Question number	Answer	Notes	Marks
1 (a)	1. larger (petals); 2. lour; 3. enc sed anther / enclosed stamens / shorter stamen / shorter filament; 4. enc sed stigma / enclosed carpels / shorter style / stigma not feathery; 5. n tary;	ignore amount of pollen or nectar allow converse for wind-pollinated for all Mps ignore attractive / smell / sticky as not structures	3
(b)	A petal / petals / corolla;		1
	B anther;		1
	C filament;		1

(c)	1. igma; 2. pollen tube grows (down style); 3. into ovule / ovary; 4. en rs via micropyle; 5. (male nucleus / (pollen grain) nucleus / male gamete; 6. rtilisation / fuse / join / eq; 7. o m / egg / (female) nucleus / female gamete; 8. ovule becomes seed; 9. o le wall becomes seed coat / testa; 10. ovary b mes fruit;	allow if shown on clearly labelled diagram	5

Total 11 marks

<table>
<tr><th>Question number</th><th>Answer</th><th>Notes</th><th>Marks</th></tr>
<tr><td>2 (a)</td><td>1. large etals);
2. loured / bright / white (petals) / eq;
3. cent / smell;
4. n tar / nectary;</td><td></td><td>3 max</td></tr>
<tr><td>(b)</td><td>
<table>
<tr><th></th><th>In flowering plants</th><th>In mammals</th></tr>
<tr><td>female gametes are made in the</td><td>ovule;</td><td>ovary;</td></tr>
<tr><td>male gametes are made in the</td><td>anther</td><td>testes;</td></tr>
<tr><td>gametes are brought together by</td><td>pollination</td><td>copulation;</td></tr>
<tr><td>fertilisation takes place in the</td><td>ovule</td><td>fallopian tube;</td></tr>
<tr><td>embryo develops in the</td><td>seed</td><td>uterus;</td></tr>
</table>
</td><td></td><td>5</td></tr>
</table>

Question number	Answer	Notes	Marks
2 (c)	1. u d in growth / used in repair / used in asexual reproduction / eq; 2. n genetic variation / clones / genetically identical cells produced / exact genetic copies of cells / eq; 3. chromosome number stays the same / eq; 4. o round of division / 2 cells produced; 5. d loid cells produced / not used to make gametes;	Allow converse answers for meiosis	3 max
(d)	1. same <u>colour</u> / no <u>colour</u> variation / same phenotype / look the same / all identical / same characteristics / eq; 2. n genetic variation / clones / alleles the same; 3. quic r production; 4. production all year roun	Ignore more produced / profit	2 max
			Total 13 Marks

<table>
<tr><th>Question number</th><th>Answer</th><th>Notes</th><th>Marks</th></tr>
<tr><td>3 (a)</td><td><table><tr><th>Order</th><th>Name of stage</th></tr><tr><td>1</td><td>gamet s;</td></tr><tr><td>2</td><td>z gote</td></tr><tr><td>3</td><td>embry</td></tr><tr><td>4</td><td>etus;;</td></tr><tr><td>5</td><td>baby</td></tr></table></td><td>1 mark for gametes
1 mark for baby
2 marks for zef

1 mark for zfe or ezf or fez</td><td>4</td></tr>
<tr><td>(b) (i)</td><td>connection between <u>atria</u> / eq;
connection between arteries / pulmonary artery and aorta;</td><td></td><td>2</td></tr>
<tr><td>3 (c) (i)</td><td>XY;</td><td></td><td>1</td></tr>
<tr><td>(ii)</td><td>46 or 23 <u>pairs</u></td><td></td><td>1</td></tr>
</table>

TOTAL 8 MARKS

Question number	Answer	Notes	Marks
4 (a) (i)	P oviduct / fallopian tube; Q ovary; R uterus / womb; S vagina;	 allow ovaries allow uterine wall / uterine lining	4
(b) (i)	O from oestrogen peak to trough;		1
(ii)	M from start until oestrogen line levels at start of cycle / from where progesterone peaks to end of cycle		1
(iii)	1. grows / thickens / build up / repaired / eq; 2. maintained / remains / eq; 3. breakdown / loss / shedding / eq; 4. not broken down if pregnant / egg fertilised / egg implanted / eq;	allow vascularisation	Max 3

Question number	Answer	Notes	Marks
(c)	1. ovulation may vary within one woman / ovulate on different day each month / length of cycle varies / cycle can be irregular / ovulate early / ovulate late / error in calculating days / hard to tell when ovulation occurs / eq; 2. sperm survive;		2
(d)	1. secondary sexual characteristics; 2. start menstruation / ovulation / periods / eq; 3. hips widen; 4. growth of breasts; 5. growth of pubic hair / body hair; 6. change distribution of fat;	5. ignore ref to hair alone	Max 3

Total 14 marks

Question number	Answer	Notes	Marks
5 (a)	mitosis;		1
(b)	1. A produces two daughter cells; 2. A has one round of division / A splits once; 3. A produces cells with four chromosomes / diploid cells / full set of chromosomes / eq;	allow converse for B use of 'it' assumes A ignore ref to size of cells ignore identical / varied as not shown in the diagram	Max 2

Question number	Answer	Notes	Marks
5 (c)	A any correctly named plant part; B anther / ovule / ovary;	eg growing region tip / stem / root / buds / leaf / embryo / cuttings / callus / bulb / pollen tube	2