

GCSE Biology A (Gateway)

J247/03 B1-B3 and B7 Higher (Higher Tier)

Question Set 4

1

A boy picks up a hot plate and quickly drops it.

This is a reflex action.

- (a) Describe the sequence of events that happens in his nervous system during this reflex action.

[5]

- (b) The table shows information about different types of neurones.

Type of neurone	Is myelin sheath present?	Diameter ($\times 10^{-3}$ mm)	Speed of impulse (m/s)
A	yes	13–20	80–120
B	yes	6–12	33–75
C	yes	5–8	4–24
D	yes	1–5	3–15
E	no	0.2–1.5	0.5–20

- (i) Discuss the effect of diameter on the speed of impulse.

[2]

- (ii) Explain how strong a conclusion, if any, you can make from the data about the effect of the myelin sheath on the speed of impulse.

[2]

Total Marks for Question Set 4: 9

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