

(c) Fig. 5.2 shows how the rate of reaction of a digestive enzyme changes with pH.

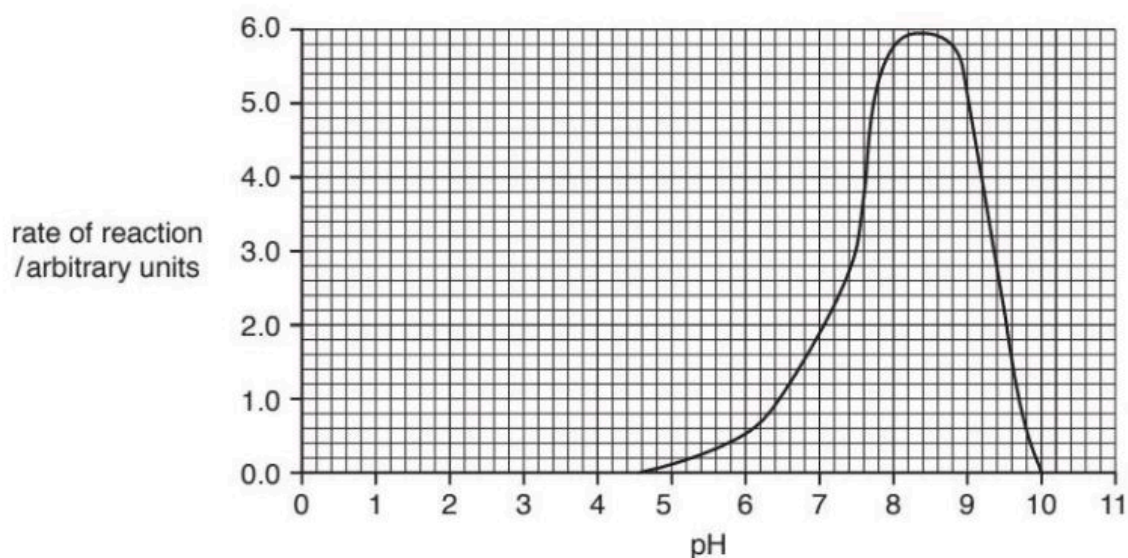


Fig. 5.2

(i) Describe the effect of the increase in pH on the rate of reaction shown in Fig. 5.2.

Rate of reaction increases and decreases

Optimum, at pH 8.1 to 8.7

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[2]

(ii) State **one** factor other than pH that will affect enzyme activity.

Temperature

[1]

[Total: 10]

Complete Table 6.1 by inserting the genotypes of the numbered individuals in Fig. 6.3.

Table 6.1

individual	genotype
1	Tt
3	Tt
4	Tt

[3]

- (ii) Individual 2 in Fig. 6.3 is heterozygous for tongue rolling. He marries a woman who cannot roll her tongue.

State all of the possible genotypes of their children and predict the ratio of phenotypes for their children.

possible offspring genotypes:genotypes: Tt and tt.....

ratio of phenotypes:1 : 1.....

[2]

[Total: 8]

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(d) Fig. 8.2 is a diagram of the circulatory system. The blood vessels are labelled with letters.

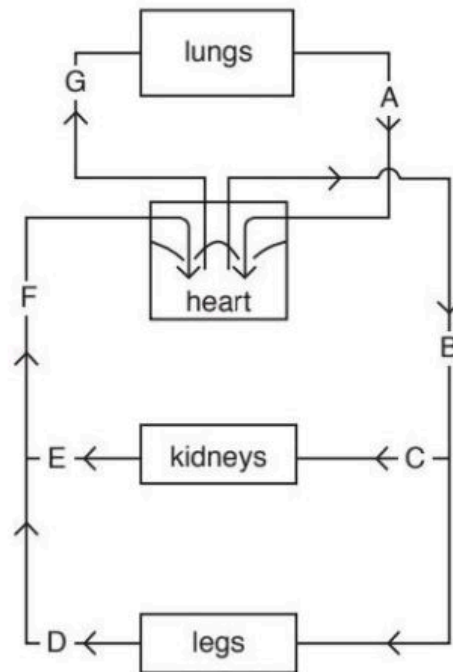


Fig 8.2

Complete Table 8.1 by identifying the letter of the named blood vessels in Fig. 8.2.

Table 8.1

name of blood vessel	letter
aorta	B
pulmonary artery	G
renal vein	E
vena cava	F / D

[4]