Lakhmir Singh Solutions For Class 8 Science Chapter 9

1. Which life process ensures that a plant of animal species will not disappear from the earth?

Answer

Reproduction is the life process that ensures that a plant of animal species will not disappear from the earth.

2. What is the name of the reproductive process?

(a) Which involves two parents?

(b) Which involves only one parent?

Answer

(a) Sexual reproduction

(b) Asexual reproduction

3. (a) Name two animals that reproduce sexually.

(b) Name two animals that reproduce asexually.

Answer

(a) Animals that reproduce sexually are humans and dogs

(b) Animals that reproduce asexually are hydra and planaria.

4. State whether human beings reproduce by sexual method or asexual method.

Answer

Humans reproduce by sexual method.

5. Which type of reproduction?

(a) Involves gametes?

(b) Does not involve gametes?

Answer

(a) Sexual reproduction involves gametes.

(b) Asexual reproduction does not involve gametes.

6. Give another term for a fertilized egg.

Answer

Zygote is another term for the fertilized egg.

7. Name the process of the fusion of gametes?

Answer

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The process by which male and female gametes fuse together is called fertilization.

8. Do all animals give birth to individuals like humans?

Answer

No, all animals do not give birth like humans.

9. What is the other name of sex cell?

Answer

Gametes are also called sex cells.

10. What are the organs in humans which produce the gametes?

Answer

Testes in males and ovaries in females are the organs in humans that produce the gametes.

11. (a) What are the male gametes in humans called?

(b)Name the Organ which produce male gametes.

Answer

(a) The male gametes in humans are called sperms

(b) Testes is the organ which produces male gametes.

12. (a) What are the female gametes in humans called?

(b) Name the organs which produce female gametes.

Answer

(a) The female gametes in human cells are called eggs.

(b) Ovaries produce female gametes.

13. Name the organs which produce sperms in humans.

Answer

Testes are the organs which produce sperms in humans.

14. Name the organs which produce egg (or ova) in humans.

Answer

Ovaries produce eggs (or ova) in humans.

15. What do the testes in a man produce?

Answer

The testes in a man produces sperms.

16. What do the ovaries in a woman produce?

Answer

The ovaries in a woman produces eggs.

17. Which organ of the human body passes sperms from a man to a woman?

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Answer

The penis is the organ that passes sperms from man into the vagina of a woman's body.

18. In which female reproductive organ does the embryo get embedded?

Answer

The embryo gets embedded in the wall of the uterus for further development.

19. Which stage comes earlier in the development of a human baby from zygote: fetus or embryo?

Answer

Embryo stage comes earlier in the development of a human body.

20. Name the technique which is used to help a woman with blocked oviducts to have a baby.

Answer

In Vitro Fertilization is the technique that is used to help a woman with blocked oviducts to have a baby.

21. Write the full name of IVF.

Answer

IVF stands for In Vitro Fertilization.

22. What is the success rate of IVF technique of reproduction in humans?

Answer

The success rate of IVF is only about 30 to 40 percentage.

23. What type of fertilization takes place in a hen?

Answer

Internal fertilization takes place in a hen.

24. What term is used for the following? The change from tadpole to frog.

Answer

The transformation from tadpole to frog is termed as metamorphosis.

25. Name two animals that produce embryos that grow into larvae before transforming into adults.

Answer

Frog and silk moth produce embryos that grow into larvae before transforming into adults.

26. What term is used for 'bulges' observed on the sides of the body of Hydra?

Answer

Bulges observed on the sides of the body of Hydra are termed as buds and they develop into a new individual.

27. What type of fission takes place in Amoeba?

Answer

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Binary fission takes place in Amoeba.

28. Name one animal each which reproduces :

(a) by binary fission, and

(b) by budding.

Answer

(a) Amoeba

(b) Hydra

29. Name the asexual method of reproduction:

(a) in Hydra, and

(b) in Amoeba.

Answer

(a) Budding

(b) Binary fission

30. Name the technique which was used in producing 'Dolly' the sheep.

Answer

The technique which was used in producing 'Dolly' the sheep is cloning.

31. Name the parent sheep of which Dolly was a clone.

Answer

Dolly was the healthy clone of Finn Dorsett Sheep.

32. What name is given to the following?

An animal which is an exact copy of its parents.

Answer

An animal which is an exact copy of its parents is called a clone.

33. What are the two general methods of reproduction in organisms?

Answer

The two general methods of reproduction in organisms are sexual and asexual reproduction.

State whether the following statements are True or False:

(a) Each sperm is a single cell.

(b) A new human individual develops from a cell called gametes.

(c) Egg laid after fertilization is made up of a single cell.

(d) A zygote is formed as a result of fertilization.

(e) External fertilization takes place in the frog.

(f) An embryo is made up of a single cell.

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(g) Oviparous animals give birth to young ones.

(h) Internal fertilization takes place in hens.

(i) The hens give birth to chicks like human beings give birth to babies.

(j) Amoeba reproduces by budding.

(k) Binary fission is a method of asexual reproduction.

(l) Fertilization is necessary even in asexual reproduction.

(m) Cloning is a sexual reproduction method in mammals.

Answer

(a) True

(b) False

(c) True

(d) True

(e) True

(f) False

(g) False

(h) True

(i) False

(j) False

(k) True

(l) False

(m) False

Q. 35

Fill in the following blanks with suitable words

(a) The process of _____ ensure continuity of life on earth.

(b) The cells involved in sexual reproduction are called _____

(c) Fusion of gametes gives rise to a single cell called _____

(d) The process of fusion of gametes is called _____

(e) The other name of egg cell is _____

(f) A sperm is much _____ than an egg cell.

(g) In humans, one nature egg (or ovum) is released into oviduct every _____ by one of the ovaries.

(h) The egg-laying animals are called _____ animals.

(i) The cow is a _____ animal whereas ostrich is an _____ animal.

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(j) The change of caterpillar into an adult silk moth is called _____

(k) The larva of the frog is called _____

(l) The two common methods of asexual reproduction in animals are _____ and _____

(m) Dolly , the sheep, was produced by the technique called _____

Answer

(a) The process of reproduction ensures continuity of life on earth.

(b) The cells involved in sexual reproduction are called gametes

(c) Fusion of gametes gives rise to a single cell called a zygote

(d) The process of fusion of gametes is called fertilization

(e) The other name of an egg cell is ovum

(f) A sperm is much smaller than an egg cell.

(g) In humans, one nature egg (or ovum) is released into oviduct every mouth by one of the ovaries.

(h) The egg-laying animals are called oviparous animals.

(i) The cow is a vivaparous animal whereas ostrich is anoviparous_ animal.

(j) The change of caterpillar into an adult silk moth is called metamorphosis

(k) The larva of the frog is called tadpole

(l) The two common methods of asexual reproduction in animals are binary fission and budding

(m) Dolly, the sheep, was produced by the technique called cloning.

Short Answer Type Questions

36. (a) What is the difference between asexual and sexual reproduction?

(b) Which of the following organisms reproduce by sexual method and by asexual method?

Amoeba, Cats, Humans, Birds, Hydra

Answer

(a)

Asexual reproduction	Sexual reproduction
The type of reproduction in which only a single parent is involved is called asexual reproduction.	The type of reproduction which involves two parents to give rise to an offspring is called sexual reproduction.
There is no mixing of genetic information.	The genetic information from both parents is inherited.
Example: Budding in hydra	Example: Human beings

(b) Asexual method of reproduction: Cats, Humans, Birds

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Sexual method of reproduction: Amoeba and Hydra

37. What is meant by the terms internal fertilization and external fertilization? Explain with examples

Answer

Internal fertilization: The fertilization takes place inside the female body is called internal fertilization.

Internal fertilization protects the fertilized egg or embryo from harsh environments.

Examples are cow, humans, dogs, monkeys etc.

External fertilization: The fertilization takes place outside the female body is called external fertilization.

It produces a large number of offspring due to external hazards.

Examples are fish, frog, organisms etc.

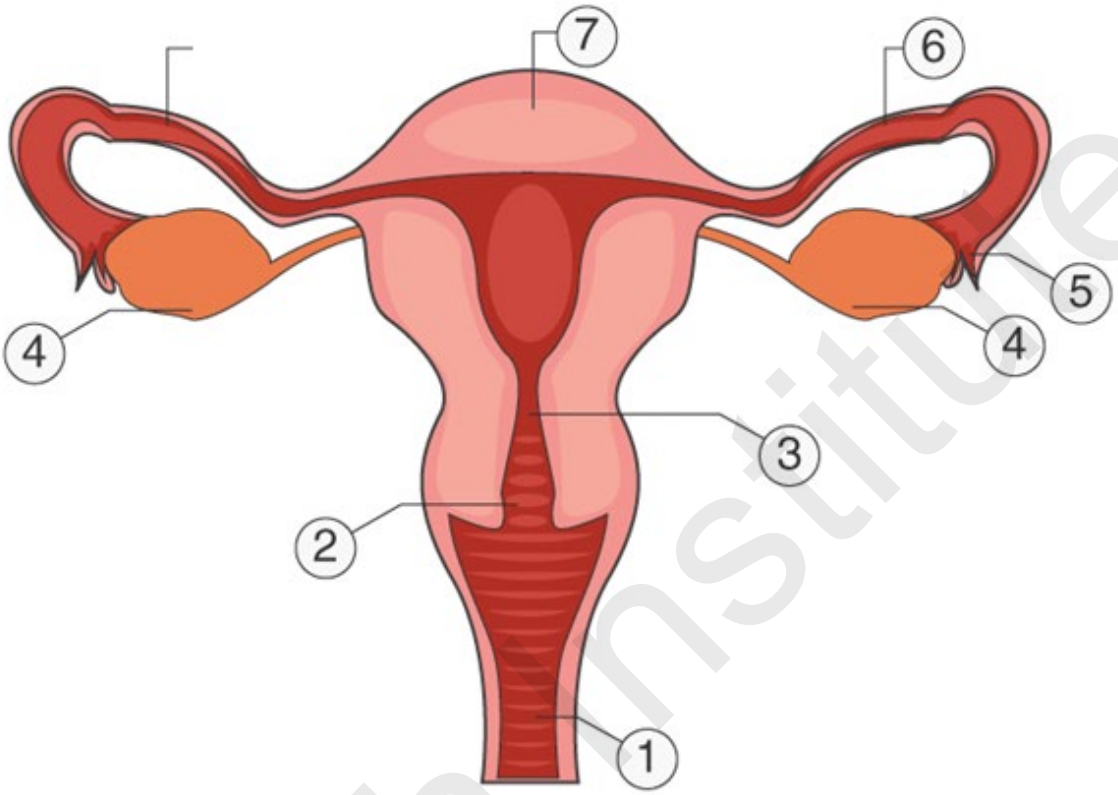
38. Draw a labeled diagram of the human female reproductive system

(a) Where in the human body does the egg (ovum) gets fertilized.

(b) Where does the fertilized egg (or zygote) gets developed into a baby in human body?

Answer

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1 Vagina | 2 Cervix | 3 Endometrium | 4 Ovary
5 Fimbriae | 6 Fallopian tubes | 7 Uterus

(a) In the human body does the egg (ovum) get fertilized in the fallopian tube.

(b) The fertilized egg (or zygote) gets developed into a baby in the uterus of the human body.

39. What type of fertilization take place in the following?

(a) Cow

(b) Frog

(c) Human

(d) Fish

(e) Hen

Answer

(a) Cow- Internal fertilization

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(b) Frog- External fertilization

(c) Human- Internal fertilization

(d) Fish- External fertilization

(e) Hen- Internal fertilization

40. Why do female frogs (or fish) lay hundreds of eggs?

Answer

Female frogs (or fish) lay hundreds of eggs because the chances of survival in that environment are scarce. Hence, female frogs (or fish) lay hundreds of eggs.

41. What is meant by embryo? Can we identify the body features in an embryo?

Answer

The zygote divides repeatedly to give rise to a ball of cells. The cells then begin to form groups that develop into different tissues and organs of the body. This developing structure is termed an embryo.

The stage of the embryo in which all the body parts can be identified is called a foetus.

42. Give two differences between a zygote and a foetus.

Answer

Zygote:

- It is the earliest stage of development
- It is formed by the fusion of male and female gametes

Foetus

- It is the last developmental stage of an organism
- Foetus mainly undergoes internal development.

43. Describe the various steps involved in sexual reproduction in animals.

Answer

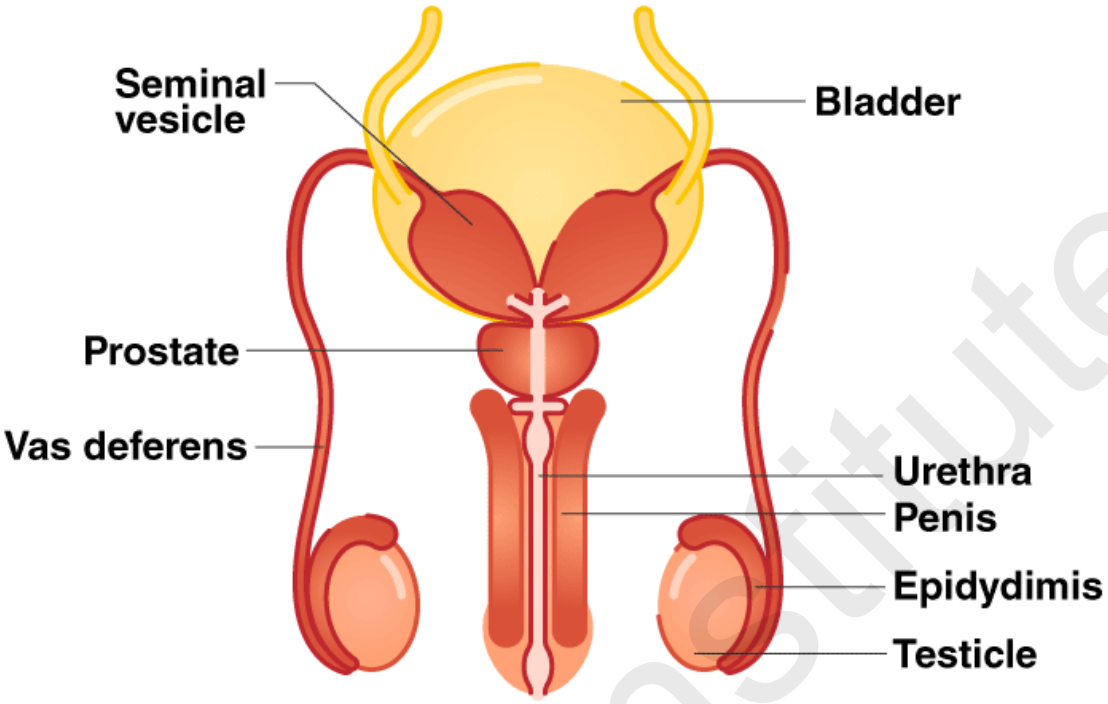
Following steps are involved in the process of sexual reproduction in an animal:

- The male parent produces male gametes called sperms.
- The female parent produces female gamete called ova (eggs)
- The sperm enters the ovum and fuses with it to form a new cell called zygote. This step is called fertilisation.
- The zygote begins to develop into an embryo. The zygote divides repeatedly to form a large number of cells and ultimately the zygote grows and develops to form a baby.

44. Draw a labeled diagram of the human male reproductive system in animals.

Answer

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45. Define foetus. After how many weeks of development, a human embryo is said to become a foetus.

Answer

The stage of embryo in which all body parts can be identified is called a foetus. A human embryo is said to become a foetus after 8 weeks of the development of the baby.

46. What is metamorphosis? Give two examples of metamorphosis.

Answer

The transformation of the larva into an adult through drastic changes is called metamorphosis. Frogs and insects are examples of organisms showing metamorphosis.

47. What is the difference between viviparous animals and oviparous animals?

Answer

Viviparous Animals

- Animals that give birth to offspring are called viviparous.
- In viviparous animals, both fertilization, as well as the development of the embryo, takes place inside the female reproductive system.
- Examples of Viviparous Animals: Human beings, dogs, cats, elephants, etc.

Oviparous Animals

- Animals that lay eggs are called oviparous.

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- In oviparous animals, fertilization takes place internally but embryo development takes place externally.
- Examples of Oviparous Animals: Fish and Frog

48. Which of the following are viviparous animals and which of the following are oviparous animals?

Frog, Human being, Sparrow, Lizard, Cow, Dog, Hen, Fish, Butterfly, Cat

Answer

Viviparous animals: Human being, Dog, Cow and Cat

Oviparous animals: Frog, Sparrow, Lizard, Dog, Hen, Fish, and Butterfly

49. Give five examples each of the animals which develop

(a) inside the mother.

(b) inside eggs which the mother lays.

Answer

(a) Inside the mother: Human being, Dog, Cow, Tiger and Cat

(b) Inside eggs which the mother lays: Frog, Sparrow, Lizard, Dog, Hen, Fish, and Butterfly

50. Explain how chicks are born. How much time does the embryo present in hen's egg take to develop into a chick (when provided sufficient warmth)?

Answer

As like humans, hens also undergo internal fertilization but, they do not give birth like human beings. After the fertilization, the zygote divides repeatedly to form embryo which travels through the oviduct. As it travels through many different protective layers are formed. The outermost layer of protection is the hard shell of the egg. During this process when the hard shell is completely done the hen lays the egg. Then the hen sits on the eggs to provide sufficient warmth to the eggs so that it develops from embryo to chick. The embryo takes about 3 weeks to develop into a complete chick.

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