GCSE Biology B (Twenty First Century Science)

J257/01 Breadth in Biology (Foundation)

Question Set 30

Multiple Choice Questions

1 **Fig. 10.1** shows three different circulatory systems.

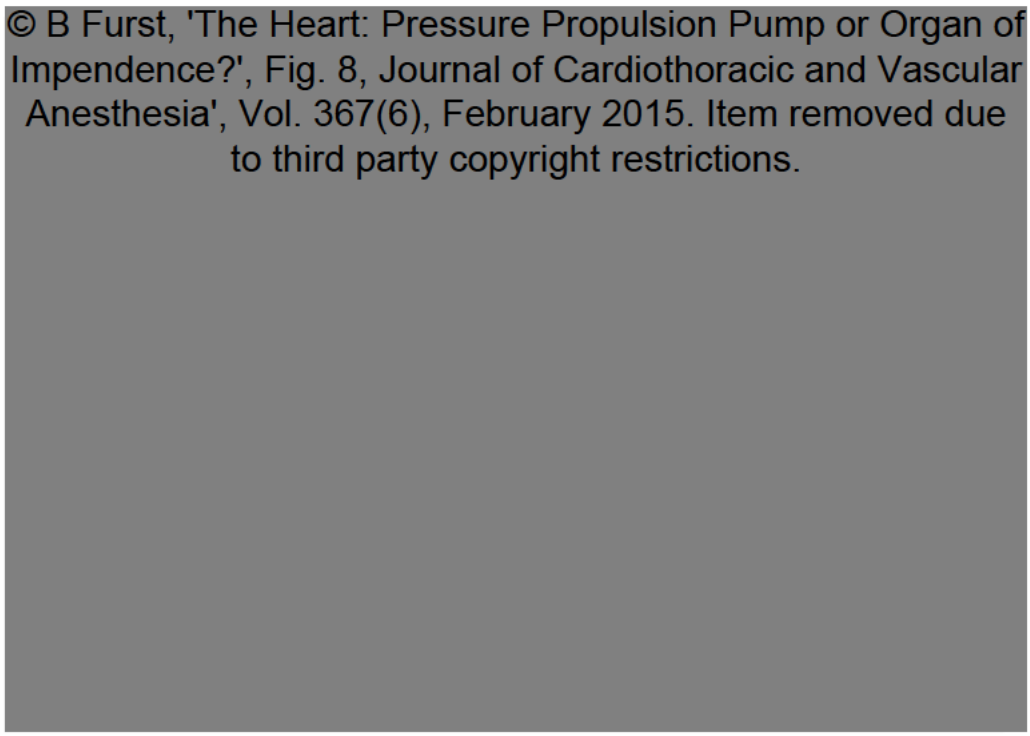

Fig. 10.1

(a) Which diagram best represents the **human** circulatory system?

Tick (✓) **one** box.

A ☐

B ☐

C ☐

Give a reason for your answer.

[2]

(b) The human heart has many features that means it is adapted to its function.

For each statement decide which structure's function is described.

Tick (✓) **one** box in each row.

	Structure		
Function	**Heart valves**	**Cardiac muscle**	**Heart chambers**
Contracts to force blood from atria to ventricles			
Contracts to force blood out of the ventricles through vessels			
Prevents backflow of blood during contractions			
Blood temporarily stored in these small spaces to allow blood to be pumped at a high pressure			

[4]

(c) Some babies are born with a heart defect known as a 'hole in the heart'. This is where thereis a hole between two of the heart's chambers.

Fig. 10.2 shows a normal heart. **Fig. 10.3** shows a heart of a baby with a 'hole in the heart'.

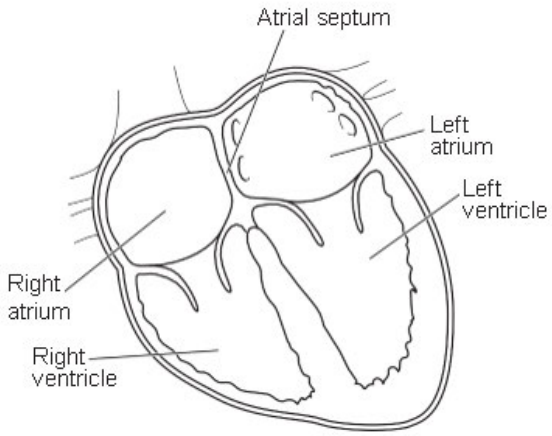

Fig. 10.2

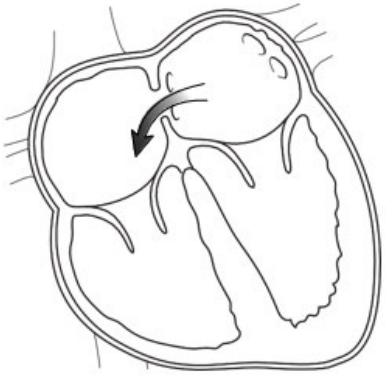

Fig. 10.3

Suggest how the defect in **Fig. 10.3** could affect the baby.

[1]

(d) The human circulatory system has three types of blood vessel.

Draw lines to connect the **blood vessel** to the correct description of its **structure** and the explanation of how its structure allows it to carry out its **function**.

Blood vessel	Structure	Function
Arteries	Very thin walls, one cell thick	To withstand the high blood pressure of blood leaving the heart
Capillaries	Very thick walls containing elastic tissue and muscle	They can be squashed to move blood along; backflow of blood is prevented
Veins	Thin walls containing elastic tissue, also contains valves	Allows diffusion of substances into and out of the vessel quickly and easily

[3]

Total Marks for Question Set 30: 10