Questions

Q1.

The hormone adrenaline is unable to pass through cell membranes.

When liver and muscle cells are exposed to adrenaline, the enzyme glycogen phosphorylase breaks down glycogen in these cells.

Describe how adrenaline causes liver cells to increase the concentration of glucose in the blood.

(3)

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(Total for question = 3 marks)

Mark Scheme

Q1.

Question Number	Answer	Additional Guidance	Mark
	A description that makes reference to three of the following: • adrenaline binds to receptors on {membrane / cell (surface)} (1) • {second messengers / cAMP} involved / (1) • {activates / binds to / triggers to} glycogen phosphorylase / protein kinase (1) • {diffusion} of glucose (out of cells) (1)	**DO NOT ACCEPT** in cells **ACCEPT** adenylate cyclase activated **ACCEPT** glycogen phosphorylase is phosphorylated	3