OCR GCSE 21ST CENTURY BIOLOGY B · J257

BIOLOGY



EXAM QUESTION PACK

B4.5 SHOULD WE USE STEM CELLS TO TREAT DAMAGE AND DISEASE? (FOUNDATION)

SCORE	PERCENTAGE
/6	%

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1(a). When a baby is born, stem cells are found in the fluid (amniotic fluid) surrounding it.

Another type of stem cell is found in the embryo itself.

These are called embryonic stem cells.

If a baby is born before it is due, its intestines may not be fully developed.

In the future, it may be possible to treat this problem using stem cells.

Look at the statements **A** to **F**.

A Embryonic stem cells can develop into all types of cells.
B Removal of amniotic fluid is not a difficult procedure.
C Stem cells from the amniotic fluid will not be rejected by the baby.
D It is difficult to store amniotic fluid from every birth just in case it is needed.
E Using stem cells to treat underdeveloped intestines has only been done on rats.
F Removing embryonic stem cells may result in the death of the embryo.

Which **one** of the statements, **A** to **F**, best suggests why it may be …

… more ethical to use amniotic stem cells instead of embryonic stem cells?

_____ [1]

(b). … easier to obtain stem cells from amniotic fluid than from embryos?

_____ [1]

(c). … more successful to use the baby's own stem cells than stem cells from a donor?

_____ [1]

(d). … that embryonic stem cells still have the best potential to treat many different conditions?

_____ [1]

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2. The use of **embryonic** stem cells for research and treatment of patients is subject to Government regulation.

Suggest **two** ethical issues to be considered when carrying out this work.

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[2]

END OF QUESTION PAPER

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