

Smart Edu Hub / Smart Exam Resources

9700 / CAIE A level Biology / Paper-1/ Multiple Choice
Questions

1.2.10-Lysosomes-Set-1-qp

Total Questions: 7

Questions

Question 1:

The following are all features of eukaryotic cells.

- 1 chloroplast
- 2 Golgi apparatus
- 3 lysosome
- 4 mitochondrion
- 5 nucleus

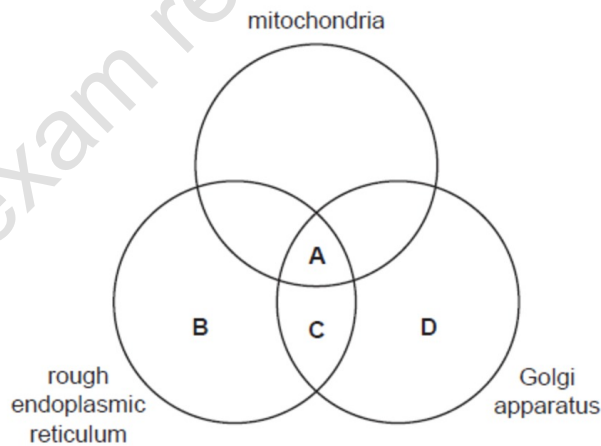
Which of these has a single membrane?

- A** 1 and 2
- B** 2 and 3
- C** 3 and 4
- D** 4 and 5

Questions (Continued)

Question 2:

Which organelles are required for the formation of the hydrolytic enzymes found in lysosomes?

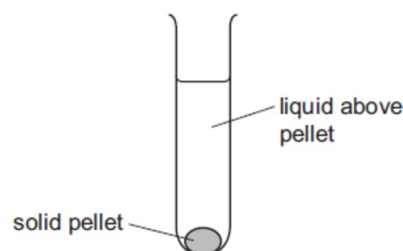


Question 3:

A scientist carried out an experiment to separate the organelles in an animal cell by mass.

The scientist mixed the cells with a buffer solution which had the same water potential as the cells. He then broke the cells open with a blender to release the organelles.

The extracted mixture was filtered and then spun in a centrifuge at a speed to separate the heaviest organelle. This sank to the bottom, forming a solid pellet, 1.



The liquid above pellet 1 was poured into a clean centrifuge tube and spun in the centrifuge at a higher speed to separate the next heaviest organelle. This organelle sank to the bottom, to form a solid pellet, 2.

He repeated this procedure twice more to obtain pellet 3 and pellet 4, each containing a single organelle.

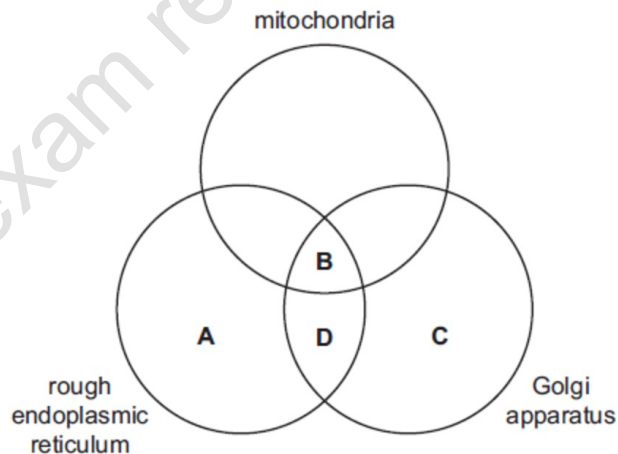
What is the function of the organelle extracted in pellet 3?

- A digestion of old organelles
- B production of ATP
- C synthesis of mRNA
- D synthesis of protein

Questions (Continued)

Question 4:

Which organelles are required for the formation of lysosomes containing hydrolytic enzymes?



Question 5:

Which organelles are enclosed in a single phospholipid bilayer and contain hydrolytic enzymes?

- A endocytotic vesicles
- B Golgi body
- C lysosomes
- D mitochondria

Question 6:

Lysosomes have a variety of different shapes and sizes, making them difficult to identify.

What describes a lysosome?

- A a vesicle containing enzymes, enclosed by a double membrane, that is budded off the endoplasmic reticulum
- B a vesicle containing hydrolytic enzymes and surrounded by a single membrane, found only in phagocytes
- C a vesicle enclosed by a single membrane, containing several different hydrolytic enzymes that may act inside or outside the cell
- D a vesicle surrounded by a double membrane, containing enzymes which can hydrolyse damaged organelles in a cell

Questions (Continued)

Question 7:

Tay-Sachs disease occurs when cells are unable to produce an enzyme, leading to a build up of certain lipids in cells.

Which cell structure would **not** function correctly, resulting in the disease?

- A Golgi apparatus
- B lysosome
- C mitochondrion
- D smooth endoplasmic reticulum