

Question	Answer	Marks	AO Element	Notes	Guidance
1	testosterone ;	1			
2	<p><i>any four from:</i></p> <p>maintains temperature ;</p> <p>(mechanical) protection ;</p> <p>provides support (of the fetus)</p> <p>;</p> <p>provides a sterile environment / prevents infections ;</p> <p>allows movement (of the fetus)</p> <p>;</p> <p>(movement) allows for development of bones and muscles ;</p> <p>ref. to swallowing (of fluid) ;</p> <p>lubrication / AW ;</p> <p>AVP ;</p>	4			
3	carbon dioxide / urea / AVP ;	1			

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4	name of structure	function	letter in diagram	5		one mark per row	
	testis	production of sperm / produces or releases testosterone	<b>C</b> ;				
	sperm duct	transports sperm but not urine	<b>D</b> ;				
	urethra	tube for urine and seminal fluid through the penis	<b>A</b> ;				
	prostate gland	secretes / produces, seminal fluid / nutrient-rich fluid / alkaline fluid / AW	<b>E</b> ;				
	scrotum / scrotal sac	contains the testes	<b>B</b> ;				

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5	<p>sperm / male gametes are,  <b>1</b> deposited in, <b>S</b> / vagina OR travel through, <b>R</b> / cervix ;</p> <p><b>2</b> egg / sperm / gametes, travel, to <b>P</b> / oviduct ;</p> <p>enzymes (from acrosome /  <b>3</b> sperm) digest jelly coat (around egg) ;</p> <p>fertilisation OR fusion of  <b>4</b> <u>nuclei</u>, of sperm / male gamete, and of female gamete / egg (cell) ;</p> <p><b>5</b> formation of <u>diploid</u> zygote ;</p> <p>zygote / embryo, travels,  <b>6</b> down <b>P</b> / oviduct OR zygote / embryo, travels to, <b>T</b> / uterus ;</p> <p>mitosis / cell division / growth  <b>7</b> / develop (zygote / embryo / fetus) ;</p> <p><b>8</b> ball of cells / embryo, implants in, <b>T</b> / uterus ;</p> <p><b>U</b> / placenta / <b>V</b> / umbilical  <b>9</b> cord (between mother, and fetus) ;</p> <p><b>0</b></p>	6			

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	<p>delivery / diffusion, of (named) resource / excretion of (named) waste, via <b>U</b> / placenta / <b>V</b> / umbilical cord ;</p> <p>AVP ; e.g.</p> <ul style="list-style-type: none"> <li>• named sperm adaptation for swimming e.g. mitochondria</li> <li>• <b>Q</b> / ovary / <b>U</b> / placenta,</li> </ul> <p><b>1</b> releases progesterone (to maintain lining)</p> <ul style="list-style-type: none"> <li>• <i>ref to</i> (cell) specialization / complexity, of fetus / (named) organs (in fetus)</li> </ul>				
6	embryo ;	<b>1</b>			
7	<p>lumen or wall of left or right oviduct labelled <b>Q</b> ;</p> <p>area of uterus with darkest shading labelled <b>R</b> ;</p> <p>ovary labelled <b>S</b> ;</p> <p>vagina labelled <b>T</b> ;</p>	<b>4</b>			

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8	<p><i>any four from:</i></p> <p>rubella is caused by a virus ;</p> <p>(virus) can cross the placenta ;</p> <p>(virus) can affect embryo / fetus ;</p> <p>can cause serious, disease / damage / death, to baby / offspring ;</p> <p>vaccination stimulates, long-lasting / active, immunity (in the mother) ;</p> <p>(immunity gained) before they become pregnant ;</p> <p>AVP ;</p>	4			
9	<p><i>any three from:</i></p> <p>ref. to making new cells after fertilisation ;</p> <p>making membranes ;</p> <p>(protein for) making enzymes ;</p> <p>making new, (named) cell structures / cytoplasm ;</p> <p>(fat / protein) provide / source of, energy ;</p> <p>energy for, cell division / mitosis / growth (of cell) / metabolism / AW ;</p>	3			

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10	<p><i>days 0–7:</i> decrease in thickness ;</p> <p>decreases quickest between days 0 and 3 ;</p> <p><i>days 7–28:</i> increase in thickness ;</p> <p>remains at same thickness from day, 21 / 22 / 23 ;</p>	3			

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11	hormone	site of production	target organ	role	5			
	FSH	pituitary gland	ovary	(stimulates) development of egg or ovum / ref. to secretion of oestrogen ;				
	LH	pituitary gland	ovary	(stimulates) ovulation / ref. to secretion of progesterone (and oestrogen) ;				
	oestrogen	ovary ; A placenta	uterus	stimulates growth of the lining of the uterus				
	progesterone	ovary ; A placenta	uterus					

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	<div> <div></div> <div></div> <div></div> <div>                     maintains / AW, the lining of the uterus ;                 </div> </div>				
12	hormone <b>A</b> is oestrogen ; stimulates repair / thickening, of uterus lining ; inhibits FSH secretion ; stimulates secretion of LH ;	<b>3</b>			
13	FSH ;	<b>1</b>			
14	<div> <div>E</div> <div>A</div> <div>B</div> <div>D</div> <div>C</div> </div>	<b>1</b>		Accept <div> <div>A</div> <div>E</div> <div>B</div> <div>D</div> <div>C</div> </div>	



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15	<p>weakens the immune system/ reduces capacity of body to respond to disease/ AW;</p> <p><u>lymphocytes</u> are, damaged/ destroyed/ killed/ not functional;</p> <p>(B/T) lymphocytes/ white blood cells, stop making antibodies;</p> <p>any <b>two</b> roles of antibodies or lymphocytes or phagocytes which will not happen or not happen very well;;</p>	3		max [3]	<p><b>R</b> 'no immune system'/ 'destroys immune system'</p> <p><b>A</b> 'fight' disease</p> <p>antibodies stop, pathogens spreading (in the body)</p> <p>antibodies cause pathogens to, clump/ agglutinate</p> <p>antibodies kill bacteria</p> <p>antibodies make it easier for phagocytes to ingest pathogens</p> <p>antibodies, neutralise toxin(s)/ make toxins harmless</p> <p>phagocytes, ingest/ AW, pathogens</p> <p>lymphocytes kill infected cells</p>
16	HIV ;	1			

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17	<p><b>any three from:</b></p> <p><b>1</b> cases increase then decrease ;</p> <p><b>2</b> large increase between 10–14 and 15–19 ;</p> <p><b>3</b> most cases in the 15–19 age group ;</p> <p><b>4</b> from 15–19 number of cases decrease / from 20–24 number of cases steep decrease ;</p> <p><b>5</b> no cases above 55 years old / in 55–64 age group / 65+ age group ;</p> <p><b>6</b> data quote with number of cases and age group ;</p>	<b>3</b>			
18	<p><b>any two from:</b></p> <p>(contaminated) blood transfusion ;</p> <p>sexual fluids ;</p> <p>breast feeding ;</p> <p>blood to blood contact ;</p> <p>AVP ;;</p>	<b>2</b>			
[Total: 51]					