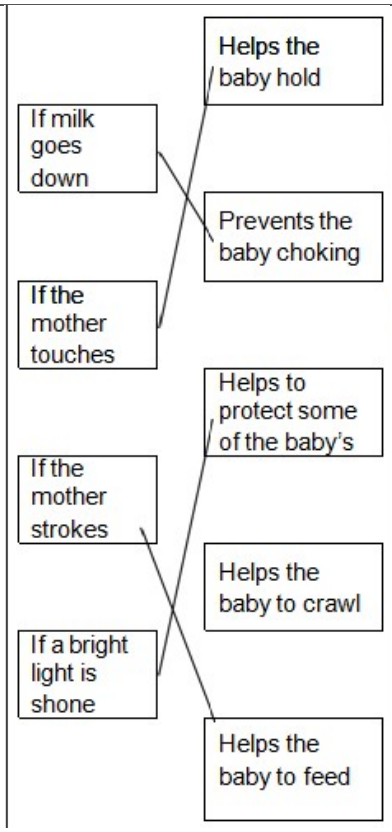
Nervous System 2 MS

QUESTION 1

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)		all four correct = 4 marks three correct = 3 marks two correct = 2 marks one correct = 1 mark extra line from a statement cancels the mark	4
b)	glands muscles	1 mark for each correct tick each extra box ticked cancels 1 mark	1 1
Total marks			6

QUESTION 2

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	a stimulus		1
b)i)	A		1
b)ii)	C D	either order	1 1
b)iii)	E		1
c)	brain	allow spinal cord / CNS / central nervous system do not allow spine	1

Total marks			6

QUESTION 3

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	A cytoplasm B (cell) membrane	in this order only do not accept (cell) wall	1 1
b)i)	synapse		1
b)ii)	(as) chemical	accept neurotransmitter or named ignore references to how the chemical is passed do not accept electrical	1
c)	(from light-sensitive cell to connecting neurone) to sensory neurone (sensory neurone) to brain / CNS (brain / CNS) to motor neurone (motor neurone) to (eyelid) muscle	ignore references to synapses accept 'nerve cell' for neuron(e) throughout penalise 'nerve' for neurone once only allow (sensory neurone) to relay neurone / spinal cord allow (relay neurone / spinal cord) to motor neurone ignore effector	1 `1 1 1
Total marks			8

QUESTION 4

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	sensory neurone		1
b)i)	synapse		1
b)ii)	a chemical		1
c)	(What happens to the muscle) any one from: •contraction / contracts •gets shorter (How this helps the body) idea of protection for body (from damage / pain)	mark both parts of the question together ignore relaxation / relaxes / tenses eg moves finger / arm away (from pin / stimulus / source of pain)	1 1
Total marks			5

QUESTION 5

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	motor	allow efferent / postsynaptic allow another relay (neurone)	1
b)	release of chemical (from relay neurone) chemical crosses gap / junction / synapse chemical attaches to X / motor / next neurone (causing impulse)	allow ecf for 'motor' neurone from (a) allow release of neurotransmitter / named example allow diffuses across allow chemical moves to X	1 1 1
c)	(curare) decrease / no contraction (strychnine) increase / more contraction	accept (muscle) relaxes if no other mark awarded allow 1 mark for (curare) decrease / no response and (strychnine) increase / more response	1 1
Total marks			6

QUESTION 6

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	detect changes in surroundings or detect stimuli convert information to impulse	allow any named stimulus for skin allow send impulse to sensory neurones / brain	1 1
b)i)	<table><tr><th>muscle</th><th>contract(ion)</th></tr><tr><td>gland</td><td>release / secrete / produce chemical / hormone / enzyme</td></tr></table>	1 mark for each effector 1 mark for each response response must match type of effector (if given) ignore examples ignore relax(ation) / movement for contraction do not allow expansion for muscles	4
b)ii)	any one from: • (maintain temperature at which) enzymes work best • so chemical reactions are fast(est) • prevent damage to cells / enzymes	allow prevent enzymes being denatured (by temperature being too high)	1
Total marks			7

QUESTION 7

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	stimulus		1
a)ii)	cytoplasm		1
b)i)	ear(s) eye(s) skin	in this order only accept retina ignore extra detail	1 1 1
b)ii)	A muscle		1
Total marks			6