Chapter 18. Reproduction in Animals

Very Short Q&A:

Q1: What does the young one of Hen called?

Ans: The young one of Hen is Chick.

Q2: What are the modes of Animal reproduction?

Ans: Sexual and asexual are two modes of Animal reproduction.

Q3: _____ is important for continuation of a species.

Ans: Reproduction

Q4: Gametes fuse to form _____.

Ans: Zygote

Q5: Both male and female reproductive organ produces gamete. (True/False)

Ans: Both male and female reproductive organ produces gamete. (True)

Q6: Plants reproducing sexually have male and female parts. (True/False)

Ans: Plants reproducing sexually have male and female parts. (True)

Q7: How zygote is important in birth of offspring?

Ans: Because it is the zygote which develops into new individual.

Q8: What is the basic function of reproductive parts?

Ans: The basic function of reproductive parts is to produce gametes which eventually fuse to form Zygote.

Q9: The basic function of reproductive parts is same in both plant and animal. (True/False)

Ans: The basic function of reproductive parts is same in both plant and animal. (True)

Q10: Human sperm is a single celled. (True/False)

Ans: Human sperm is a single celled. (True)

Q11: What are the components of Sperm cell?

Ans: Tail, middle piece and head are the components of Sperm cell.

Q12: What is the purpose of tail in a human sperm?

Ans: Tail helps the sperm swim and float all the way from vagina to fallopian tube where it fertilises the egg.

Q13: What is Sperm cell?

Ans: Single cell.

Q14: Name the components of male reproductive organs in human.

Ans: Pair of testes, two sperm ducts and a penis constitutes male reproductive organs.

Q15: Define fertilisation.

Ans: When sperm comes in contact with an egg, one of the sperm gets fused with the egg to form zygote, such kind of fusion between egg and sperm to form a zygote is called as fertilisation.

Q16: What do you mean by zygote?

Ans: It is the beginning of the new individual, for detail refer Section A answer no 15.

Q17: Oviducts are also known as _____.

Ans: Fallopian tubes.

Q18: What are Ova?

Ans: Female gametes called Ova.

Q19: What is internal fertilisation?

Ans: Fertilisation which takes place inside the female body is called as internal fertilisation, it occurs in humans, cows, hens and dogs.

Q20: Name some animals in which internal fertilisation occurs.

Ans: Cows, hens and dogs.

Q21: Name some animals in which external fertilisation occurs.

Ans: Fish and frog.

Q22: Where does the development of baby take place in female body?

Ans: The development of baby takes place in Uterus.

Q23: Which component of female reproductive system produces egg cell?

Ans: Ovary produces egg cell in female reproductive system.

Q24: What is the rate of production of egg cell in Human being?

Ans: Single egg cell is released by one of the ovary each month.

Q25: During fertilization how many sperm can fuse with the egg?

Ans: During fertilization only one sperm cell can fuse with the egg.

Q26: Name the kind of fertilisation occuring in human beings

Ans: Internal fertilization occurs in case of human.

Q27: Define foetus.

Ans: Foetus is the developing mammal or other viviparous vertebrate, it is that stage of the growing embryo in which all the body parts can be identified.

Q28: Development of Test tube babies takes place in uterus. (True/False)

Ans: True

Q29: Embryo embeds in the wall of _____.

Ans: Uterus

Q30: Completion of which stage of embryo ensures the birth of child?

Ans: Development of Foetus stage of embryo ensures the birth of child.

Q31: What do you mean by Oviparous?

Ans: Those animals which lay eggs are called Oviparous.

Q32: What is viviparous?

Ans: Those animals which give birth to young ones are called viviparous.

Q33: Give examples of some oviparous and viviparous animals.

Ans: Oviparous - frog, fish, lizard

Viviparous - cow, dog, human beings

Q34: Which kind of capability does frog gain by transforming from tadpole to adult frog?

Ans: Frog gains jumping in addition to swimming by transforming from tadpole to adult frog.

Q35: What is Bud?

Ans: Bulges on the body of organisms, which develop into new individual, are called Bud.

Short Q&A:

Q1: Define Sexual reproduction.

Ans: Sexual reproduction: Reproduction which begins with the fusion of male and female gamete is called Sexual reproduction.

Q2: Define Fertilization.

Ans: Fertilization: Fusion of egg with sperm is called Fertilization.

Q3: What is Zygote?

Ans: Fusion of male and female gametes produce fertilize egg which is Zygote.

Q4: Define internal fertilization.

Ans: Fertilization which takes place inside female body is called internal fertilization.

Q5: What is in-vitro fertilization?

Ans: Fertilization done by doctors, outside the body, is called In-vitro fertilization?

Q6: How do the hundreds of egg of frog remain protected even if laid on open aquatic system?

Ans: A layer of Jelly holds the eggs together and provides them protection.

Q7: What is External fertilization?

Ans: The type of fertilization in which fusion of male and female gametes takes place outside the body of female is called External fertilization. It takes place in animals like frog, lizard, fish etc.

Q8: Give two examples of organisms showing both internal and external mode of fertilization.

Ans: Internal fertilization: Human and Hen.

External fertilization: Frog and Starfish.

Q9: What are the common difference between zygote and embryo?

Ans: Zygote: Single fertilizes egg and found in oviducts.

Embryo: Ball of cells and gets embedded in the wall of uterus for development.

Q10: Define Embryo.

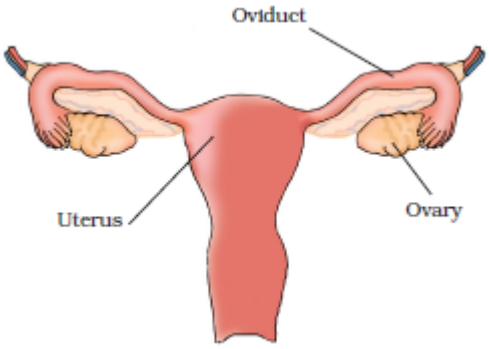
Ans: Zygote divides repeatedly to give ball of cell called Embryo.

Q11: What is Foetus?

Ans: The stage of embryo in which all body part can be identified is a Foetus. When the development of foetus is complete, the mother gives birth to the baby.

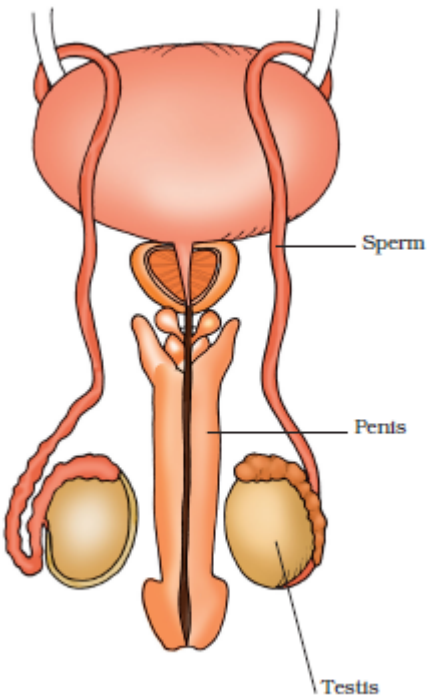
Q12: Draw a labelled diagram of human female reproductive organ.

Ans: Human female reproductive organ:



Q13: Draw a labelled diagram of human male reproductive organ.

Ans: Human male reproductive organ:



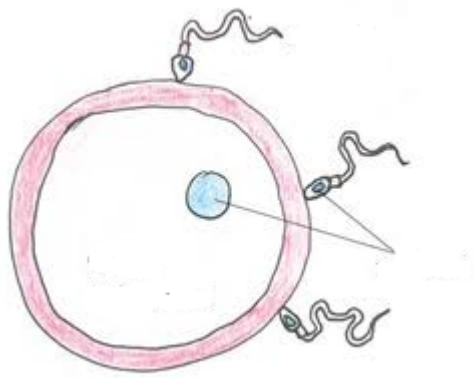
Q14: What is the basic difference between reproduction mechanism in human being and hen?

Ans: Human being gives birth to baby, they are viviparous; whereas Hen lays egg and they are oviparous.

Q15: Why do frogs and fish lay eggs in hundred, whereas a hen lays only one egg at a time?

Ans: Organisms having internal fertilization, like hen, produce one egg at a time. This is so because here there is less chance of failure of fusion between male and female gamete. After the gametes are fertilized there is just the need of development of animal in the form of egg. Frog like aquatic organisms who shows external mode of reproduction have to lay egg in hundred. The first reason behind this is the single egg is so small in size that it will not be possible to stay to definite position and which in turns make hard for sperm to found and fuse them. Whereas, when large number of eggs make them stick together this makes fertilization possible. Another reason behind this is there is a lot of organisms who feed on these eggs, so larger number of eggs gives more possibility of giving birth to young ones

Q16: Name the process taking place here and label the diagram:



Ans: The process is Fertilization.

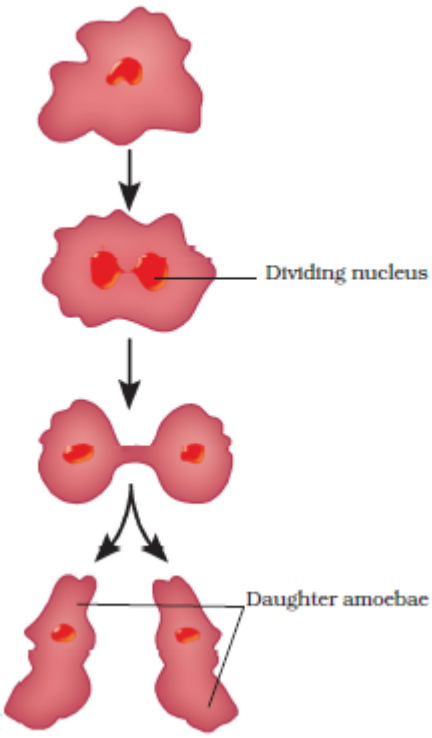
1. A: Sperm
2. B: Nucleus
3. C: Egg

Q17: What is Viviparous animal?

Ans: The animals which give birth to young one are called Viviparous animal. Like cow, dog etc.

Q18: Give a diagram explaining mode of reproduction in Amoeba.

Ans: Amoeba reproduce asexually through Binary fission:



Q19: Explain Metamorphosis.

Ans: The transformation of larva into adult through drastic changes is called Metamorphosis.

Q20: Differentiate between internal fertilisation and external fertilisation.

Ans:

External fertilisation	Internal fertilisation
1. Fusion of male and female gamete take place outside the female body 2. It occurs in animals like dog, cows as well as in human beings.	1. Fusion of male and female gamete take place inside the female body 2. It occurs in animals like dish, frog etc.

Q21: Differentiate between zygote and foetus.

Ans:

Zygote	Foetus
1. It is formed by the fusion between male and female reproductive cells. 2. It is formed from fusion between sperm and ovum	1. It is a developing mammal or other viviparous vertebrate after the embryonic stage and before birth. 2. It is formed from zygote that is zygote implants itself in uterus. Then it starts dividing repeatedly to give rise to a ball of cells, from 8 weeks till the birth, the baby is called foetus.

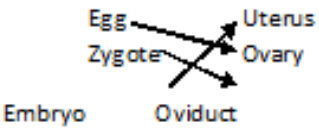
Q22: Name the developmental stage:

Ans: The developmental stage is Foetus.

Q23: Match the following:

Column 1	Column 2
1. Egg 2. Zygote 3. Embryo	1. Uterus 2. Ovary 3. Oviduct

Ans: Match the following:



Q24: Name some animals in which young ones are different from adult.

Ans: Silkworm and Frog have young ones different from adult.

Q25: Define asexual mode of reproduction.

Ans: Mode of reproduction in which only single parent is involved is called asexual reproduction.

Q26: Does all kind of asexual mode of reproduction can also be called Budding?

Ans: No, there is another mode of asexual reproduction apart from Budding, which is Binary fission.

Q27: Define Binary fission and give name of at least one organism following it.

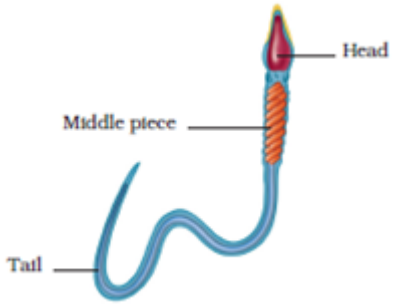
Ans: The mode of asexual reproduction in which an animal reproduce itself by dividing into two individual is called Binary fission. Amoeba follows this mode for its reproduction.

Q28: Differentiate between Budding and Binary fission.

Ans: In Budding new organism develops from bud, whereas, in Binary fission organism reproduce by dividing itself into two.

Q29: Draw a labelled diagram of human sperm.

Ans: Human sperm:



Q30: Explain how chicks are born?

Ans: Chickens are not actually born, they are hatched from eggs. A chicken will ovulate and lay an egg within 24 hours. The chicken will continue to lay eggs every 24-36 hours. After eggs are layed, it takes about 3 weeks for them to hatch.

Q31: Name different stages of the lifecycle of a frog and silkworm.

Ans: Life cycle of frog: Eggs --> Early tadpole --> Late tadpole --> Adult frog

Life cycle of a butterfly: Egg--> Larva or caterpillar --> pupa --> Adult

Q32: Define metamorphosis. Explain it in human beings.

Ans: The transformation of the larva into an adult through drastic changes is called as metamorphosis. This is the matter of contradiction that human beings undergo metamorphosis or not. Some people say humans don't go through metamorphosis. We just change size and appearance, but we are not considered to go through metamorphosis. On the other hand some people say Of course we go through metamorphosis! When you are born you are a big foot-long worm and as a young toddler you start to make a cocoon. Then, when you break out at about age 10 you are a normal looking person.

Q33: Define asexual reproduction with an example.

Ans: Mode of reproduction in which only single parent is involved is called asexual reproduction. Asexual reproduction can occur by any of the following ways:

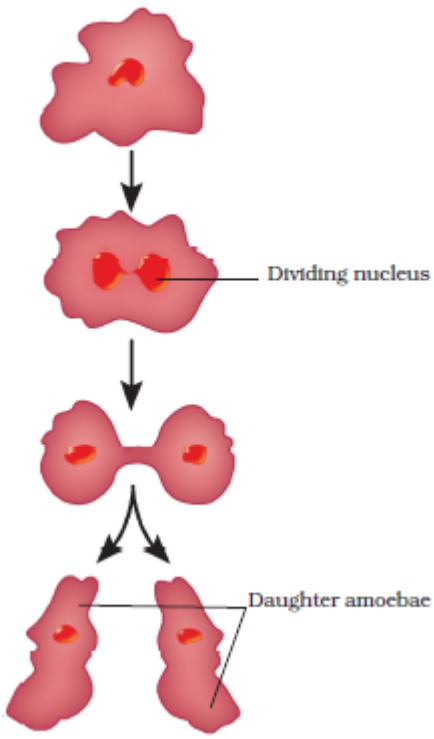
Binary Fission
Budding
Sporulation
Regeneration
Parthenogenesis
Vegetative Propagation

For example: In binary fission the parent organism is replaced by two daughter organisms, because it literally divides in two.

Q34: What do you mean by binary fission?

Ans: The mode of asexual reproduction in which an animal reproduce itself by dividing into two individual is called binary fission. Amoeba follows this mode for its reproduction.

Amoeba reproduce asexually through Binary fission:



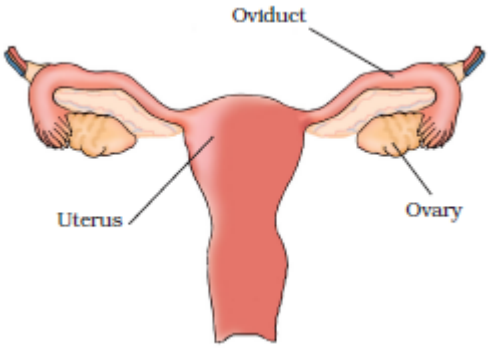
Long Q&A:

Q1: Why frog lays egg coverless, whereas, Hen lays it with hard cover? Explain.

Ans: Hen reproduces through internal fertilization in which the egg is already fertilized before coming out as in form of egg.In the case of frog there is external fertilization, hence, egg fertilizes outside the female body. Female lays coverless eggs in the water body later male deposit there sperm over them. And with the help of tail, the sperm swims and fuses with egg. If these eggs have hard covering then it is impossible for the sperm to fuse with them and thus the reproduction cannot be possible.

Q2: Explain the process of sexual reproduction in human beings.

Ans: Human female reproductive organ:



Fertilisation: the fusion of sperm and ovum is called fertilisation; it results in the formation of fertilised egg or zygote. After fertilisation the development of embryo take place. The zygote divides repeatedly to form a ball of cells, the cell then begin to form groups that develop into different tissues and organs of the body, this developing structure is called as embryo.

Q3: Explain the importance of reproduction in organisms.

Ans: Reproduction is a process which is essential to maintain the life of an individual.

The organisms reproduce because of the two main reasons: -

1. To continue one's progeny
2. It provides group immortality by replacing the dead individuals with the new ones for the survival of the species on this earth.

Q4: Explain cloning with an example of first cloned animal.

Ans: Cloning is defined as the production of exact copy of a cell, any other living part or a complete organism. Cloning of an animal was first of all performed successfully by Lan Wilmut and his colleagues, for the first time a sheep named as dolly was cloned successfully; Dolly was born on 5 July 1996 and was the first mammal to be cloned. The process of cloning involve collection of cell from the mammary gland of a female Finn Dorsett sheep and an egg whose nucleus was removed was obtained from a Scottish blackface ewe then nucleus from the mammary gland of Finn Dorsett sheep was inserted into egg of Scottish blackface ewe, the egg thus produced was implanted into the Scottish blackface ewe, development of this egg take place normally and finally Dolly was produced.