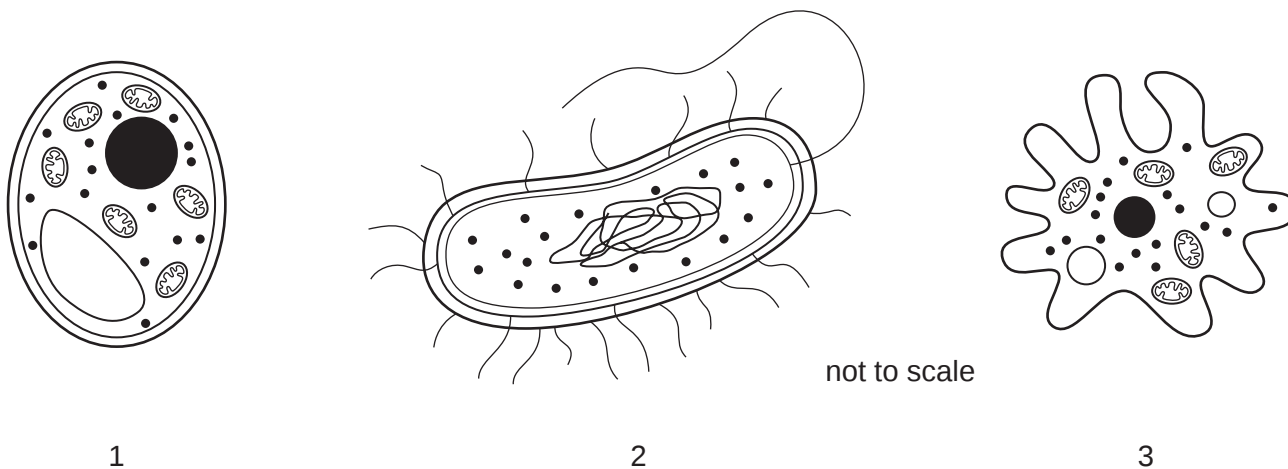


Which statement about the rats is correct?

- A The rats belong to the same genus.
- B The rats belong to the same species.
- C The rats can breed together to produce fertile offspring.
- D The rats do **not** share any of the same features.

35 - (0970/22_Winter_2025_Q2) 

The diagrams show cells of organisms from three different kingdoms.



Which row shows the kingdoms for the organism cells labelled 1, 2 and 3?

	cell 1	cell 2	cell 3
A	fungus	protocist	prokaryote
B	fungus	prokaryote	protocist
C	prokaryote	fungus	protocist
D	prokaryote	protocist	fungus

1 – D	21 – A	41 –	61 –	81 –
2 – A	22 – A	42 –	62 –	82 –
3 – D	23 – D	43 –	63 –	83 –
4 – A	24 – D	44 –	64 –	84 –
5 – A	25 – A	45 –	65 –	85 –
6 – B	26 – A	46 –	66 –	86 –
7 – D	27 – A	47 –	67 –	87 –
8 – D	28 – B	48 –	68 –	88 –
9 – D	29 – D	49 –	69 –	89 –
10 – B	30 – B	50 –	70 –	90 –
11 – D	31 – C	51 –	71 –	91 –
12 – B	32 – B	52 –	72 –	92 –
13 – C	33 – D	53 –	73 –	93 –
14 – D	34 – A	54 –	74 –	94 –
15 – A	35 – B	55 –	75 –	95 –
16 – C	36 –	56 –	76 –	96 –
17 – D	37 –	57 –	77 –	97 –
18 – A	38 –	58 –	78 –	98 –
19 – C	39 –	59 –	79 –	99 –
20 – C	40 –	60 –	80 –	100 –

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