Reproduction in Animals

Very Short Answer Type Questions

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

Answer: Reproduction is an important life process which ensures that a plant or animal species does not disappear from this earth.

Q.2. What is the name of the reproductive process?

(a) Which involves two parents?

(b) which involves only one parents?

Answer: (a) In sexual reproduction, two parents are involved.

(b) In asexual reproduction, only one parent is involved.

Q.3 A. Name two animals which reproduce sexually.

Answer: Cows and dogs are reproducing sexually.

Q.3 B. Name two animals which reproduce asexually.

Answer: Hydra and planaria reproduce by asexually.

Q.4. State whether human beings reproduce by sexual method of asexual method.

Answer: Human beings reproduce by sexual method.

Q.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.

Q.6. Give another term for a fertilized egg.

Answer: Another term for a fertilized egg is zygote.

Q.7. Name the process of the fusion of gametes?

Answer: The process by which male and female gametes fuse to each other is called fertilization.

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

Answer: No. All organisms do not give birth to individuals like humans.

Q.9. What is the other name of sex cell?

Answer: Sex cells are also known as gametes.

Q.10. What are the organs in humans which produces the gametes?

Answer: In humans, testes (in male) and ovaries (in female) are reproductive organ which produces the gametes.

Q.11 A. What are the male gametes in humans called?

Answer: The male gametes in human are called sperms.

Q.11 B. Name the Organ which produce male gametes.

Answer: Testes produce male gametes called sperms.

Q.12 A. What are the female gametes in human called?

Answer: The female sex cells (gametes) in humans are called eggs.

Q.12 B. Name the organs which produce female gametes.

Answer: Ovary produces female sex cells called eggs.

Q.13. Name the organs which produces sperms in humans.

Answer: Testes produce male gametes (sperms) in humans.

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

Answer: Ovaries produce egg (or ova) in humans.

Q.15. What do the testes in a man produces?

Answer: Testes in a man produce male gametes called sperms.

Q.16. What do the ovaries in a woman produce?

Answer: Ovaries in a woman produce female gametes called eggs.

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

Answer: Penis is an organ which passes the sperms from the man's body into the vagina in the women's body during mating.

Q.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.

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

Answer: Embryo stage comes earlier in the development of a human baby from zygote.

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

Answer: In vitro fertilization (IVF) technique is used to help a woman with blocked oviducts to have a baby.

Q.21. Write the full name of IVF.

Answer: The full name of IVF is in vitro fertilization (fertilization outside the body).

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

Answer: The success rate of IVF technique is only about 30 to 40 percent.

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

Answer: Internal fertilization takes place in a hen.

Q.24. What term is used for the following?

The change from tadpole to frog.

Answer: The transformation of the larva (tadpole) into an adult (frog) through drastic changes is called metamorphosis.

Q.25. Name two animals which 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.

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

Answer: These bulges are the developing new individuals and they are called buds.

Q.27. What type of fission takes place in Amoeba?

Answer: Binary fission takes place in Amoeba.

Q.28. Name one animal each which reproduces:

(a) by binary fission, and

(b) by budding.

Answer:

(a) Amoeba reproduces by common asexual method called binary fission.

(b) Budding is asexual method of reproduction in hydra.

Q.29. Name the asexual method of reproduction:

(a) in Hydra, and

(b) in Amoeba.

Answer:

(a) Hydra reproduce by asexual method called budding.

(b) Amoeba reproduce by binary fission, a asexual method.

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

Answer: Cloning is the technique which was used in producing 'Dolly' the sheep.

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

Answer: Dolly was a healthy clone of the Finn Dorsett sheep.

Q.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 clone.

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

Answer: There are two methods of reproduction:

(i) Sexual reproduction **(ii)** Asexual Reproduction

Q.34. 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 frog.

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

(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, sperm is a single cell with all the usual cell components.

(b) False, A new human individual develops from a cell called zygote.

(c) True, egg laid after fertilization is made up of a single cell.

(d) True, Fertilization results in the formation of zygote which begins to develop into an Embryo.

(e) True, External fertilization takes place in frog and fish.

(f) False, embryo is a developing structure which is made up of group of cells.

(g) False, those animals which lay eggs are called oviparous animals.

(h) True, Internal fertilization takes place in hens, humans and cow.

(i) False, Hens are oviparous animals which lay eggs.

(j) False, Amoeba reproduce by binary fission.

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

(l) False, fertilization is not necessary in asexual reproduction.

(m) False, Cloning is the production of an exact copy of a cell, any other living part, or a complete organism.

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.

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

(k) The larva of 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) reproduction **(b)** gametes **(c)** zygote

(d) fertilization **(e)** ovum **(f)** smaller

(g) month **(h)** oviparous **(i)** viviparous; oviparous

(j) metamorphosis **(k)** tadpole **(l)** binary fission; budding

(m) cloning

Short Answer Type Questions

Q.36 A. What is the basic difference between asexual and sexual reproduction?

Answer: Difference between asexual and sexual reproduction:

Asexual reproduction	Sexual reproduction
In this type of reproduction, the offspring arises from a single parent.	The offspring arises from two parents of different sexes.
Example: Hydra, Amoeba, etc.	Example: Frog, human beings, etc.

Q.36 B. Which of the following organisms reproduces by sexual and which by asexual method?

Amoeba, Cats Humans, Hydra, Birds

Answer: Sexual method: Cats, humans, birds

Asexual method: Amoeba and Hydra

Q.37. What is meant by the terms 'internal fertilization and 'external fertilization'? Explain with example.

Answer: **Internal fertilization:** Fertilization which takes place inside the female body is called internal fertilization. Internal fertilization occurs in many animals including humans, cows, dogs and hens.

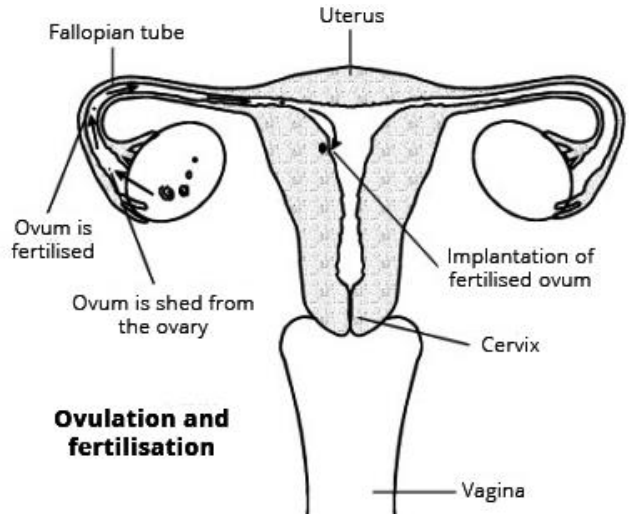
External fertilization: This type of fertilization in which the fusion of a male and a female gamete takes place outside the body of the female is called external fertilization. It is very common in aquatic animals such as fish, starfish, etc.

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

(a) Where in the human body does an egg (or ovum) get fertilized

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

Answer: The diagram of the human female reproductive system is shown below:



a) In the human body, an egg (or ovum) gets fertilized in the fallopian tubes.

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

Q.39. What types of fertilization takes place in the following?

(a) Cow **(b)** Frog

(c) Humans **(d)** Fish

(e) Hen

Answer: Internal fertilization – (a) Cows (c) Humans (e) Hen

External fertilization - (b) Frog (d) Fish

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

Answer: The female frogs (or female fish) lay hundreds of eggs because there are fewer chances of surviving in that environment, so from 100 even if 5-10 survive, their species will survive.

Q.41. What is meant by an '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.

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

Answer: (i) Zygote is made up of a single cell while foetus is made up of many cells.

(ii) Zygote is formed by the fertilization of sperm and ovum, foetus is formed by the repeated divisions of the zygote.

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

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

(i) In the animal, male parent produces male gametes called sperms. Millions of sperms are produced by testes.

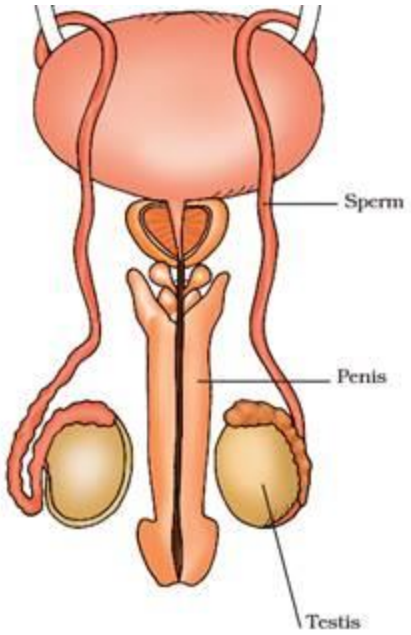
(ii) The female parent produces female gamete called ova (eggs). Like a sperm, an egg is also a single cell.

(iii) The next step is fertilization. In this step, sperm enters the ovum and fuses with it to form a new cell called zygote. The zygote is the beginning of a new individual.

(iv) In this step, 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.

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

Answer:



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

Answer: The stage of the embryo in which all the body parts can be identified is called a foetus. A human embryo becomes a foetus after about 8 weeks of pregnancy.

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

Answer: The transformation of the larva into an adult through drastic changes is called metamorphosis. Metamorphosis occurs in frog and silk moth.

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

Answer: Difference between viviparous animals and oviparous animals:

Viviparous animals	Oviparous animals
The animals which give birth to young ones are called viviparous animals.	The animals which lay eggs are called oviparous animals.
Examples- human, cow.	Example – Hens and frog.

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

Frog, Human being, Sparrow, Lizard, Cow, Dog, hen, Fish, Butterfly, Cat.

Answer: Oviparous animals – Frog, sparrow, lizard, hen, fish, butterfly

Viviparous animals – Human being, dog, cat.

Q.49. Give five example each of animals which develop:

(a) inside the mother.

(b) inside eggs which the mother lays.

Answer: (a) The animals which give birth to young one are called viviparous animals. In such animals, the baby develops inside the body of the mother.

Examples of Viviparous animals – Human beings, cat, dog, cow, tiger.

(b) The animals that reproduce by laying eggs are called oviparous animals. In such animals, the baby develops inside eggs that the mother lays.

Examples of Oviparous animals – Frog, sparrow, lizard, hen, fish, butterfly.

Q.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: In hens, internal fertilization take place but they do not give birth to chicks like human beings. After fertilization, the zygote divides repeatedly to form embryo which travels down the oviduct. As it travels down, many protective layer are formed around it.

The outermost protective layer is hard shell which we can see in a hen's egg. After the hard shell is formed around the developing embryo, the hen finally lays the egg. The hen, then sits on the egg to provide sufficient warmth to the eggs for the development of the embryo into the chicks. The embryo takes about 3 weeks to develop into a complete chick.

Q.51. In which of the following animals the embryo develop fully inside the mother's body and in which they develop fully in the eggs laid by mother?

Cow, Ostrich, Frog, Lizard, Deer, Cat, Snake, Tiger, Dog, Hen

Answer:(a) Viviparous animals –Cow, deer, cat, tiger, dog.

(b) Oviparous animals – Ostrich, frog, lizard, snake, hen.

Q.52. Name two animals which undergo metamorphosis and two which do not.

Answer: Frog and silk moth undergo metamorphosis whereas cow and hen do not undergo metamorphosis.

Q.53. Which of the following animals undergo metamorphosis and which do not?

Cow, Butterfly, Silk moth, Humans, Frog, Housefly, Sparrow, Hen, Mosquito, Money

Answer: Butterfly, silk moth, frog, housefly and mosquito undergo metamorphosis while cow, human, hen and monkey do not undergo metamorphosis.

Q.54 A. What are gametes?

Answer: The cells involved in sexual reproduction are called gametes.

Q.54 B. In which sort of reproduction are gametes fuse?

Answer: Fertilization is the step of reproduction in which fusion of gametes take place.

Q.54 C. What is formed when two gametes involved?

Answer: Zygote is formed when two gametes are fused together.

Q.54 D. What is this act of fusion called?

Answer: The fusion of a sperm with an ovum to form a zygote during sexual reproduction is called fertilization.

Q.55. Match the terms given in column A with those given column B:

Column A	Column B
(i) Sperm	**(a)** Female organ
(ii) Ovary	**(b)** Egg tube
(iii) Oviduct	**(c)** Male organ
(iv) Tests	**(d)** Male gamete

Answer: (i) (d); **(ii)** (a); **(iii)** (b); **(iv)** (c)

Q.56. Differentiate between internal fertilization and external fertilization. What type of fertilization takes place in?

(a) frog, and (b) fox?

Answer: Differences between internal fertilization and external fertilization:

Internal fertilization	External fertilization
It takes place inside the female body.	It takes place outside the female body.
Example – Human being.	Example – Frog, starfish.

(a) In frog, external fertilization takes place.

(b) In fox, internal fertilization takes place.

Q.57. What is meant by 'cloning'? State whether gametes are involved in cloning or not. Name two animals which have been produced by cloning.

Answer: Cloning is the production of an exact copy of a cell, any other living part, or a complete organism. Yes, gametes are involved in cloning. Dolly and noah are two cloned animals.

Q.58. What is meant by 'reproduction'? why is it essential?

Answer: Reproduction is one of the important characteristics of living things. The ability of organism to produce young ones of its own kind is called reproduction. It is essential for the continuation of a species.

Q.59. Define asexual reproduction. Name two methods of asexual reproduction in animals. Name two animals which reproduce by these asexual reproduction methods.

Answer: The type of reproduction in which only a single parent is involved is called asexual reproduction. Binary fission and budding are two methods of asexual reproduction in animals. Amoeba reproduce by binary fission and Hydra reproduce by budding.

Q.60. What is a clone? Name one famous clone.

Answer: The organisms which are produced asexually are genetically identical to the parent and are called clones.

Dolly was born on 5th July 1996 and was the first mammal to be cloned.

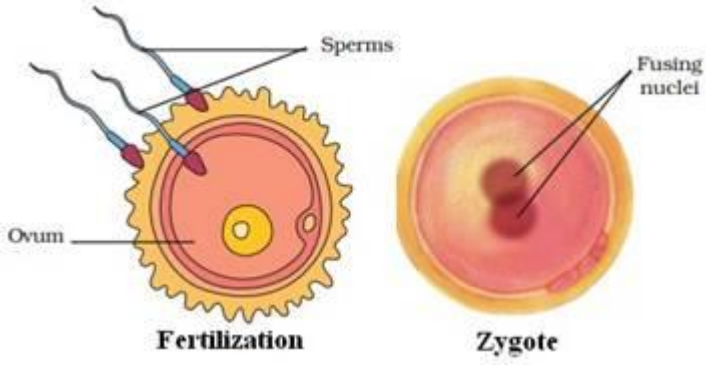
Long Answer Type Questions

Q.61 A. Explain the term 'fertilization'. Describe the process of fertilization in human beings.

Answer: The fusion of male and female gametes to form zygote is known as fertilization. The process of fertilization takes place in the fallopian tube (oviduct). As sperm enter into the vagina through the process of copulation; it moves upwards and enter into the oviduct. In the oviduct, ovum fuse with the sperm to form zygote.

Q.61 B. Draw a labeled diagram to show the fertilization of a human egg by a sperm to form a zygote.

Answer:



Q.62 A. What type of couples are helped to have babies by the in vitro fertilization technique?

Answer: In vitro fertilization technique is used to help those couples in having babies who can produce sperms and ovum but fertilization does not take place inside the woman's body due to blocked oviducts.

Q.62 B. Describe the 'in vitro fertilization' technique of reproduction in humans.

Answer: In IVF or invitro fertilization technique, is a process by which an egg is fertilized by the sperm outside the body.

The process involves monitoring and stimulating a woman's ovulatory process, removing ovum or ova (egg or eggs) from the woman's ovaries and letting sperm fertilise them in a fluid medium in a laboratory

Q.63 A. What are viviparous animals? Give two examples of viviparous animals.

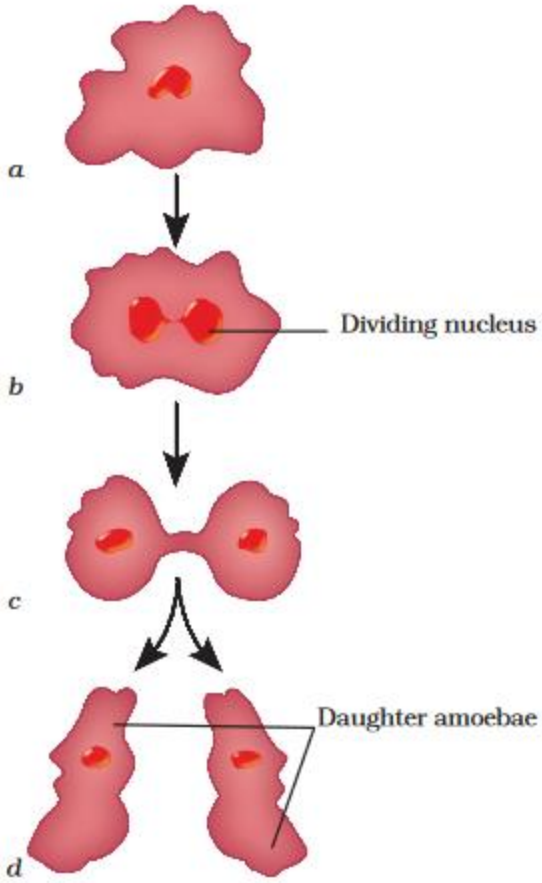
Answer: The animals which give birth to young ones are called viviparous animals. Human beings and cow are examples of viviparous animals.

Q.63 B. What are oviparous animals? Give two examples of oviparous animals.

Answer: Those animals which lay eggs are called oviparous animals. Examples - Hens and frog.

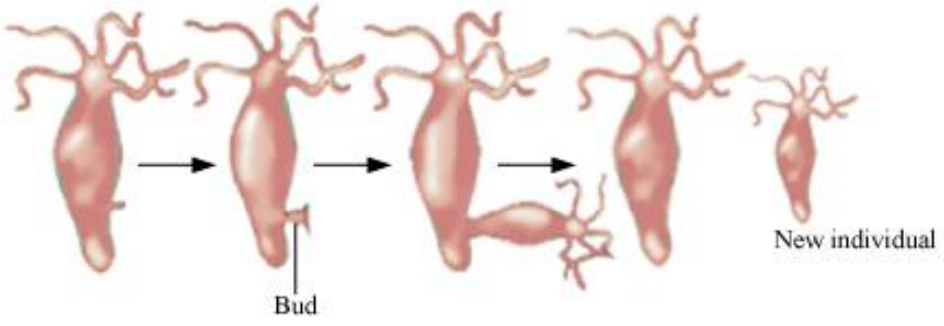
Q.64. How does an Amoeba reproduce? Describe with the help of labeled diagram.

Answer: Amoeba reproduces by common asexual method called binary fission. In this method, Amoeba cell divides into two equal daughter cells. The nucleus of amoeba first divides into two parts. After that the cytoplasm of amoeba divides into two parts, one part around each nucleus. This leads to the formation of the two daughter Amoebae cell having a nucleus and its own cell organelles.



Q.65. How does a Hydra reproduce? Explain with the help of labeled diagrams.

Answer: Hydra reproduces by budding. In hydra, there may be one or more bulges. These bulges are the developing new individual and they are called buds. This bud then grows gradually to form a small hydra by developing a mouth and tentacles. The tiny new hydra detaches itself from the parent body and become new independent individual.



Multiple Choice Questions (MCQs)

Q.66. Internal fertilization occurs:

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

Q.67. The number of nuclei present in a zygote is:

Answer: The correct answer is one nucleus is present in the zygote.

Explanation: Zygote is the formed due to fertilization of the gametes. During fertilization, the nuclei of the sperm and the egg fuse to form a single nucleus.

Q.68. A tadpole develops into an adult frog by the process of:

Answer: The correct answer is option (b) i.e. metamorphosis

Explanation: The transformation of the larva into an adult through drastic changes is called metamorphosis. Metamorphosis occurs in frog and silk moth.

Q.69. Fertilization results immediately in the formation of:

Answer: The process by which male and female gametes fuse to each other is called fertilization.

Q.70. Which of the following is not a part of the human male reproductive system?

Answer: Oviducts is not a part of male reproductive system. It is a part of female reproductive system.

Q.71. Which of the following is not a viviparous animal?

Answer: Rat, rabbit and cat are viviparous animals whereas lizard is a oviparous animal because it lays egg.

Q.72. The multicellular organism which reproducts by buddings is:

Answer: Hydra is a multicellular organism which reproduce by budding.

Q.73. In asexual reproduction, two off springs having the same genetic material and the same body features are called:

Answer: In asexual reproduction, two offspring having the same genetic material and the same body features are called clones.

Q.74. Which of the following animal does not show metamorphosis?

Answer: Frog, silk moth and mosquito undergo metamorphosis whereas fish does not show metamorphosis.

Q.75. Asexual reproduction is:

Answer: Asexual reproduction is a method producing generally identical offspring.

Q.76. Which of the following organisms reproduces by binary fission?

Answer: Amoeba, a unicellular organism reproduces by binary fission.

Q.77. Which of the following is not an oviparous animal?

Answer: Snake, fish and frog are oviparous animals whereas rat is viviparous animals.

Q.78. Tadpole is the larva of:

Answer: Tadpole is the larva of frog.

Q.79. The production of an exact copy of an animal by asexual reproduction is known as:

Answer: Cloning is the production of an animal by asexual reproduction.

Q.80. One of the following is not a part of the human female reproductive system. This one is:

Answer: Scrotal sac is a part of the human male reproductive system.

Q.81. Reproduction is essential for living organisms in order to:

Answer: Reproduction is one of the important characteristics of living things. The ability of organism to produce young ones of its own kind is called reproduction. It is essential for the continuity of species.

Q.82. One of the following occurs reproductive system of flowering plants well as that of humans. This is:

Answer: Ovary is the structure that occurs in the reproductive system of flowering plants as well as of humans. In both of them, it produces female gametes called egg.

Q.83. In human males, the testes lie in the scrotal sacs outside the body because it helps in the:

Answer: The testes are located outside the abdominal cavity in the scrotum because the temperature of scrotum is less than the normal body temperature which is requires for sperm formation.

Q.84. Characterstics that are transmitted from parents to offsprings during sexual reproduction show:

Answer: Characters that are transmitted from parents to offspring during sexual reproduction show both similarities and variations with parents.

Q.85. The offspring formed as a result of sexual reproduction exhibits more variations because:

Answer: The offspring formed as a result of sexual reproduction exhibits more variations because genetic material comes from two parents of same species.

Questions Based on High Order Thinking Skills (HOTS)

Q.86. Two very small organisms X and Y both reproduce by the method of budding. Organism X is industrially very important because it is used in making alcohol from sugar. It is also used in making bread. Organisms Y is a tiny animal having tentacles which live in water.

(a) What is organisms X?

(b) Name the process in which X converts sugar into alcohol.

(c) To which class of organism does X belong?

(d) What are organisms Y?

(e) Out of X and Y, which organism is multicellular and which one is unicellular?

Answer:

(a) X is Yeast.

Explanation: Yeasts are unicellular fungi which convert glucose into alcohol through the process of fermentation.

(b) The process in which X converts sugar into alcohol is called Fermentation.

Explanation: The following chemical reaction takes place:

Yeast + Glucose → Alcohol (l) + CO_2 (g)

(c) The organism X i.e. Yeast belongs to the fungi of living organisms.

Explanation: Yeast is a single-cellular organism which divides by mitosis and shows budding. Fungi have the following characteristics:

i) They have a cell wall. **ii)** They have a nucleus. **iii)** They have no chloroplasts.

(d) Organism Y is Hydra.

Explanation: Hydra is a genus of small fresh-water animals

(e) Yeast (X) is a unicellular and Hydra (Y) is a Multicellular.

Explanation: Yeasts are unicellular organisms because they are single-celled organisms.

Hydra are multicellular organisms with complex bodies

Q.87. A unicellular organism P lives in pond water. The organisms P has no fixed shape, its shape keeps on changing. It moves and catches its prey with the help

of organs Q which keep on appearing and disappearing. The organisms P reproduces by a process R. Another organisms S also reproduces by this process. Name P, Q, R and S.

Answer: P is Amoeba; Q is Pseudopodia; R is Binary fission; S is Paramecium.

Q.88. The animal A which is classified as an amphibian lays eggs in pond water. The hatching of its eggs produces a tailed-form B which looks very different from the animal A. The form B then undergoes a change C and gets converted into animal A.

(a) Name (i) animal A and (ii) form B.

(b) What is the change C known as?

(c) name the breathing organs of A.

(d) What are the breathing organs of B?

Answer:

(a) Animal A is Frog and form is Tadpole.

(b) The change from Tadpole to Frog is called as Metamorphosis.

(c) Since, A is Frog, hence the breathing organ of Frog is Lungs.

(d) Since, B is Tadpole. The breating organ of Tadpole is gills.

Q.89. X and Y are the two types of animals. The animals like X undergo external fertilization whereas animals like Y undergo internal fertilization. The animals like X lay eggs from which baby animals are hatched. On the other hand, in animals like Y, the young one develops inside the uterus of mother which then gives birth to the baby.

(a) What is the general name of animals like X?

(b) Give two examples of animals like X?

(c) What is the general name of animals like Y?

(d) Write the names if two animals like Y.

Answer: (a) General Name of Animals Like X is Oviparous. Oviparous animals are those which reproduce by laying eggs. The young ones develop inside the eggs.

(b) Examples of Animals like X are Frog, Fish and Star Fish etc.

(c) General Name of Animals Like Y is Viviparous. Viviparous animals are those animals in which the young ones develop inside the uterus of the mother.

(d) Examples of Animals like Y are Human beings, cattle, etc.

Q.90. A is an insect which breeds in ponds of stagnant water. The egg of this insect produces a worm like form B which is entirely different in appearance from the adult insects. The form B undergoes a change C and gets converted into insects A. The female of insects A is a carrier of protozoan D which spreads a disease in humans.

(a) What are A, B, C, and D?

(b) Name another insect which also undergoes change C.

Answer:

(a) A is Mosquito; B is Larva; C is Metamorphosis; D is plasmodium

(b) Butterfly is another insect which also undergoes metamorphosis.