

**A Level Biology B**

**H422/01** Fundamentals of biology

**Question Set 7**

1. (a) (i) Dialysis is a common treatment for kidney failure.

Fig. 37.1 shows a haemodialysis machine at the beginning of a dialysis session.

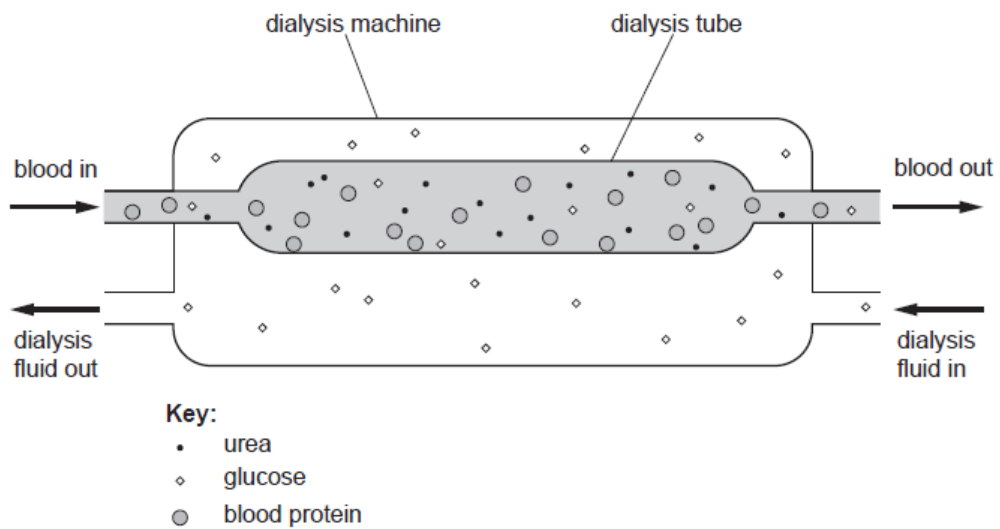


Fig. 37.1

With reference to Fig. 37.1, describe how the composition of the blood changes over time.

[2]

- (a) (ii) Explain the changes described in (i)

[3]

- (b) Peritoneal dialysis is another form of dialysis that is used to treat kidney failure.

State **one** advantage and **one** disadvantage of peritoneal dialysis compared with haemodialysis.

[2]

- (c) (i) Loss of blood in dialysis sessions can lead to anaemia if left untreated. In cases of severe anaemia, patients may need a blood transfusion.

Before a blood transfusion is given, the patient's blood group must be tested.

The patient's blood is mixed with anti-A antibodies and anti-B antibodies. The result of the test is visible by eye.

An example result is shown in Fig. 37.2.

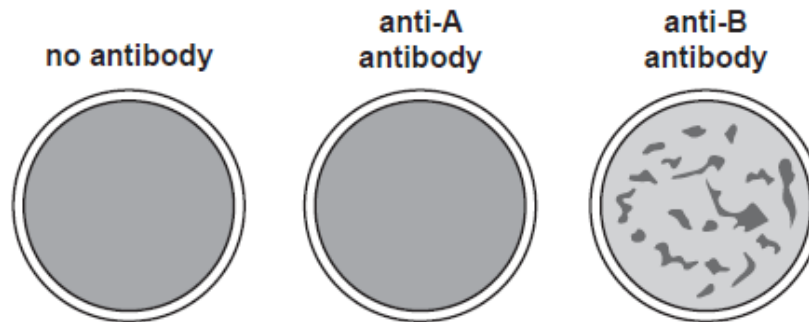


Fig. 37.2

State which type of stored blood product would be required for a blood transfusion to treat severe anaemia.

[1]

- (c) (ii) Identify the blood group of the patient tested in Fig. 37.2 **and** state which donor blood group(s) can be safely transfused to this patient.

[2]

- (d) A patient with kidney failure requires treatment in the form of either haemodialysis or a kidney transplant.

Some medical notes about the patient are shown in Fig. 37.3.

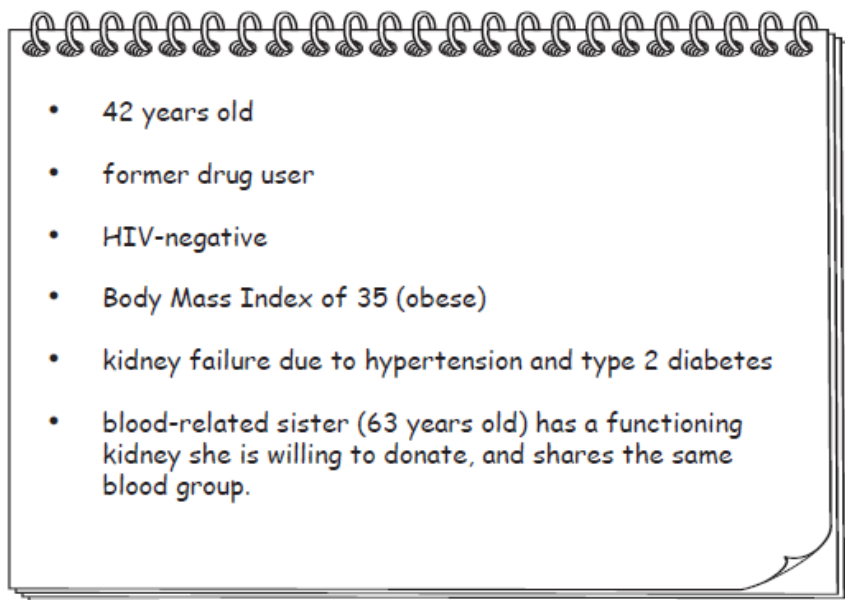


Fig. 37.3

Using the information in Fig. 37.3, discuss the suitability of each treatment option for this patient.

[3]

**Total Marks for Question Set 7: 13**

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