**HUMAN BIOLOGY YEAR 11 ATAR**

**EXTENDED RESPONSE 4: INFERTILITY**

**MARKING KEY**

**DUE DATE & VALIDATION TEST: THURSDAY 6th SEPTEMBER 2018**

Currently in Australia, 1 in 6 couples experience problems with fertility. In this assignment you are going to investigate the causes of infertility, as well as the reproductive technologies used to assist infertile couples achieve a successful pregnancy.

**PART 1:**

1. What is infertility? (2 marks)  
   inability to conceive after 12 months of regular intercourse
2. How is infertility diagnosed:
   1. In women? (2 marks)

Investigating suspected infertility requires tests for both the woman and her partner. Tests for the woman may include:

physical examination – including medical history

blood tests – to check for the presence of ovulation hormones

laparoscopy – a ‘keyhole’ surgical procedure in which an instrument is inserted though a small incision in the abdomen so that the reproductive organs can be examined

ultrasound scans – to check for the presence of fibroids.

(4 methods for 2 marks – brief)

* 1. In men? (2 marks)  
     Investigating suspected infertility requires tests for both the man and his partner. Diagnosing male infertility may involve:

Physical examination – including medical history

Semen analysis – a sample of the man’s semen is investigated in the laboratory and checked for abnormalities and the presence of antibodies

Blood tests – to assess hormone levels

Testicular biopsy – a fine needle and microscope are used to check the network of tubes within the testicles to see if they contain any sperm

Ultrasound scans – to take pictures of the reproductive organs, such as the prostate gland.

(4 methods for 2 marks – brief)

1. **Describe** three (3) causes of infertility in women. (6 marks)  
   Female infertility can be caused by:

ovulation problems

polycystic ovary syndrome

problems with the fallopian tubes

problems with the uterus

endometriosis.

(any 3 described for 2 marks each)

1. **Describe** three (3) causes of infertility in men. (6 marks)  
   The major causes of male infertility are:

Obstructions to the passage of sperm

Problems with sperm (such as low sperm count)

Functional problems (such as impotence)

Hormonal problems.

(any 3 described for 2 marks each)

1. **Describe** the following treatments for infertility:

Need a good point described for each mark

* 1. Artificial Insemination (AI) (3 marks)
  2. In Vitro Fertilisation (IVF) (4 marks)
  3. Gamete Intrafallopian Transfer (GIFT) (3 marks)
  4. Zygote Intrafallopian Transfer (ZIFT) (3 marks)
  5. Intracytoplasmic Sperm Injection (ICSI) (3 marks)
  6. Surrogacy (3 marks)

Include a **Bibliography** of all resources used. (3 marks)