

1. (a) Day 20 - 22;
follicle is largest prior to ovulation; 2
- (b) Another follicle develops;
corpus luteum degenerates; 2
- (c) (i) oestrogen; 1
- (ii) High hormone X (oestrogen) prevents follicles
developing as no FSH released; 1
- [6]**
2. (a) Production of FSH/LH/pituitary hormones;
Stimulate ovary/follicle development;
Producing oestrogen;
Oestrogen stimulating breast development;
Oestrogen stimulating pelvic girdle growth;
Androgen secretion;
Androgens responsible for growth spurt/pubertal hair development;
Growth hormone also involved; max 6
- (b) (i) Negative feedback;
Inhibits FSH secretion;
Follicles do not develop
No ovulation; max 3
- (ii) Oestrogen secreted by follicles;
Therefore no oestrogen/low concentration of oestrogen;
Oestrogen secretion will not be cyclical;
Not available to inhibit pituitary gland;
Therefore high concentration of FSH; max 3
- [12]**
3. (a) Ensures sex organs mature before conception can occur; 1
- Do not credit answers relating to emotional or psychological maturity*
- (b) (i) April 1995; 1
- (ii) Coincides with rise in progesterone;
Progesterone produced by corpus luteum;
Corpus luteum formed after ovulation; max 2
- [4]**

4. change in base/nucleotide (in DNA);
change in base sequence of mRNA/change in codons/idea of
frameshift following deletion or addition;
incorrect tRNA/anticodon;
incorrect amino acids/ different primary structure/fomation of new
stop codon;
different tertiary structure/different 3D structure/different
polypeptide/shortened polypeptide;
different shape of active site/no active site present;

5 max

[5]