

SCIENCE COORDINATE 9-1

0973 | Paper 1

2020 — 2025

Chapter 1- BIOLOGY

Page 1

CH 1 - B1. Characteristics Of Living Organisms

CH2 - B2 - Organisation of the organism

CH3 - B3 - Movement in and out of cells

CH4 - B4 - Biological molecules

CH5 - B5 - Enzymes

CH6 - B6 - Plant nutrition

CH7 - B7 - Human nutrition

CH8 - B8 - Transport in plants and animals

CH9 - B9 - Diseases and immunity

CH10 - B10 - Gas exchange and respiration

CH11 - B11 - Excretion in humans

CH12 - B12 - Coordination and response

CH13 - B13 - Reproduction

CH14 - B14 - Inheritance

CH15 - B15 - Variation and selection

CH16 - B16 - Organisms and their environment

CH17 - B17 - Biotechnology and genetic engineering

CH18 - B18 - Human influences on ecosystems

Chapter 2 - CHEMISTRY

Page 106

CH19 - C1 - States of matter

CH20 - C2 - Atoms, elements, and compounds

CH21 - C3 - Stoichiometry

CH22 - C4 - Electricity and chemistry

CH23 - C5 - Chemical energetics

CH24 - C6 - Chemical reactions

CH25 - C7 - Acids, bases, and salts

CH26 - C8 - The Periodic Table

CH27 - C9 - Metals

CH28 - C10 - Air and water

CH29 - C11 - Sulfur

CH30 - C12 - Carbonates

CH31 - C13 - Organic chemistry

Chapter 3 - PHYSICS

Page 202

CH32 - P1 - Motion

CH33 - P2 - Work, energy, and power

CH34 - P3 - Thermal physics

CH35 - P4 - Properties of waves, including light and sound

CH36 - P5 - Electricity and magnetism

CH37 - P6 - Electric circuits

CH38 - P7 - Electromagnetic effects

CH39 - P8 - Radioactivity and particles



1 - (0973/11_Summer_2020_Q1)

Which characteristic of living organisms is described as the chemical reactions in cells that break down nutrient molecules and release energy?

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

2 - (0973/12_Summer_2020_Q1)

Which characteristic of living things is described as the removal of toxic materials and substances in excess of requirements?

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

3 - (0973/11_Winter_2020_Q1)

Lions are carnivores that chase, catch and eat zebra.

While still chasing zebra, which characteristic of living organisms is **not** exhibited by the lion?

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

4 - (0973/11_Winter_2021_Q1)

All living organisms can break down nutrient molecules to release energy.

What is this process?

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

5 - (0973/11_Summer_2022_Q1)

Which statement about one of the characteristics of living organisms is correct?

- A** Excretion is the removal of excess substances and toxic materials.
- B** Movement is the ability to detect and respond to changes in the environment.
- C** Nutrition is the maintenance of a constant internal environment.
- D** Respiration is the manufacture of nutrients from raw materials.

6 - (0973/12_Summer_2022_Q1)

Which statement about the characteristics of living organisms is correct?

- A** Excretion is the chemical reactions in cells that release energy.
- B** Nutrition is the taking in of materials for energy, growth and development.
- C** Respiration is the process that makes more of the same kind.
- D** Sensitivity is the removal of toxic materials and excess substances.

7 - (0973/11_Winter_2022_Q1)

Which characteristic of living organisms involves chemical reactions that break down nutrient molecules to release energy?

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

8 - (0973/12_Summer_2023_Q1)

Which is **not** a characteristic of all living organisms?

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

9 - (0973/11_Winter_2023_Q1)

Which characteristic of a living organism releases energy for growth?

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

10 - (0973/11_Summer_2024_Q1)

What is a characteristic of all living organisms?

- A** excretion
- B** digestion
- C** photosynthesis
- D** sexual reproduction

11 - (0973/11_Winter_2024_Q1)

Which characteristic of living things is described as the removal of toxic materials and substances in excess of requirements?

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

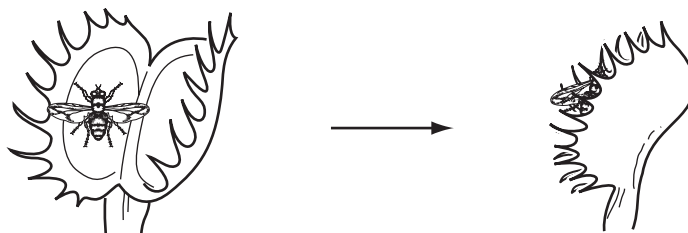
12 - (0973/11_Summer_2025_Q1)

Which characteristic of living organisms involves a permanent increase in size?

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

13 - (0973/12_Summer_2025_Q1)

The Venus fly trap is a plant that catches insects.



Which characteristic of living organisms is shown in the diagram?

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

14 - (0973/11_Winter_2025_Q1)

Which characteristic of living organisms is described as the chemical reactions in cells that break down nutrient molecules and release energy?

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

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

1 - (0973/12_Summer_2020_Q2)

What is **not** in contact with cytoplasm?

- A cellulose cell wall
- B cell membrane
- C chloroplast
- D nucleus

2 - (0973/11_Winter_2020_Q2)

Which structure in a plant cell makes organic nutrients?

- A cell membrane
- B cell wall
- C chloroplast
- D nucleus

3 - (0973/11_Winter_2020_Q8)

Which process uses energy?

- A cell division
- B diffusion
- C osmosis
- D respiration

4 - (0973/11_Summer_2021_Q2)

The photograph shows a bumble bee at a magnification of $\times 6$. The line shows the length of the bumble bee.



What is the actual length of the bumble bee?

- A** 0.05 mm **B** 20 mm **C** 126 mm **D** 720 mm

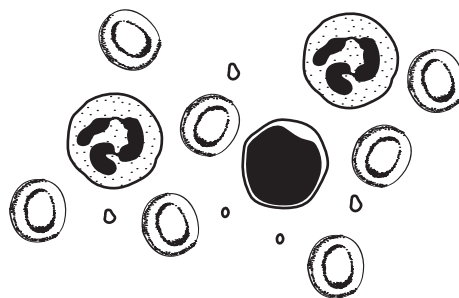
5 - (0973/11_Winter_2021_Q2)

Which structure is only found in plant cells?

- A** cell membrane
B cytoplasm
C nucleus
D vacuole

6 - (0973/11_Winter_2021_Q7)

The diagram shows some blood viewed under a light microscope.



How many red blood cells are shown?

- A** 1 **B** 3 **C** 5 **D** 7

7 - (0973/11_Summer_2022_Q2)

Which statement about animal cells and plant cells is correct?

- A** Only animal cells possess cell membranes.
- B** Only animal cells possess cell walls.
- C** Only plant cells possess cell membranes.
- D** Only plant cells possess cell walls.

8 - (0973/12_Summer_2022_Q2)

Which statement about cells is correct?

- A** Cell membranes are found only in animal cells.
- B** Cell membranes are found only in plant cells.
- C** Cell walls are found only in animal cells.
- D** Cell walls are found only in plant cells.

9 - (0973/11_Winter_2022_Q2)

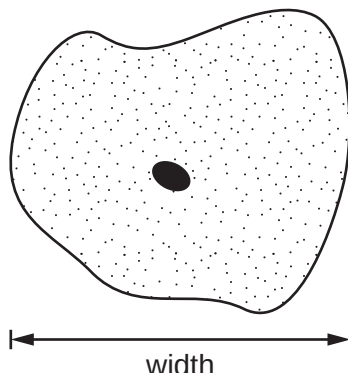
What is the formula for magnification?

- A** $\frac{\text{actual size}}{\text{image size}}$
- B** $\frac{\text{actual size}}{\text{image size}} \times 100$
- C** $\frac{\text{image size}}{\text{actual size}}$
- D** $\frac{\text{image size}}{\text{actual size}}$ mm

10 - (0973/11_Summer_2023_Q2)

The diagram shows a cell with a magnification of $\times 1000$.

The width of the image is 45 mm.



What is the actual width of the cell?

- A** 45 mm **B** 4.5 mm **C** 0.45 mm **D** 0.045 mm

11 - (0973/12_Summer_2023_Q2)

Which statement about the structures found in animal and plant cells is correct?

- A** Both have cell walls.
B Only plant cells have a cell membrane.
C Both have cytoplasm.
D Only animal cells have a nucleus.

12 - (0973/11_Winter_2023_Q2)

A student draws a diagram of a chicken's egg and includes the magnification, m , of the drawing.

The student writes $m = \times 2$.

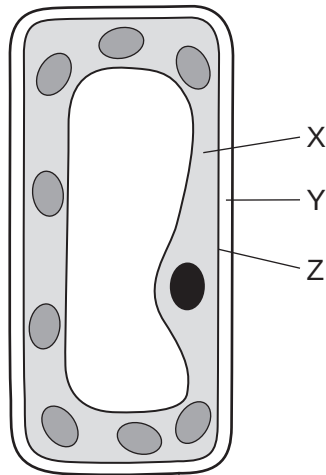
The image length on the diagram is 140 mm.

What is the length of the actual chicken's egg?

- A** 35 mm **B** 70 mm **C** 140 mm **D** 280 mm

13 - (0973/11_Summer_2024_Q2)

The diagram shows a typical plant cell.



Which row is correct?

	cell membrane	cell wall	cytoplasm
A	X	Y	Z
B	X	Z	Y
C	Z	X	Y
D	Z	Y	X

14 - (0973/11_Summer_2025_Q2)

The photograph shows a caterpillar.

The length of line PQ is 90 mm.

The actual length of the caterpillar is 30 mm.

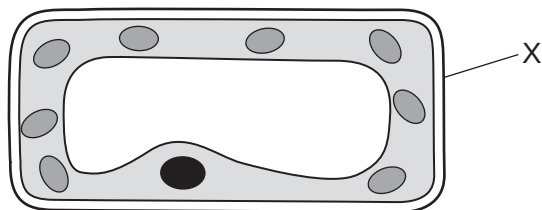


What is the magnification of the photograph?

- A** $\times 0.33$ **B** $\times 3.0$ **C** $\times 27$ **D** $\times 2700$

15 - (0973/12_Summer_2025_Q2)

The diagram shows a plant cell.

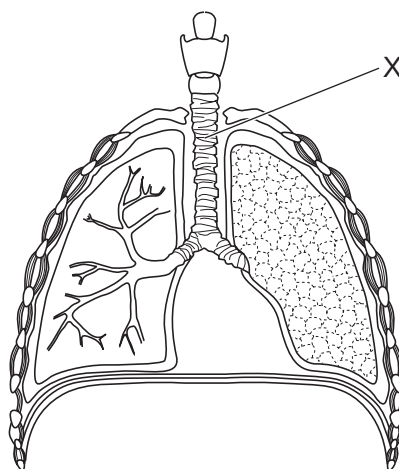


Which row names X and describes its function?

	name	function
A	cell membrane	controls which substances enter or leave the cell
B	cell membrane	maintains cell shape
C	cell wall	controls which substances enter or leave the cell
D	cell wall	maintains cell shape

16 - (0973/11_Winter_2025_Q2)

The diagram shows part of the breathing system in humans.



Which cell type makes up part of structure X?

- A** ciliated
- B** gamete
- C** palisade mesophyll
- D** phloem

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15 – D	35 –	55 –	75 –	95 –
16 – A	36 –	56 –	76 –	96 –
17 –	37 –	57 –	77 –	97 –
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