Human Reproduction Practice Exam Questions
Mark Scheme

Question 1

Question	Answers	Extra Information	Mark
1.1	flagellum	Allow tail.	1
1.2	nucleus		1
1.3	(the midpiece) contains many mitochondria to release energy for movement		1 1
1.4	**Level 2:** At least two adaptations of the egg cell are given and at least one of these is explained. For four marks, at least two adaptations must be explained.		3 – 4
	Level 1: Some adaptations of the egg cell are described. There may be an attempt to explain one of the adaptations.		1 – 2
	No relevant content.		0
	Indicative content: • nucleus contains genetic information from the mother/half the genetic information that will be received by the offspring • genetic information from the mother combines with the genetic information from the father to form a zygote • cell membrane changes after fertilisation • ensures that only one sperm cell can enter the egg cell to fertilise it • large size • increases the chance of the egg cell being fertilised and allows more space for nutrients to be stored • cytoplasm contains nutrients • to support the developing embryo after fertilisation/before implantation		
Total			8

Question 2

Question	Answers	Extra Information	Mark
2.1	ovary		1
2.2	uterus		1
2.3	holds the baby/foetus in place during pregnancy		1
2.4	**Level 2:** At least two changes that take place during the menstrual cycle are described and an explanation is given for why these changes take place. For four marks, the approximate day that each of the changes takes place should be included.		3 – 4
	Level 1: Some changes that take place during the menstrual cycle are described. The approximate day that some of the changes take place may be included.		1 – 2
	No relevant content.		0
	Indicative content: Day 1 • the uterus lining breaks down and passes out of the vagina • this releases tissues that are no longer required by the body because pregnancy has not occurred Day 5 • the uterus lining begins to build up again • to prepare the body for the implantation of a fertilised egg cell (zygote) • an egg cell starts to mature in an ovary • the egg cell contains the genetic information from the mother needed to produce offspring Day 14 • an egg cell is released from an ovary (ovulation) and travels down the oviduct • the egg cell may be fertilised by a sperm cell in the oviduct to form a zygote		
Total			7

Question 3

Question	Answers	Extra Information	Mark
3.1	12		1
3.2	Any **two** from: • the mean age for females to start puberty is higher than the mean age for males to start puberty • the range of ages for females to start puberty is greater than the range of ages for males to start puberty • the youngest age for females to start puberty is lower than the youngest age for males to start puberty	Allow converse statements.	2
3.3	• sperm cells contain genetic information from the male • to fertilise an egg cell from a female to produce offspring	Allow DNA for genetic information.	1 1
3.4	**Level 3:** There is a detailed description of several changes that take place in females during puberty, along with an explanation of how each of these changes prepare the female body for producing offspring.		5–6
	Level 2: There is a detailed description of some of the changes that take place in females during puberty and an attempt is made to explain how at least one of these changes prepares the female body for producing offspring.		3–4
	Level 1: There are simple statements describing some of the changes that take place in females during puberty.		1–2
	No relevant content.		0
	Indicative content: • breasts develop • these produce milk to feed a newborn baby • hips widen • to allow more space for a baby to be born • menstrual cycle starts • egg cells are released to be fertilised by male sperm cells and the uterus prepares for the implantation of a fertilised gg cell		
Total			11