OCR AS/A-level Year 1 Biology A exam practice answers

**7 Cell division, cell diversity and cellular organisation**

**1** The correct answer is option (c). [1]

**2 (a)** Differentiation refers to the process in which a cell becomes specialised in order to perform a specific task. [2]

**(b)** More ribosomes/rough endoplasmic reticulum, more Golgi apparatus and more secretory vesicles. [3]

**(c)** Stem cells from another person/the same person are placed in the pancreas. These will develop into new beta cells. [2]

**(d)** They are able to differentiate into a wider range of cells, so are more likely to work. [2]

**3 (a)** A tissue is a group of cells of the same or similar types, working together.

An organ is a group of tissues working together to perform a task or function. [4]

**(b)** Xylem consists of cells joined end to end to form vessels. These vessels transport water. They are hollow with no organelles or cytoplasm.

Phloem consists of sieve tube elements and companion cells. The sieve tube elements are joined end to end to form a sieve tube, which transports assimilates. The companion cells have dense cytoplasm and actively load the sieve tube elements. [5]