KS3 SCIENCE · BIOLOGY

Human reproduction: exam questions

Name _____
Total: 22 marks

1 Name the male gamete and the female gamete in humans. **[2 marks]**

2 A sperm cell has a tail and many mitochondria. Explain how each of these helps the sperm cell to do its job. **[2 marks]**

3 Name the organ where sperm are made, and the organ that contains eggs. **[2 marks]**

4 The menstrual cycle lasts about 28 days. Describe what happens (a) during menstruation and (b) at ovulation. **[2 marks]**

5 Describe what happens at fertilisation, and state where in the body it happens. **[3 marks]**

6 Describe what happens to a fertilised egg in the days after fertilisation. **[2 marks]**

7 State the function of (a) the umbilical cord and (b) the amniotic fluid. **[2 marks]**

8 Name one substance that passes from the mother to the foetus at the placenta, and one that passes from the foetus to the mother. **[2 marks]**

9 Describe what the muscles in the wall of the uterus do during birth. **[1 mark]**

10 A pregnant woman smokes cigarettes. Explain how this could affect the foetus. **[2 marks]**

11 Both of a woman's oviducts are completely blocked. Explain why she is unlikely to become pregnant. **[2 marks]**

Human reproduction: mark scheme

Total: 22 marks

1 [2 marks]
- Male: sperm (cell) **(1)**
- Female: egg (cell) (accept: ovum) **(1)**

2 [2 marks]
- The tail lets it swim (to the egg) **(1)**
- The mitochondria release the energy it needs (for swimming) **(1)**

3 [2 marks]
- Sperm: the testes (accept: testis, testicles) **(1)**
- Eggs: the ovaries (accept: ovary) **(1)**

4 [2 marks]
- Menstruation: the lining of the uterus breaks down and is lost through the vagina (accept: the lining is shed) **(1)**
- Ovulation: an egg is released from an ovary **(1)**

5 [3 marks]
- A sperm (cell) joins with an egg (cell) **(1)**
- Their nuclei join (accept: fuse) **(1)**
- In an oviduct (accept: fallopian tube) **(1)**

6 [2 marks]
- It divides (many times) to form a ball of cells (accept: an embryo) **(1)**
- It settles into the lining of the uterus (accept: implantation) **(1)**

7 [2 marks]
- Umbilical cord: joins the foetus to the placenta (accept: carries blood between the foetus and the placenta) **(1)**
- Amniotic fluid: protects the foetus (accept: cushions it against bumps) **(1)**

8 [2 marks]
- To the foetus: oxygen or nutrients (accept: glucose or another named nutrient; also accept alcohol, nicotine or another named drug) **(1)**
- To the mother: carbon dioxide (accept: waste, urea) **(1)**

9 [1 mark]
- They contract and push the baby out (through the vagina) **(1)**

10 [2 marks]
- Harmful substances from the smoke pass across the placenta (accept: carbon monoxide means that her blood carries less oxygen to the foetus) **(1)**
- The baby is more likely to be born early or with a low birth mass (accept: the foetus grows more slowly) **(1)**

11 [2 marks]
- Sperm cannot reach the egg (accept: the egg and the sperm cannot meet) **(1)**
- So the egg cannot be fertilised (accept: the two nuclei cannot join) **(1)**