

Name: Answer key

Teacher: _____

PART A: MULTIPLE CHOICE1. Chose the **incorrect** statement regarding implantation.

- ☒ a. During fertilization the egg is fertilised by a sperm cell in the uterus. **x**
- b. Muscular contractions and cilia in the fallopian tube moves the zygote along.
- c. A morula is a solid ball of cells.
- d. The blastocyst sinks into the endometrium and firmly attaches to the wall.

2. Choose the **incorrect** statement regarding the placenta.

- a. The placenta is a membrane that develops around the foetus. **✓**
- ☒ b. The placenta is a combination of foetal and paternal tissue. **✓**
- c. The umbilical cord attaches the placenta to the foetus. **✓**
- d. Two umbilical arteries carry blood to the placenta from the foetus. **✓**

3. What gives the placenta a large surface area?

- ☒ a. Chorionic villi.
- b. Endometrium.
- c. Umbilical arteries.
- d. Amniotic fluid.

4. Choose the **incorrect** statement. During week 4 of embryonic development;

- a. The embryo is under 4mm long.
- ☒ b. Eyes appear as slits.
- c. Tail is evident.
- d. Brain begins to form.

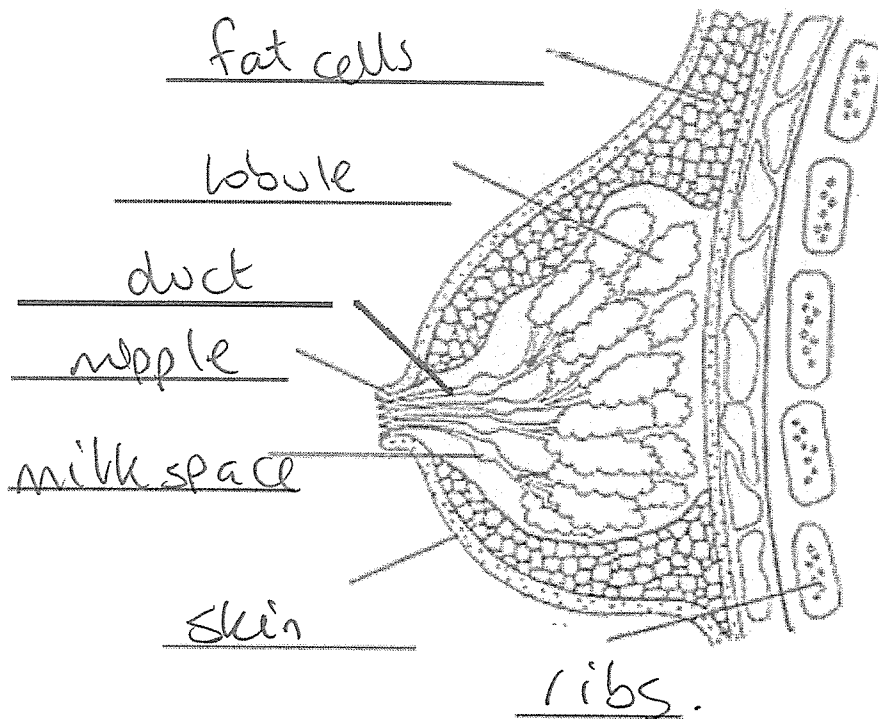
5. Vernix is;

- a. The substance that is discharged from the umbilical cord after birth.
- b. The placenta and umbilical cord discharged after birth.
- c. The fine hairs that cover the foetus.
- ☒ d. The waxy substance covering the baby at birth.

PART B: SHORT ANSWER

1) Label the following diagram of a breast

(4 marks)



2. Fill in the missing words.

(5 marks)

Lactation

- a. When the baby sucks on the sensitive nipple, a message is sent along the woman's nerves to her brain.
- b. The brain sends a message to the pituitary gland.
- c. This produces prolactin (hormone).
- d. The hormone travels in blood to breasts and signals milk cells to produce milk.

-1 for
every 2
incorrect

Milk let-down reflex

- a. Baby's sucking on mother's nipple also causes a message to be sent along woman's nerves to her brain.
- b. The brain sends a message to the pituitary gland.
- c. This produces oxytocin (hormone).
- d. This hormone travels in blood to breasts and causes the muscles around milk-producing cells and ducts to contract, squeezing milk out of the nipples.

2) Fill in the table below regarding the changes to the mother after childbirth.

(7 marks)

Change	Description
Puerperium	<ul style="list-style-type: none"> ➤ uterus contracts (1) ➤ Abdomen flattens (1)
Discharge of fluid from uterus	<ul style="list-style-type: none"> ➤ Fluid is mixture of blood and tissue remains (1)
Blood volume	<ul style="list-style-type: none"> ➤ gradually returns to normal (1)
Pulse	<ul style="list-style-type: none"> ➤ slows down (1)
Emotional changes	<ul style="list-style-type: none"> ➤ postnatal depression may occur (1)
Menstrual cycle	<ul style="list-style-type: none"> ➤ Begins again (1)

3a) List TWO advantages of women using the combined pill as a method of birth control.

(2 marks)

- very reliable
- unrelated to sexual activity
- Regular periods
- reduced incidence of ovarian & uterine cancer

1 mark per answer

3b) List TWO disadvantages of women using the combined pill as a method of birth control.

(2 marks)

- Regular doctor's prescription required
- Pill must be taken daily
- Possible side effects
- no protection against STIs

1 mark per answer

4) In-vitro fertilisation (IVF) and gamete intrafallopian transfer (GIFT) are two types of assisted reproductive technologies.

State TWO differences between the two types.

(4 marks)

IVF	GIFT
* mixture injected into uterus (1)	* mixture injected into fallopian tubes. (1)
* Man's sperm fertilises egg outside of her body (1)	* Egg & sperm are mixed together outside of her body (1)

5) Explain how fetoscopy works.

What kind of problems can it detect? Give a specific example.

(3 marks)

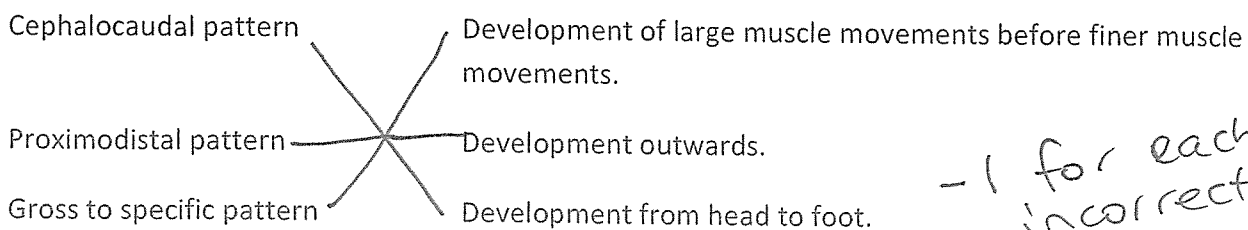
- Small, telescope instrument is put into uterus to observe appearance of fetus. (1)
- can detect conditions such as cleft lip and palate or physical abnormalities (1)

6) List two internal organ changes that occur to both males and females during adolescence. (2 marks)

- Heart almost doubles in size
- Total blood volume increases
- Lungs increase in size & capacity

Any 2

7) Match the type of motor development with its description. Draw a line to connect them. (2 marks)



- 1 for each incorrect

PART C: EXTENDED ANSWER

7) A great number of changes occur to the baby's circulation after birth. Compare the differences of the baby's circulation before birth and after birth. (16 marks)

You **must** include information on the following four points.

Lungs, ductus arteriosus, foramen ovale and ductus venosus.

	Before birth	After birth
Lungs	<ul style="list-style-type: none"> - Flattened (1) - Very little blood flowing through them (1) 	<ul style="list-style-type: none"> - volume increases - Blood flows through lungs - Air moves in & out of lungs (ANY 2)
Ductus venosus	<ul style="list-style-type: none"> - Allows blood to bypass liver (1) 	<ul style="list-style-type: none"> - closes off (1) - allowing blood to go to liver (1)
Ductus arteriosus	<ul style="list-style-type: none"> - Allows blood to bypass the lungs (1) 	<ul style="list-style-type: none"> - Blood flow through vessel decreases (1) - Eventually breaks down (1)
Foramen ovale	<ul style="list-style-type: none"> - Hole (1) that allows blood to flow from right atrium to left atrium (1) 	<ul style="list-style-type: none"> - Pressure in left atrium increases (1) pushing flap of foramen ovale closed (1)

- 8) Choose an STI from the following list; describe it, describe what causes it, two symptoms and treatment. (8 marks)

Gonorrhoea, syphilis, chlamydia, genital herpes, HIV/AIDS

	Description	Cause	Symptoms	Treatment
Gonorrhoea	common sexually transmitted disease - spread by contact with mouth, vagina, penis or anus	Bacteria Neisseria gonorrhoeae	- Burning & pain when urinating - Discharge from penis or vagina - sore throat - tender or swollen testicles - Painful sexual intercourse - Fever (females)	- Antibiotics
Syphilis	sexually transmitted disease - can cause death if not treated	- Bacteria Treponema pallidum	- skin ulceration - rash - rash on sores in mouth, vagina, anus - fever, swollen lymph glands - sore throat, hair loss, weight loss	- antibiotics
Chlamydia	Common sexually transmitted disease can damage women's reproductive organs	- Bacteria Chlamydia trachomatis	- Vaginal discharge - burning when urinating - nausea, fever, vomiting - Pain during intercourse - men - discharge from penis, burning when urinating	- antibiotics
Genital herpes	sexually transmitted disease	herpes simplex virus - Sexually	Blisters on or around genitals - sores in genital area in mouth & on lips	No treatment to cure it - antiviral medications can help. antiviral
HIV/AIDS	one of most deadly diseases in human history Causes immune system weakness (2)		infections	No cure antiretroviral treatment can slow down disease (2)