



BIOLOGY

SAMPLE BOOK



BIOLOGY



I'm the
Intelli Kid

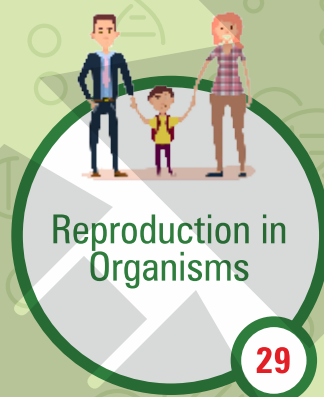
and
I'm becoming the
Best Version
of myself with





INDEX

GRADE-8



Experiential Experimental Edutaining



I AM PROGRESSING

(Tick mark the columns after achieving the Learning Milestones)



TOPIC

1st Learning

Exercise Solving

1st Revision

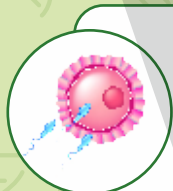
2nd Revision



**Crop Production
&
Management**

☐☐☐☐

**Reproduction
in
Organisms**

☐☐☐☐

**Reaching the
Age of
Adolescence**

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BIOLOGY

SAMPLE THEORY

CHAPTER 2

REPRODUCTION IN ORGANISMS

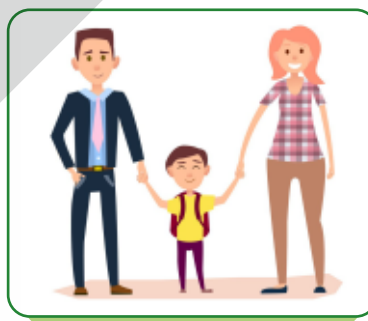
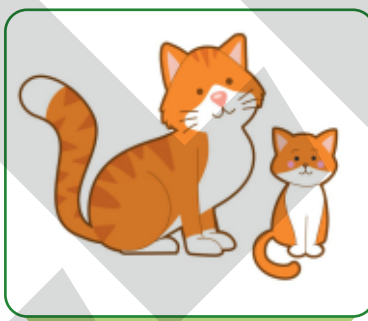
INTRODUCTION

We see a variety of organisms on the Earth. Every species like dogs, cats, monkeys, bacteria, birds, plants, etc. have a community of their own. Have you ever thought about how the community's population never disappears & how they are able to maintain their existence on the Earth ?

All organisms are made up of cells and organisms become complex according to their cellular organizations. If we talk about the survival of an individual, it has to carry out the life process to stay alive, but when we talk about the whole community's existence, this could only be maintained with the help of reproduction.

REPRODUCTION

- It is defined as a process of production of new individuals by existing one of their own kinds.
For e.g. Plants grow from seed to seedling & then into a mature plant. A cat gives birth to a kitten that grows into an adult cat. Human beings give birth to the baby that grows into an adult.



- Multiplication and perpetuation of species is essential for reproduction because the aged or older individual will die one day.
- DNA (genetic blueprint of life) stores complete information regarding body design, cellular machinery, functioning, etc.
- During each cell division, DNA produces new master copies. Firstly, DNA makes RNA, and then RNA builds proteins, enzymes & other biochemicals.



- Copied DNA leads to variations. These variations help in the evolution of organisms.

SIGNIFICANCE OF REPRODUCTION

- **For the continuation of the species:** Every organism will die one day and species will become extinct if new individuals are not created.
- **To maintain the growth of the population:** After reproduction, new members are added, which helps to maintain the population size.
- **To add variations for evolution:** New variations are added to organism's next generation, which helps it to survive.

TYPES OF REPRODUCTION

- The Earth has variety of living organisms that perform different modes of reproduction.
- Reproduction is classified into two categories:

Asexual reproduction

Sexual reproduction

Asexual reproduction

- In this type, only a single individual participates in reproduction & gives rise to the new one.
- Offspring (next generation) produced in asexual reproduction is a clone (genetically similar) of its parent.

Modes of asexual reproduction:



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SAMPLE EXERCISE



EXERCISE

GRADE-8

Reproduction in Organisms



Directions: Solve the following multiple choice questions by choosing the most appropriate option.

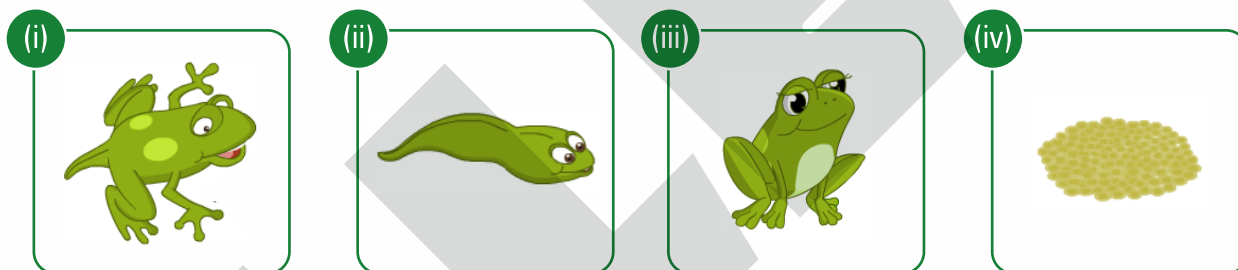
1. **Kapil was roaming around a pond. He saw a jelly-like structure on the surface of the pond. When he went for a closer look, he was fascinated after seeing eggs of the frog under the jelly-like structure. He was surprised to see all this. Next day, he went to the school & asked his teacher the reason behind laying hundreds of eggs at a time in the water. Choose the correct statement according to the given situation.**

- (1) It is because frogs lay eggs only once in a lifetime.
- (2) It is because hundreds of eggs increase the chances of survival.
- (3) It is because frogs are oviparous animals.
- (4) Both (1) & (2)

2. **At the time of grafting, the upper part of the plant that is grafted is known as _____.**

- (1) scion
- (2) stock
- (3) stem
- (4) adventitious bud

3. **Use the following pictures to depict the frog life cycle in the correct order.**



- (1) (i) → (iii) → (iv) → (ii)
- (2) (ii) → (iii) → (i) → (iv)
- (3) (iv) → (ii) → (i) → (iii)
- (4) (i) → (ii) → (iii) → (iv)

4. **Which of the following options is correct about the placenta ?**

- (1) It helps in the exchange of various materials like gases, nutrients, excretory products from mother to developing baby.
- (2) It plays a vital role during vegetative propagation.
- (3) It only helps in gaseous exchange from mother to baby.
- (4) It prevents the developing baby from mechanical shock.

5. **Development of a child during the gestation period inside the mother's womb properly is significant. Select the correct order of development of the baby after fertilization.**

- (1) Foetus → Offspring → Embryo → Zygote
- (2) Offspring → Zygote → Embryo → Foetus
- (3) Zygote → Embryo → Foetus → Offspring
- (4) Embryo → Foetus → Zygote → Offspring

8. Read the given paragraph.

A pair of _____ is present inside the abdominal cavity in the lower section of the female body. It has two primary functions. It produces a female gamete named _____. It also produces a female hormone called _____. The process of releasing the ovum from the ovary is known as _____.

Fill in the blanks by choosing appropriate options.

- | (A) | (B) | (C) | (D) |
|-------------|--------|--------------|---------------|
| (1) Testes | Sperm | Testosterone | Fertilization |
| (2) Ovaries | Ova | Oestrogen | Ovulation |
| (3) Kidneys | Zygote | Insulin | Gametogenesis |
| (4) Lungs | Embryo | Progesterone | Gastric |

1. George and Perry had a debate. Both gave different statements. Read the statements carefully & choose the most appropriate option.

Storage: Animals that lay eggs are called *oviparous animals*.

Flare lizard, bat, frog are examples of ectothermic animals.

- (1) Shweta is correct & Pooja is incorrect
(2) Pooja is correct & Shweta is incorrect
(3) Both are correct
(4) Both are incorrect

8. Pictures of two organisms are given below. Choose the most appropriate option from the given ones.



- (i) A is a hydra, whereas B is planaria.
 (ii) A reproduces through fragmentation, whereas B reproduces through regeneration.
 (iii) Both reproduce through fragmentation.
 (iv) Both have specialized cells that can develop back the lost parts.

8. **Subtract the incorrectly matched terms.**

- (i) Animals that produce eggs within the body: *Oviparous*
(ii) The process of formation of the male gamete: *Deogenisis*
(iii) A tissue cultured from the tip of the plant during tissue culture: *Callus*
(iv) A fluid in blood in the uterus: *Amniotic fluid*
- (1) (i) only
(2) (ii) only
(3) (i) and (ii)
(4) (ii) and (iv)