<u>Characteristics and classification of living organisms – 2023 November IGCSE 0610</u>

1. Nov/2023 /Paper_ 0610/11/No.1

Some processes carried out by living organisms are listed.

- 1 egestion
- 2 excretion
- 3 reproduction
- 4 respiration

Which processes are carried out by all living organisms?

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

2. Nov/2023 /Paper_ 0610/11/No.2

lassif* The scientific name for humans is *Homo sapiens*.

What does Homo refer to?

- A mammal
- В genus
- С kingdom
- D species

3. Nov/2023 /Paper_ 0610/11/No.3

Which row is correct for arthropod classification?

	arthropod group	antennae present	number of body parts	number of legs
Α	arachnids	no	2	6
В	crustaceans	yes	3	8
С	insects	yes	3	6
D	myriapods	no	2	4

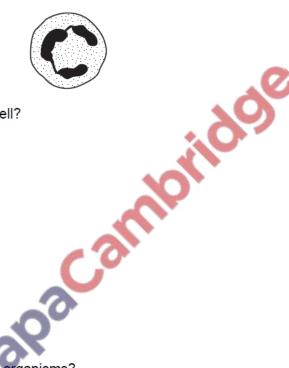
4. Nov/2023 /Paper_ 0610/11/No.4

In a mesophyll cell, where are chloroplasts found?

- A between the cell wall and the cell membrane
- B in the cytoplasm
- C in the nucleus
- D in the vacuole

5. Nov/2023 /Paper_ 0610/11/No.5

The cell shown in the diagram has been magnified 3000 times. The diagram is 21 mm wide.



What is the actual diameter of the cell?

- A 21 mm
- B 21mm 3000
- C 21 mm × 3000
- D $\frac{3000}{21 \text{mm}}$

6. Nov/2023 /Paper_ 0610/13/No.1

What are characteristics of all living organisms?

- A breathing, growth and movement
- B egestion, nutrition and reproduction
- C digestion, excretion and respiration
- **D** reproduction, respiration and sensitivity

7. Nov/2023 /Paper 0610/13/No.2

Using the binomial system, the name of a lion is Panthera leo.

Which statement is correct?

- A The lion belongs to the kingdom *Panthera*.
- **B** The lion belongs to the genus *Panthera*.
- C The lion belongs to the species Panthera.
- **D** The lion belongs to the genus *leo*.

8. Nov/2023 /Paper_ 0610/13/No.3

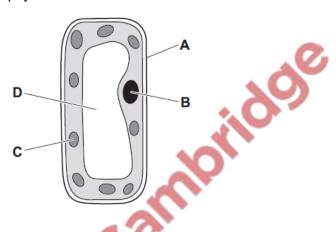
Which feature would place organisms into the crustacean group of arthropods?

- A eight legs
- six legs
- two pairs of antennae
- D usually have two pairs of wings

9. Nov/2023 /Paper_ 0610/13/No.4

The diagram shows the structure of a palisade cell from a leaf.

Which structure contains chlorophyll?



10. Nov/2023 /Paper_ 0610/13/No.5

A bacterial cell has a length of 40 mm when it is magnified by ×20 000.

What is the actual length of the bacterial cell?

- 0.002 mm 0.02 mm A 0.0002 mm **D** 0.2 mm

11. Nov/2023 /Paper_ 0610/21/No.1

Some processes carried out by living organisms are listed.

- egestion 1
- 2 excretion
- 3 reproduction
- 4 respiration

Which processes are carried out by all living organisms?

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

12. Nov/2023 /Paper_ 0610/21/No.2

The scientific name for humans is Homo sapiens.

What does Homo refer to?

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

13. Nov/2023 /Paper_ 0610/21/No.3

Some structures found in cells are listed.

- 1 cell membrane
- 2 cell wall
- 3 mitochondria
- 4 nucleus

Which structures are found in prokaryotic cells?

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

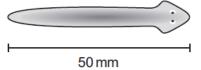
14. Nov/2023 /Paper_ 0610/21/No.4

In a mesophyll cell, where are chloroplasts found?

- A between the cell wall and the cell membrane
- B in the cytoplasm
- C in the nucleus
- D in the vacuole

15. Nov/2023 /Paper_ 0610/21/No.5

The diagram shows a flatworm. The flatworm has been magnified by ×100.



What is the actual size of the flatworm?

- **A** 0.5 μm
- **B** 5 μm
- **C** 50 μm
- **D** 500 μm

16. Nov/2023 /Paper_ 0610/22/No.1

Which processes are characteristics of all living organisms?

- digestion 1
- 2 respiration
- 3 excretion
- **A** 1, 2 and 3
- B 1 only
- C 2 and 3 only D 2 only

17. Nov/2023 /Paper_ 0610/22/No.2

Using the binomial system, the Arctic fox is called Vulpes lagopus.

Which row is correct?

	Vulpes	lagopus
Α	genus	kingdom
В	genus	species
С	species	genus
D	species	kingdom

18. Nov/2023 /Paper_ 0610/22/No.3

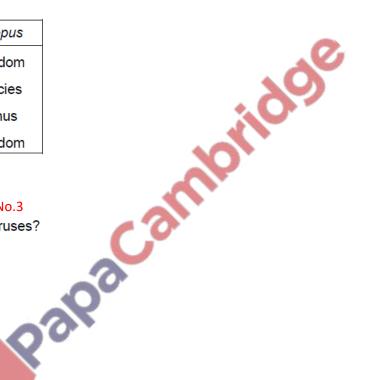
Which feature is found in viruses?

- A cell wall
- mitochondria
- C nucleus
- **D** protein coat

19. Nov/2023 /Paper 0610/22/No.4

Which features are possessed by all plant cells?

	a cell wall	chloroplasts	
Α	✓	✓	key
В	✓	X	✓= yes
С	X	✓	x = no
D	x	x	



20. Nov/2023 /Paper_ 0610/22/No.5

The length of a bacterium in a diagram is 50 mm. The magnification of the diagram is ×5000.

What is the actual length of the bacterium?

- **A** 1μm
- **B** 10 μm
- **C** 100 μm
- 1000 μm

21. Nov/2023 /Paper_ 0610/23/No.1

What are characteristics of all living organisms?

- A breathing, growth and movement
- egestion, nutrition and reproduction
- С digestion, excretion and respiration
- reproduction, respiration and sensitivity

22. Nov/2023 /Paper_ 0610/23/No.2

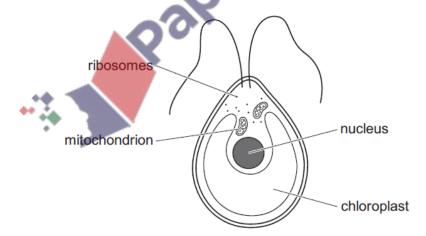
noridoe Using the binomial system, the name of a lion is Panthera leo.

Which statement is correct?

- A The lion belongs to the kingdom Panthera.
- В The lion belongs to the genus Panthera.
- The lion belongs to the species Panthera. С
- The lion belongs to the genus leo.

23. Nov/2023 /Paper 0610/23/No.3

The diagram shows an organism called Chlamydomonas.



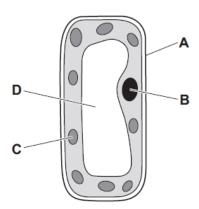
Which processes can Chlamydomonas carry out?

- A photosynthesis and respiration only
- **B** photosynthesis, respiration, and protein synthesis
- С protein synthesis and respiration only
- **D** respiration only

24. Nov/2023 /Paper_ 0610/23/No.4

The diagram shows the structure of a palisade cell from a leaf.

Which structure contains chlorophyll?



25. Nov/2023 /Paper_ 0610/23/No.5

A diagram of a white blood cell has a diameter of 76 mm. The magnification of the diagram is $\times 8000$.

What is the actual diameter of the white blood cell?

- **A** $0.095 \mu m$
- **B** 0.95 μm
- C 9.5 μm
- **D** 95.0 μn

26. Nov/2023 /Paper_ 0610/32/No.8(a)

- (a) All living organisms can be classified into groups by the features they share.
 - (i) Complete the sentences about classifying organisms.

One feature that is used to identify vertebrates is a

(ii) Draw a (circle) around the characteristic shared by all living organisms.

egestion nutrition sexual reproduction transpiration

[1]

[5]

27. Nov/2023 /Paper_ 0610/33/No.7(a_ b)

Fig. 7.1 is a photograph of a lionfish (Pterois volitans).



Fig. 7.1

(a)	State the genus of the lionfish.		11
(b)	Lionfish are classified as fish.		-1
	Table 7.1 shows features of organisms.	0	

Place ticks (✓) in the boxes to show the correct features of birds, fish and insects.

Table 7.1

features	birds	fish	insects
compound eyes			
feathers			
internal skeleton			

[3]