4. INTRODUCTION TO REPRODUCTION IN ANIMALS

TEACHING TASK

Multiple Choice Questions

1.Why is reproduction important to animals?

Answer: b) It ensures their species doesn't disappear and allows them to pass on survival traits.

Explanation: Reproduction is critical for the survival of a species, as it allows animals to produce offspring, ensuring the continuation of their genetic lineage and the passing of traits that aid survival.

2.How do amphibian eggs typically develop?

Answer: d) In water, hatching into tadpoles

Explanation: Amphibians, such as frogs and toads, typically lay their eggs in water, where they develop into tadpoles, which undergo metamorphosis to become adults.

3.What is the name given to baby fish that hatch from eggs?

Answer: b) Fry

Explanation: Baby fish that hatch from eggs are called fry, a term specific to fish in their early developmental stage.

4.Which of the following is NOT a characteristic of viviparous animals?

Answer: c) Mothers provide minimal care to the newborns

Explanation: Viviparous animals give birth to live young that develop inside the mother's body, and mothers often provide significant care (e.g., nursing in mammals). Minimal care is not typical.

5.What distinguishes egg-laying animals from live-bearing animals?

Answer: d) Babies of egg-laying animals develop outside the mother's body

Explanation: Egg-laying (oviparous) animals lay eggs in which the embryos develop outside the mother's body, whereas live-bearing (viviparous) animals develop their young inside the mother's body.

Advanced Level

More than One Answer Type

6.Which of the following animals exhibit oviparous reproduction?

Answer: a) Birds, b) Reptiles, c) Amphibians, d) Fish

Explanation: All listed animals (birds, reptiles, amphibians, and fish) are primarily oviparous, meaning they reproduce by laying eggs that develop outside the mother's body. While some reptiles and fish may be viviparous, oviparity is the dominant method.

7.Which statements accurately describe viviparous reproduction?
Answer: a) Babies develop inside the mother's body, b) Babies are born alive, c) Examples include humans, dogs, and cats
Explanation: Viviparous reproduction involves embryos developing inside the mother's body and being born alive (a, b). Humans, dogs, and cats are examples (c). While some viviparous animals provide direct care (d), this is not universal (e.g., some viviparous reptiles provide minimal care), so d is not always accurate.

Fill In the Blanks
8. Amphibians like frogs and toads lay eggs in _____.
Answer: water
Explanation: Amphibians typically lay their eggs in water or moist environments, where the eggs develop into tadpoles.

9.In _____ animals, babies develop inside the mother's body and are born alive.
Answer: viviparous
Explanation: Viviparous animals, such as mammals like humans and dogs, develop their young inside the mother's body and give birth to live offspring.

(iii) Matching Type
10. Match the animals with their method of egg laying:
Matching Column I with Column II

s.no	**Column I**	**Column II**	**Correct Match**
1.	Birds	A. Lay eggs in nests made of twigs and leaves	A
2.	Reptiles	B. Lay eggs in water, often resembling a mass of jelly	(No match)
3.	Amphibians	C. Bury eggs in sand or soil	C
4.	Fish	D. Lay eggs and sit on them to keep them warm until hatching	(No match)

Solutions and Explanations
Birds - A. Lay eggs in nests made of twigs and leaves
Explanation: Birds typically build nests using twigs, leaves, and other materials to lay their eggs, providing a safe environment for incubation.

Reptiles - B. Lay eggs in water, often resembling a mass of jelly
Explanation: This description is incorrect for reptiles. Reptiles, such as turtles and snakes, often lay eggs on land or bury them in sand or soil, not in water as a mass of jelly. The correct match for "Lay eggs in water, often resembling a mass of jelly" would be amphibians (e.g., frogs), but since the options are fixed, there is no accurate match here. This suggests a possible error in the provided table.

Amphibians - C. Bury eggs in sand or soil
Explanation: This is incorrect. Amphibians, like frogs and toads, typically lay eggs in water, often in jelly-like masses. Some amphibians (e.g., certain salamanders) may lay eggs on land or bury them, but this is not the typical behavior. The correct match should align with water-laying, indicating a potential mismatch in the table. However, based on the given options, C is the closest provided match, though it's not ideal.

Fish - D. Lay eggs and sit on them to keep them warm until hatching
Explanation: This is incorrect for most fish. Fish typically lay eggs in water, and while some species (e.g., certain cichlids) may guard or fan their eggs, sitting on them to keep them warm is characteristic of birds. There is no accurate match here, suggesting another error in the table.

LEARNER'S TASK

Multiple Choice Questions
1.How do animals reproduce?
Answer: c) By laying eggs or giving birth to babies.
Explanation: Animals reproduce either by laying eggs (oviparity) or giving birth to live young (viviparity), depending on the species.

2.What is the primary method of reproduction for birds, reptiles, amphibians, and fish?
Answer: b) Laying eggs
Explanation: These groups are predominantly oviparous, laying eggs that develop outside the mother's body, though some species (e.g., certain reptiles) may be viviparous.

3.Where do sea turtles typically lay their eggs?
Answer: c) On sandy beaches
Explanation: Sea turtles come ashore to lay their eggs in nests dug on sandy beaches, where the eggs incubate until hatching.

3.Which of the following is an example of a reptile that gives birth to live young?
Answer: c) Snake
Explanation: Some snakes, such as certain species of vipers and boas, are viviparous and give birth to live young, unlike crocodiles, turtles, and alligators, which are typically oviparous.

4.What is a unique reproductive trait observed in some species of sharks and reptiles?
Answer: c) They can switch between laying eggs and giving birth to live young
Explanation: Some sharks and reptiles exhibit ovoviviparity or can alternate between oviparity (laying eggs) and viviparity (live birth), depending on environmental or species-specific factors.

Advanced Level

5.More than One Answer Type 5. **How do sea turtles and salmon differ in their egg-laying behavior?**

Answer: a) Sea turtles lay eggs on sandy beaches, d) Salmon lay thousands of eggs in riverbeds.

Explanation: Sea turtles lay eggs in nests on sandy beaches (a), while salmon lay thousands of eggs in riverbeds, often in gravel nests called redds (d). Sea turtle eggs do not hatch into tadpoles (c), as tadpoles are specific to amphibians.

6.What are key differences between egg-laying and live-bearing animals?

Answer: a) Babies develop outside the mother's body in egg-laying animals, c) Live-bearing animals often provide more direct care to their young after birth

Explanation: Egg-laying (oviparous) animals have embryos develop outside the mother's body in eggs (a). Live-bearing (viviparous) animals often provide more care, such as nursing in mammals (c). Egg-laying animals typically provide less direct care (b is incorrect).

Fill In the Blanks

7. _____ lay eggs in water, and their eggs often resemble a mass of jelly floating in ponds or streams.

Answer: Amphibians

Explanation: Amphibians, like frogs and toads, lay eggs in water, often in jelly-like masses that float in ponds or streams.

8._____ have the ability to lay eggs or give birth to live young.

Answer: Some sharks and reptiles

Explanation: Certain species of sharks and reptiles can exhibit both oviparous and viviparous reproduction, or ovoviviparity, where eggs develop and hatch inside the mother's body, leading to live birth.

(iii) Matching Type

9. Match the following terms with their correct descriptions:

Matching Column I with Column II

s.no	Column I	Column II	Correct Match
1.	Viviparous	A. Immature form of insects like butterflies, preceding adulthood	(No match)
2.	Reptiles	B. Lay eggs in water, often resembling a mass of jelly	(No match)
3.	Amphibians	C. Bury eggs in sand or soil	(No match)
4.	Fish	D. Lay eggs and sit on them to keep them warm until hatching	(No match)

Solutions and Explanations

Viviparous - A. Immature form of insects like butterflies, preceding adulthood

Explanation: This is incorrect. Viviparous animals give birth to live young that develop inside the mother's body (e.g., humans, dogs). The description in A refers to the larval stage (e.g., caterpillar) of insects, which is unrelated. There is no accurate match in the provided options.

Reptiles - B. Lay eggs in water, often resembling a mass of jelly
Explanation: This is incorrect. Reptiles, such as turtles and lizards, typically lay eggs on land or bury them in sand or soil, not in water as a jelly-like mass. This description better fits amphibians (e.g., frogs), indicating a mismatch in the table.

Amphibians - C. Bury eggs in sand or soil
Explanation: This is incorrect. Amphibians, like frogs and toads, usually lay eggs in water, often in jelly-like masses. Some salamanders may lay eggs on land or bury them, but this is not the typical behavior for amphibians. The correct match would be closer to B, suggesting an error in the table.

Fish - D. Lay eggs and sit on them to keep them warm until hatching
Explanation: This is incorrect. Most fish lay eggs in water, and while some species (e.g., certain cichlids) may guard or fan their eggs, sitting on them to keep them warm is characteristic of birds. There is no accurate match here.