

BCM SCHOOL BASANT AVENUE DUGRI LUDHIANA

Class 8. Subject -Science

Assignment – Solutions

1. **Answer:** (a) Pituitary gland
2. Answer: **(c)** Puberty
- 3.**Answer:** (d) All of the given
(Silkworm, Frog, Butterfly all show metamorphosis.)

Assertion / Reason

- 4.**Answer:** Assertion is true, Reason is false.
In humans, fertilization takes place inside the female body, **not outside.**
5. **Answer:** Both Assertion and Reason are true, and Reason correctly explains Assertion.

Subjective

6(a)

Male Reproductive System

1. Testes
2. Sperm duct / Vas deferens

Female Reproductive System

1. Oviduct / Fallopian Tube
2. Ovary

6(b)

Answer: The uterus is the organ where the fertilized egg implants and develops into a baby.
It provides:

- Protection
- Nourishment
- A safe environment for the development of the embryo and fetus.

Q7.

- 1) Label A and B
 - The diagram clearly shows sperms approaching an egg.
 - A – Sperm
 - B – Egg (Ovum)
- 2) Identify the process
 - **The process is *Fertilization*.**
 - 3. During fertilization, **a sperm fuses with the egg.**
The nuclei of the sperm and egg combine.
This forms a **zygote**.
 - **Answer:**
During this process, the sperm enters and fuses with the egg. Their nuclei combine to form a **zygote**, which is the first cell of the new organism.

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1. Answer: Not all animals are oviparous (egg-laying) because:

- Eggs have higher chances of being eaten, drying out, or getting damaged.
- Embryo growth outside the mother is less protected.

Advantages of viviparous animals (giving birth to young ones):

- Baby develops inside mother's body → **better protection**
- **Continuous nourishment**
- **Higher survival rate**

2. Answer:

- Dogs have **multiple embryos** developing together (multiple ova are released).

- Humans usually release **only one ovum per month**, so usually only one baby forms.

3.Answer:Twins are born in two conditions:

- **Identical twins** → 1 fertilized egg splits into two embryos
- **Fraternal twins** → Two different eggs are fertilized by two different sperms

4.Answer:The jelly cover:

- Protects the egg from injury
- Prevents drying (desiccation)
- Makes egg slippery → protects from predators
- Allows exchange of gases

9.

(a) A frightened person

Hormone: Adrenaline

Function: Increases heartbeat, breathing, and prepares body for "fight or flight".

(b) Growth of a child to adult

Hormone: Growth Hormone (GH) from pituitary

Function: Helps in height increase, bone & muscle growth.

(c) Development of caterpillar to moth

Hormone: Thyroxine

Function: Controls metamorphosis in insects.

(d) Development of tadpole to frog

Hormone: Thyroxine

Function: Controls metamorphosis in frogs.

10. Case Study

1.Farmers get plants that are:

- Disease-resistant
- Produce higher yield

- Uniform quality crops

2. All clones are genetically identical →

- A new disease could kill **all** of them
- No genetic variation
- Lower adaptability to climate changes

3. Because her DNA came from an adult sheep →

- The genes were already aged
- She showed signs of early aging
Therefore, Dolly lived a shorter life.