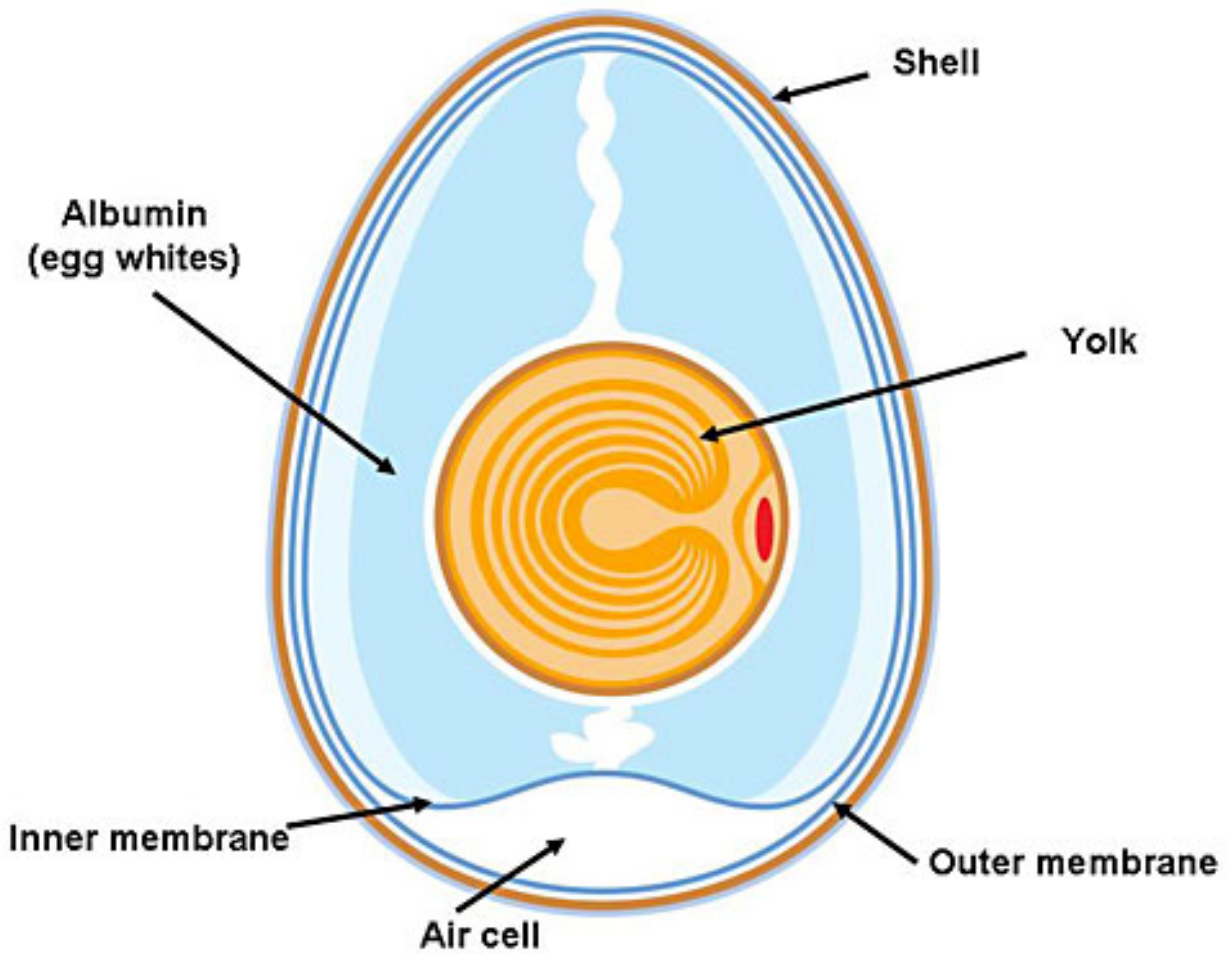


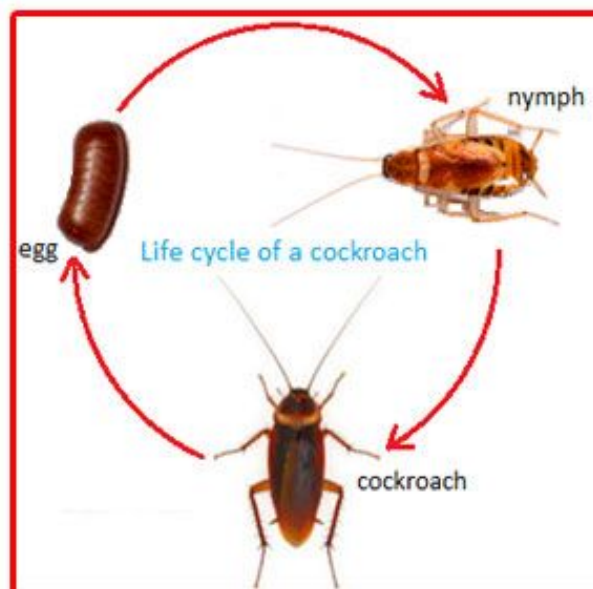
CLASS IV
SCIENCE
CHAPTER-4 REPRODUCTION IN ANIMALS

- The period of time for which a living organism lives is called **lifespan**.
- **Reproduction** is the process by which living things produce more of their own kind.
- Animals reproduce in two ways:
 1. Some animals reproduce by giving birth to their young ones.
 2. Some animals produce their young ones through eggs.
- **Viviparous Animal** : The animals which give birth to their young ones are called Viviparous animals. Eg, deer, lion and cow. The young babies of these animals feed on their mothers milk till they learn to eat other food. Such animals are called **mammals**.
- **Oviparous Animal**: The animals which give birth to their young ones through eggs are called oviparous animal.Eg, fishes and frogs.
- According to habitat, we can divide oviparous animals into three categories:
 - Aerial Oviparous animals - Birds
 - Terrestrial Oviparous animals - Insects and snakes
 - Aquatic Oviparous animals- Fishes and frogs.
- **Aerial Oviparous animals**
 - The birds such as hen, crow and parrot lay eggs. They bear their young ones in hard shelled eggs which hatch after some time. Adult birds sit on the eggs for a few days to keep them warm till they hatch. This is called as **Incubation**.

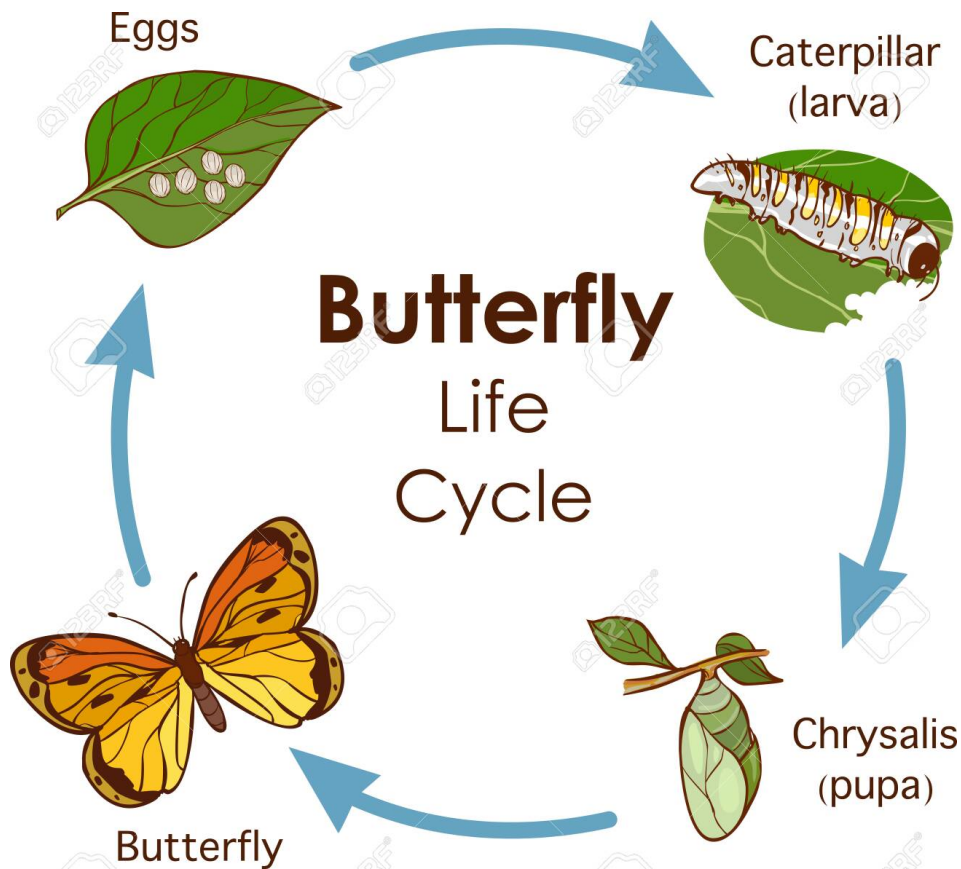
- **Parts of an Egg**



- **Terrestrial Oviparous animals : Insects reproduce by laying eggs. Insect eggs are deposited by adult insects in a safe location.**



- **Life Cycle of butterfly**



Stage 1: The egg : It all starts when a female butterfly lays her eggs, usually on leaves or stems of plants. Inside these tiny eggs, caterpillars grow.

Stage 2: The caterpillar: the caterpillar leaves its egg home and enters the big outside world.

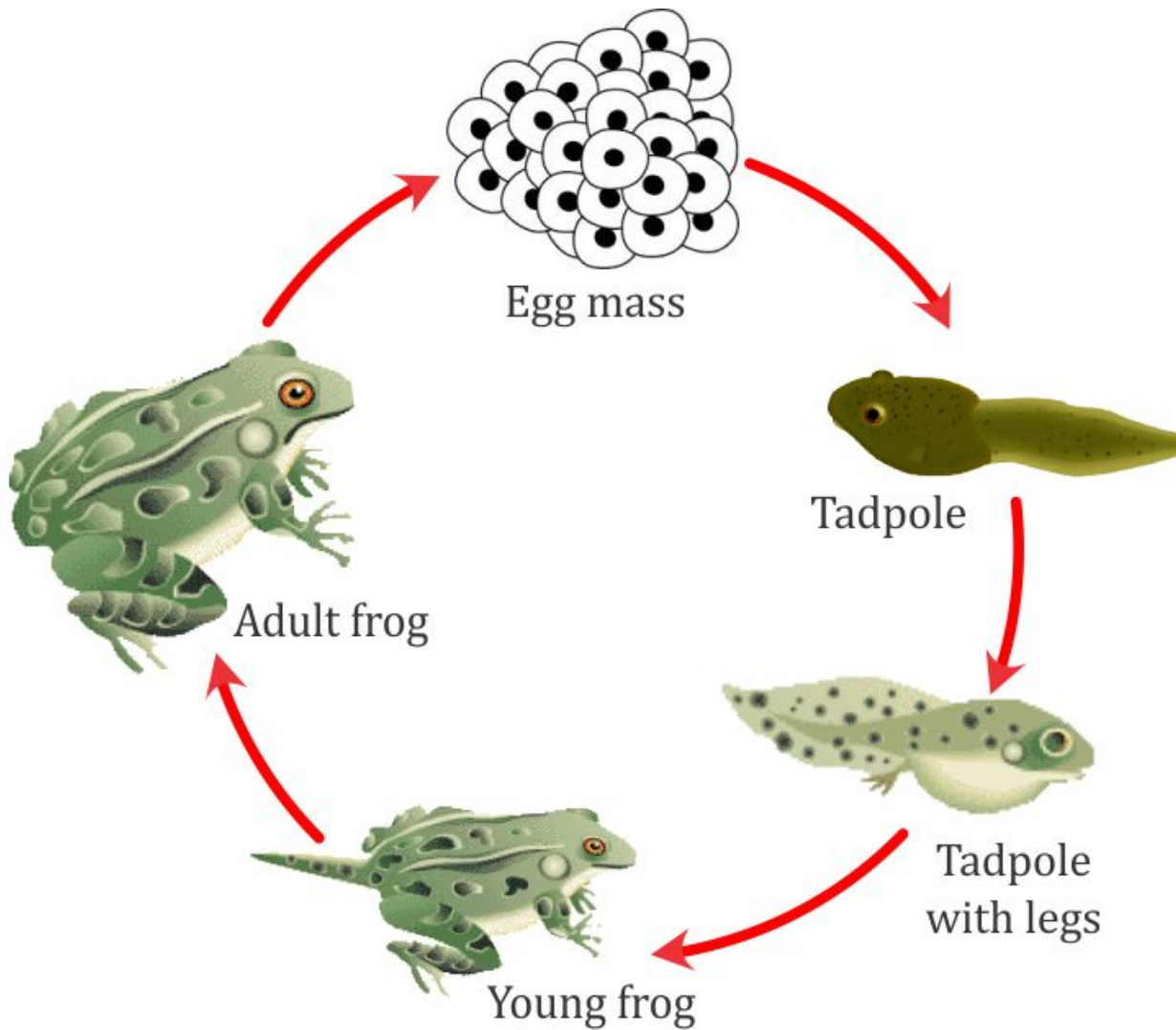
Stage 3: The pupa : The caterpillar forms itself into a “pupa” (or chrysalis) – a kind of vessel in which the caterpillar changes into a butterfly.

Stage 4: The butterfly: Once the butterfly is ready to emerge, the case around the pupa splits open.

- **Aquatic Oviparous** animals are the animals that live in water. Eg, fish and frog.

- **Fish:** breed in a number of ways. Most **fish** release thousands of **eggs**, scattering them in the water where the male **fish** fertilize them. The **eggs** develop and hatch into larvae (baby **fish**) without any help from the parents. Most larvae are eaten by other creatures, but a few survive to become adults.

- **Life cycle of Frog**



Metamorphosis in frog

Eggs: This is an egg mass laid by a frog. Each of those black dots is made up of a bunch of cells that will eventually grow into a tadpole.

Tadpole: Within a few days, the eggs develop into tadpoles. Tadpoles live completely underwater.

Tadpole with legs : After the hind legs have started to form, a pair of front legs will begin to develop and the tail will start to disappear. You might also notice that the tadpole has started to form a frog-like face.

Young frog : When the tadpole reaches the froglet stage, it is almost a full adult. At this point, the tadpole's gills have disappeared, and its lungs have enlarged.

Adult : This is a fully grown frog. As you have just read, frogs go through a lot to get to this phase.

EXERCISES
OBJECTIVE TYPE QUESTIONS

A Give two examples of the following:

1. Viviparous animals.
2. Aquatic oviparous animals.
3. Insects with 3-stage life cycles
4. Insects with 4-stage life cycles
5. Moulting animals

B Choose the correct option.

1. is the process in which the young one breaks open the egg shell to come out.
A) Metamorphosis B) hatching C) moulting D) Incubation.
2. Which of the following is not a part of a bird's egg?
A) pupa B) shell C) yolk D) albumen.
3. lays adhesive eggs.
A) snake B) frog C) cat D) lizard
4. The organism does not incubate its eggs
A) butterfly B) parrot C) pigeon D) hen

C. Fill in the blanks.

1. The period of time for which a living organism lives is called
2. The animals which give birth to young ones are called animals.

3. The animals which lay eggs are called animals.
4. provides nutrition to the embryo inside an egg.
5. The in tadpole vanishes when it grows into an adult frog.

D. Write T for True statements or F for False statements.

1. The egg shell for hen is totally water proof and air proof.
2. Birds, snake and turtles lay hard- shelled eggs.
3. Mammals leave their young ones on their own as soon as they are born.
4. Butterfly and frogs show metamorphosis.
5. Jelly - like covering protect the eggs of a frog.

E. Match the following:

1	Hen	Tadpole
2	Cockroach	Fries
3	Frog	Nymph
4	Fish	Caterpillar
5	Butterfly	Chicken

THEORETICAL QUESTIONS

A. Answer the following questions in brief.

1. How do insects take care of their eggs?
2. How does air cell form inside an egg?
3. What is metamorphosis?
4. What is incubation?
5. Draw a labelled diagram of parts of an egg.

B. Answer the questions in detail.

1. Differentiate between viviparous and oviparous animals. Give examples.
2. Draw life cycle of butterfly .

ANSWERS

QA

1- dogs and cats

2- fish and frog

3- grasshopper and cockroach

4- butterfly and housefly

5- snake and cockroach

QB

1-(b), 2- (a), 3-(b), 4-(a),

QC

1- life span

2-viviparous

3-oviparous

4-yolk

5-tail

QD

1- True, 2- False, 3-False, 4-True, 5-True

QE

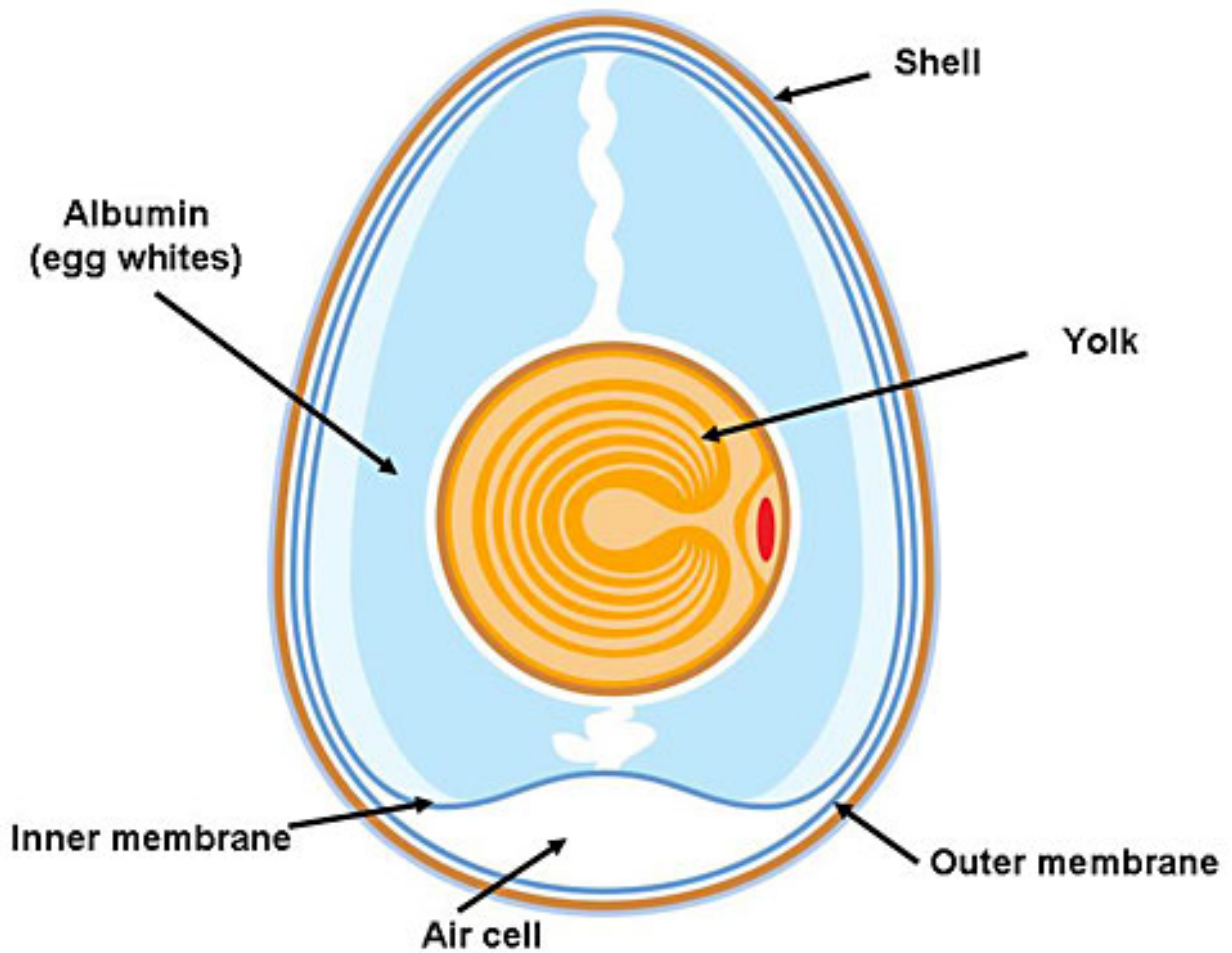
1-(e), 2-(c), 3-(a), 4-(b), 5(d)

THEORITICAL QUESTIONS

QA

- 1. Nearly all insects reproduce by laying eggs. Insect eggs are deposited by adult insects in a safe location. This location can be anywhere - woods, leaves, dirt, water, even bodies of human being and other animals. The eggs are usually sticky, so they can hang on to the surface without falling off.**
- 2. As the egg cools, the liquid contents contract more than the shell and the inner shell membrane separates from the outer shell membrane to form the air cell.**
- 3. The process of transformation from a tadpole to a frog is known as metamorphosis.**

4. Adult birds sit on the eggs for a few days to keep them warm till they hatch. This is called as **Incubation**.
5. Parts of an egg



QB

1.

- **Viviparous Animal** : The animals which give birth to their young ones are called Viviparous animals. Eg, deer, lion and cow. The young babies of these animals feed on their mothers milk till they learn to eat other food. Such animals are called **mammals**.

- **Oviparous Animal:** The animal which give birth to their young ones through eggs are called oviparous animal.Eg, fishes and frogs.When these eggs are hatched young ones comes out of these eggs.

2.

