


Question	Answer	Marks	AO Element	Notes	Guidance
1	reflex (action) ;	1			
2	<p><i>any four from:</i></p> <p>correct ref. to neurotransmitter ;</p> <p>released from vesicles (into synapse / synaptic gap) ;</p> <p>ref. to movement (of neurotransmitter) by diffusion ;</p> <p>(neurotransmitter) binds with receptor (molecules on neurone on the other side of synapse) ;</p> <p>causing impulse to continue / AW ;</p>	4			
3	arrow drawn from right to left, pointing left ;	1			
4	<p><i>any one from:</i></p> <p>automatic / involuntary ;</p> <p>receptors / neurones / nerve, still function ;</p>	1			

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5	<p><i>any three from:</i>  stimulus / light (detected by)  retina / rod / cone / receptor ;</p> <p><i>reference to</i> (electrical) <u>impulse</u>  / <u>electrical signal</u> ;</p> <p>sensory neurone → relay /  connector, neurone → motor  neurone ;</p> <p><i>reference to</i> synapses between  neurones ;</p> <p>effector / (circular) muscles (in  iris), contract / <u>respond</u> ;</p>	3			
6	<p>chemical substance produced  by a (endocrine) gland ;</p> <p>carried by the blood ;</p> <p>alters the activity of specific  target organs / AW ;</p>	3			
7	<p>one mark per box but organ  system must match organ ;;;</p> 	4			

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8	homeostasis ;	1			
9	<p><i>any three from:</i></p> <p>(blood) glucose 1 concentration, is low / decreases ;</p> <p>2 (causing) glucagon, secretion / production ;</p> <p>3 glucagon, released from / produced in, pancreas ;</p> <p>(glucagon stimulates) 4 breakdown of glycogen / release of glucose (into the blood) ;</p> <p>5 from liver / muscle ;</p> <p>(blood) glucose 6 concentration, goes (back) up / returns to normal / stays within limits ;</p>	3			

Question	Answer	Marks	AO Element	Notes	Guidance
10	<p><i>any two from;</i>  <u>deamination</u> / removal of nitrogen containing part (of amino acids) ;                      to form urea ;                      (part of) amino acid converted to ammonia ;                      ammonia converted to urea ;</p>	2			
11	<p><i>any two from:</i>                      provides blood at high pressure ;                      provides a large surface area ;                      (ultra)filtration ;  <i>ref. to</i> small or soluble molecules / water / glucose / urea / salts, (are filtered) out ;  <i>ref. to</i> (named) large OR insoluble (molecules) / blood cells, stay in the glomerulus ;                      AVP ;</p>	2			
[Total: 25]					