

Question	Answers	Extra information	Mark	AO / Specification reference
01.1	A – pituitary gland B – thyroid gland C – adrenal gland D – pancreas E – ovary		1 1 1 1 1	AO2 4.5.3.1
01.2	adrenal gland		1	AO1 4.5.3.1
01.3	thyroxine		1	AO1 4.5.3.1
01.4	(pituitary gland) secretes (several) hormones into the blood (in response to a stimulus) these stimulate other glands these glands release hormones which have the desired effect		3	AO1 4.5.3.1
02.1	contraceptive pill progesterone implant		1 1	AO1 4.5.3.5
02.2	spermicidal agents – kill sperm surgical sterilisation – prevents sperm entering the semen condom – physical barrier which prevents sperm meeting an egg oral contraceptive – prevents eggs being released from the ovary	three marks for all 4 boxes matched two marks for 2 or 3 boxes correctly matched one mark for 1 correct box	3	AO1 4.5.3.5
02.3	prevents STIs / spread of disease		1	AO1 4.5.3.5

03.1	any non-hormonal contraceptive, e.g.: <ul style="list-style-type: none"> • condom • copper IUD diaphragm		1	AO1
03.2	ovary		1	AO1
03.3	oestrogen inhibits FSH this stops the egg maturing/FSH is needed for eggs to mature		1 1	
04.1	respiration		1 1	AO1 4.5.3.2
04.2	clockwise, from top box: insulin glycogen fall rise		1 1 1 1	AO1 4.5.3.2
04.3	diabetes	allow Type 1 or Type 2 diabetes	1	AO1 4.5.3.2
05.1	gland – produces and secretes hormones target organ – organ that a particular hormone acts on hormone – chemical released by a gland	two marks for 3 boxes matched one mark for 1 or 2 correct matched boxes	2	AO1 4.5.3.1
05.2	blood		1	AO1 4.5.3.1
05.3	slower longer		1 1	AO1 4.5.3.1
06.1	insulin		1	AO2 4.5.3.2

06.2	any four from: <ul style="list-style-type: none"> chocolate bar contains sugar absorbed into blood stream blood glucose / sucrose levels rise insulin secreted to cause glucose to be converted to glycogen stored in liver reducing blood glucose levels / sugar levels to normal		4	AO2 4.5.3.2																				
06.3	a constant supply of glucose is needed for respiration to provide energy for all body process / tissue function / otherwise could pass out / die high levels can damage blood vessels / other named condition		3	AO1 4.5.3.2																				
07.1	<table border="1"> <thead> <tr> <th>Characteristic</th> <th>Male</th> <th>Female</th> <th>Both</th> </tr> </thead> <tbody> <tr> <td>fat deposited on hips</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>growth of underarm hair</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>sperm production starts</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>growth spurt</td> <td></td> <td></td> <td>✓</td> </tr> </tbody> </table>	Characteristic	Male	Female	Both	fat deposited on hips		✓		growth of underarm hair			✓	sperm production starts	✓			growth spurt			✓	one mark for each correct row	4	AO1 4.5.3.4
Characteristic	Male	Female	Both																					
fat deposited on hips		✓																						
growth of underarm hair			✓																					
sperm production starts	✓																							
growth spurt			✓																					
07.2	testosterone		1	AO1 4.5.3.4																				
07.3	testes		1	AO1 4.5.3.4																				
08.1	stimulus		1	AO1 4.5.1 4.5.2.1 4.5.3.1																				
08.2	adrenaline		1	AO1 4.5.3.7																				

08.3	similarities <ul style="list-style-type: none"> • both send signals / transmit information around the body • both cause a change in another part of the body • both the endocrine system and the nervous systems receive information from sensory receptors differences <ul style="list-style-type: none"> • electrical signals in nerves move more quickly / hormones travel more slowly • hormones are involved with slower, long-term change whereas nerves bring about immediate / rapid responses hormones move in the blood whereas nerve signals pass along neurons		6	AO1 4.5.1 4.5.2.1 4.5.3.1
09.1	ovary		1	AO1 4.5.3.4
09.2	breasts develop / fat deposited on hips / ovaries start to release eggs	do not allow growth spurt / growth of underarm or pubic hair	1	AO1 4.5.3.4
09.3	follicle stimulating hormone (FSH) – causes an egg to mature in the ovary luteinising hormone (LH) – causes egg to be released from the ovary progesterone – maintains the lining of the uterus	for all three correct answers award 2 marks, for one correct award 1 mark	2	AO1 4.5.3.4
09.4	IUD		1	AO2 4.5.3.5

09.5	any two from: <ul style="list-style-type: none"> • does not offer protection against STIs • possible health risks with use of hormones • some religious beliefs do not allow the use of contraception may prefer abstinence until they want to try to get pregnant	accept any other appropriate suggestions	2	AO3 4.5.3.5
10.1	pancreas does not produce enough insulin condition usually identified during childhood		1 1	AO1 4.5.3.2
10.2	obesity		1	AO1 4.5.3.2
10.3	insulin fall carbohydrate more		1 1 1 1	AO1 4.5.3.2
11.1	LH		1	AO1 4.5.3.4
11.2	oestrogen		1	AO1 4.5.3.4
11.3	a rise in oestrogen causes the lining to thicken / develop rise in progesterone causes thickness to be retained a decrease in progesterone causes lining to be shed / lost		1 1 1	AO1 4.5.3.4
11.4	remains high so the lining would not be shed		1 1	AO3 4.5.3.4
11.5	any named hormonal contraceptive e.g.: <ul style="list-style-type: none"> • contraceptive pill • implant hormonal IUD/coil		1	AO1