CHAPTER 8

How Do Organisms Reproduce

ONE MARK QUESTIONS

1. Name the method by which Spirogyra reproduce under favourable conditions. Is this method sexual or asexual?

Ans : [Delhi 2017]

Fragmentation. Asexual

2. Name the method by which Planaria reproduce under favourable conditions. Is this method sexual or asexual?

Ans : [Delhi 2017]

Regeneration. Asexual

3. Name the method by which Plasmodium reproduce under favourable conditions. Is this method sexual or asexual?

Ans : [Delhi 2017]

Multiple Fission. Asexual

4. When a cell reproduces, what happens to its DNA?

Ans : [All India 2017]

Its DNA first doubles up followed by its equal and accurate division between two daughter cells.

5. List two functions of ovary of human female reproductive system.

Ans : [All India 2016]

In human female, ovary contains thousands of eggs. One egg is produced every month one of the ovaries. Ovary also secretes estrogens hormone for development of sexual characteristics at puberty.

6. What are those organisms called which bear both sex organs in the same individual. Give one example of such organism.

Ans : [All India 2016]

Bisexual. For example: earthworm, leech, starfish, hibiscus, mustard. (Any one)

7. Where is DNA found in a cell?

Ans : [CBSE 2016]

Genes/Chromosomes.

8. Name the life process of an organism that helps in the growth of its population.

Ans : [All India 2015]

Reproduction.

9. List two functions performed by testis in human beings.

Ans : [Delhi 2015]

a. Testis produce sperms.
b. Produces male sex hormone, testosterone.

10. Name the causative organism of the disease "Kala-azar" and its mode of asexual reproduction.

Ans : [Foreign 2015]

Leishmania, Binary fission.

11. Name two simple organisms having the ability of regeneration.

Ans : [CBSE 2015]

Planaria/hydra/earthworm (any two).

12. Give the respective scientific terms used for studying:
a. The mechanism by which variations are created and inherited and
b. The development of new type of organisms from the existing ones.

Ans : [CBSE 2015]

a. Heredity
b. Fission.

13. Give an advantage of vegetative propagation.

Ans : [CBSE 2015]

Vegetative propagation can be practised for growing such plants which usually do not produce seeds or produce non-viable seeds.

14. Name the type of cells which undergo regeneration.

Ans : [CBSE 2015]

Regenerative cells can proliferate and make large number of cells.

15. What are sexually transmitted diseases? Name an STD which damages the immune system of human

body.

Ans : [CBSE 2015]

a. Diseases that spread through the sexual contact.
b. AIDS

16. Organisms have a varied body design. Name the property which gives the basic difference in body design.

Ans : [CBSE 2014]

Errors in DNA copying (variations).

17. How can the chromosomes be identified?

Ans : [CBSE 2014]

Chromosomes can be seen as thread like structure when cell is dividing.

18. Why is temperature of scrotal sac 2°C less than the body temperature?

Ans : [CBSE 2014,12]

Because testes require temperature 2°C less than the body temperature for the production of sperms.

19. How does the embryo gets nourishment from the mother?

Ans : [All India 2013]

Through placenta.

20. Why does the lining of uterus become thick and spongy every month?

Ans : [CBSE 2013]

To receive and nurture the growing embryo, lining of uterus become thick and spongy.

21. Regeneration is not possible in all types of animals. Why?

Ans : [CBSE 2012]

Regeneration is carried by specialised cells. The organisms which have those cells only can show regeneration.

22. What is the advantage of reproducing through spores?

Ans : [CBSE 2012]

In the form of cyst, spore with a cell wall can survive in adverse conditions.

They can be easily dispersed through wind as they are more in number and light in weight.

23. What happens if egg is not fertilized?

Ans : [CBSE 2012]

If fertilization does not occur then menstruation occurs, i.e., blood and mucus comes out through the vagina.

24. Differentiate between pollen grain and ovule.

Ans : [CBSE 2011]

Pollen grains contain male gametes and ovules contains female gametes in plants.

25. Differentiate between germination and fertilization,

Ans : [CBSE 2011]

Germination: Development of embryo into a seedling.
Fertilization: Fusion of male and female gametes.

26. Why is sexual reproduction considered to be superior to asexual reproduction is terms of evolution?

Ans : [Sample Paper 2010]

Sexual mode of reproduction is a source of variation (in a population of organisms) which ensures survival of the species.

27. Malarial parasite divides into many daughter individuals simultaneously through multiple fission. State an advantage the parasite gets because of this type of reproduction.

Ans : [Sample Paper 2010]

a. Progeny is identical like parent and in large number.
b. Single individual can reproduce.

28. Name two ways of vegetative propagation practiced by gardeners.

Ans : [All India 2009]

Cutting and grafting.

29. What is reproduction?

Ans : [All India 2009 C]

Reproduction is the process of producing individuals of its own kind.

30. What is the effect of DNA copying which is not perfectly accurate on the reproduction process?

Ans : [All India 2008]

Leads to variation/ evolution.

TWO MARKS QUESTIONS

31. State the changes that take place in the uterus when
a. implantation of embryo has occurred
b. female gamete/egg is not fertilized

Ans : [Delhi 2017]

a. Uterus wall becomes thicker due to development of blood vessels and glands in it and placenta develops from the side of foetus so that it can derive nutrition from mother and pass the waste to mother's blood.
b. Uterus lining gets peeled and shed off along with mucus, blood, dead ovum during menstruation.

32. Give reasons as to why the following processes are different from each other:
a. Fission in Amoeba and Plasmodium .
b. Binary fission and Fragmentation.

Ans : [CBSE 2016]

a. In Amoeba during binary fission the cell divides into two daughter cells while in Plasmodium multiple fission occurs, where the cell divides into many daughter cells.
b. In binary fission, a cell divides into two daughter cells while in fragmentation, the body of a multicellular organisms divides into two or more

parts which grow further.

33. a. What is the location of the following:
(i) DNA in a cell (ii) Gene
b. Expand DNA.

Ans : [CBSE 2016]

a. (i) Nucleus. (ii) Located on the chromosomes.
b. Deoxyribo Nucleic Acid.

34. Explain how do organisms create an exact copy of themselves.

Ans : [CBSE 2016]

To build the copies of DNA or the genetic material, the cells use biochemical reactions.

Additional cellular apparatus along with the DNA copies are separated and so a cell divides to give rise to two almost identical cells.

35. "Variations" are seen in the organisms. State the two main causes of variation.

Ans : [CBSE 2015]

Variations are caused by:
a. Change in the genetic material, i.e., DNA at the time of DNA copying.
b. Environmental factors viz., light, temperature, nutrition, wind and water supply, etc.
c. Mutations.

36. Define the following processes of asexual reproduction:
a. Spore formation
b. Regeneration
c. Multiple fission

Ans : [CBSE 2015]

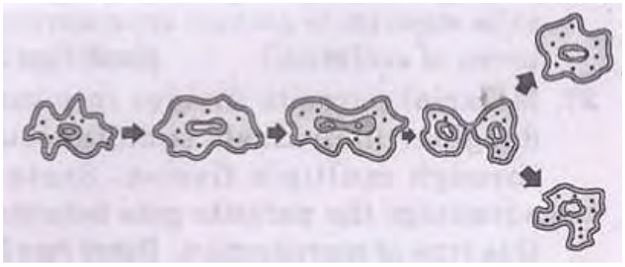
a. Reproduction seen in organisms by formation of spores.
b. Organisms are cut into any number of pieces and each piece grows into a complete organism.
c. Unicellular organisms divide into many daughter cells simultaneously.

37. What happens when the following situations are initiated:
a. A Planaria is cut into three different pieces.
b. Leaf of the Bryophyllum with notches falls on the soil.
c. Testosterone is released in the male reproductive system.

Ans : [CBSE 2015]

a. Each piece grows into a complete organism.
b. Develops into new plants.
c. Changes occurs in the appearance at the time of puberty.

38. What does the diagram given below correctly illustrate? Give reason in support of your answer.



Ans : [All India 2014-15]

Binary fission in Amoeba. The splitting of the two cells during division in Amoeba can take place in any plane.

39. What is the main difference between sperms and eggs of human? Write the importance of this difference?

Ans : [All India 2014]

Sperms are motile and are produced in . large numbers by a male. Egg are non-motile and only one is produced at a time by the female.

Sperms are motile as they have to travel up to egg for fertilization. It becomes zygote, remains protected inside female's body and gives rise to foetus and baby.

40. Draw labelled diagrams to illustrate budding in Hydra.

Ans : [CBSE 2014]

a. In sexual reproduction, fusion of male and female gametes takes place, these germ-cells/gametes contain half the number of chromosomes and by the fusion of these gametes the zygote is formed with full set of chromosomes.
b. When male and female gametes fuse at the time of fertilization, it restores the original number of chromosomes (of the parent), ensuring the stability of species.

41. "The chromosomal number of the sexually producing parents and their offspring is the same." Justify this statement.

Ans : [CBSE 2014]

a. DNA copying is essential for formation of addition cellular apparatus, so that when DNA copies separate, each cell gets its own cellular apparatus.
b. The process of DNA copying results in variation each time. As a result, the DNA copies generated will be similar, but may not be identical to the original.

42. "The consistency of DNA copying during reproduction is important for the maintenance of body design features." Support this statement with two arguments.

Ans : [CBSE 2014]

43. Why is vegetative propagation practised for growing

some types of plants? [Delhi 2012]

or

Why is vegetative propagation practiced for growing some types of plant? List two plants which are grown by this method.

Ans : [All India 2013]

Advantages of vegetative propagation:

a. The plants bear flowers and fruits earlier than those propagated sexually.
b. Plants have lost capacity to form seeds hence they are propagated vegetatively. Such plants are genetically similar to parent plants and have all their characters.

44. Define variation in relation to a species. Why is variation beneficial to the species?

Ans : [CBSE 2013]

Variation means certain changes which occur in sexually reproducing organisms because of errors in DNA copying. Variations are beneficial for species because they given survival advantage even in the adverse environmental conditions.

45. State the importance of chromosomal difference between sperms and eggs of humans.

Ans : [CBSE 2013]

Eggs always contain same type of sex chromosomes (both X). Sperms contain X or Y sex chromosomes. Thus, sperm containing X chromosome when combines with X chromosome of egg results in a female child. Whereas sperm containing Y chromosome when combines with X chromosome of egg results in a male child.

46. a. List any two methods of asexual reproduction.
b. Explain how Spirogyra reproduces.

Ans : [CBSE 2013]

a. (i) Budding in Hydra and Yeast.
(ii) Spore formation in Fungi.
b. Spirogyra breaks up into smaller pieces upon maturation. These fragments grow into new individuals

47. How can pregnancy be prevented surgically?

Ans :

Pregnancy can be prevented surgically by adopting:

a. Vasectomy: When vas deferens in males are blocked surgically, sperm transfer will be prevented.
b. Tubectomy: When fallopian tubes are blocked, eggs will not be able to reach the uterus.

48. 'Regeneration is not reproduction'. Justify this statement with reason.

Ans : [CBSE 2013,14]

When a piece is cut from an organism, it grows into complete organisms. Regeneration is carried out by specialized cells. It is not reproduction since most organisms would not be able to grow through pieces.

49. State one function each performed by the following organs in human beings: (a) Testes (b) Prostate gland

Ans : [CBSE 2013]

a. Formation of sperms takes place in testes.
b. Prostate gland contributes fluid to the semen.

50. Why do we need to adopt contraceptive measures?

Ans : [CBSE 2012, 13]

a. Contraceptive measures are needed to be adopted to prevent unwanted pregnancies.
b. To prevent sexually transmitted diseases.
c. Spacing between children.
d. For sound health of a mother.

51. Give two differences between a male and a female gamete.

Ans : [CBSE 2012]

a. Male gamete is smaller in size or compared to the female gamete.
b. Male gamete is motile whereas female gamete is non-motile.

52. What kind of contraceptive methods prevents STDs and how?

Ans : [CBSE 2012]

Barrier method prevent STDs.
By this method there is no direct contact of genital organs of male and female and thus it prevents transmission of any infection.

53. List any two reasons why the Government has banned prenatal sex determination by law.

Ans : [CBSE 2012]

a. People may get female foetus aborted.
b. Reckless female foeticide has disturbed male-female ratio in society.

54. Mention any four ways of asexual reproduction.

Ans : [CBSE 2012]

a. Fission
b. Budding
c. Spore formation
d. Fragmentation
e. Regenerations

55. Mention the functions of (a) placenta (b) fallopian tube in the human female , reproductive system.

Ans : [CBSE 2012]

a. Placenta:
(i) Helps in transporting glucose and oxygen from the mother to the embryo.
(ii) Waste generated by the embryo is removed by transferring it to the mother's blood.
b. Fallopian tube:
(i) Helps in carrying the egg from the ovary to the uterus.
(ii) Fertilization occurs here.

56. List any four modes of asexual reproduction.

Ans : [All India 2011]

a. Four modes of asexual reproduction:
b. Fission
c. Budding
d. Spore formation
e. Fragmentation

f. Regenerations

57. Give one example each of a unisexual and bisexual flower. [All India 2011]

or

Differentiate between unisexual and bisexual flower.

or

Distinguish between unisexual and bisexual flowers giving one example of each.

Ans : [All India 2014-15]

Unisexual flower have only one type of sex organ, either carpels or stamen, hence they are either male or female flower. For example: Cucurbit and maize. Bisexual flower have both carpels and stamens. For example: Marigold and rose.

58. List any two differences between pollination and fertilization.

Ans : [CBSE 2011]

	Pollination	Fertilization
1.	It is the transfer of pollen grain from the anther to the stigma of flower.	It is the fusion of male gamete with female gamete (egg).
2.	It is achieved by agents like wind, water or animals.	It is achieved by the growth of pollen tube so that the male gamete reaches the female germ cells.
3.	It leads to fertilization.	It leads to formation of seeds
4.	It is an external process	It is an internal process.

59. Differentiate between plumule and radicle.

Ans : [CBSE 2011]

	Plumule	Radicle
1.	The part of growing embryo which later forms the shoot of young plant.	The part of growing embryo which later form the root of young plant.
2.	It is positively phototrophic and negatively geotrophic.	It is positively geotrophic and negatively phototrophic.

60. Name the type of asexual reproduction in:

a. Planaria
b. Rhizopus
c. Spirogyra
d. Hydra

Ans :

a. Regeneration
b. Spore formation
c. Fragmentation
d. Budding

61. What happens to the following parts after fertilization?

a. ovum
b. ovary
c. ovule
d. sepals and petals

Ans : [CBSE 2011]

a. forms zygote
b. forms fruit
c. forms seed
d. shrinks and fall off

62. What is the function of copper-T used by some women? What is its effect?

Ans : [CBSE 2011]

Copper-T prevents pregnancy as it prevents implantation in the uterus. It can cause side effect due to irritation of the uterus.

63. Leaves of Bryophyllum fallen on the ground produce new plants. Why?

Ans : [CBSE 2011]

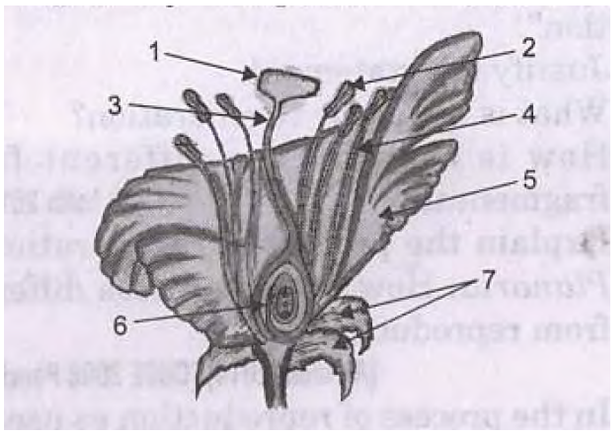
Leaves of Bryophyllum bears adventi¬tious buds/ plantlets in the notches along the leaf margin. When the buds fall on the soil they develop into new plant under favourable condi-tions.

64. Differentiate between self-pollination and cross-pollination.

Ans : [CBSE 2011]

	Self-pollination	Cross-pollination
1.	Self-pollination is the transfer of pollen grains from anther to stigma within the same flower.	Cross-pollination is the transfer of pollen grains from anther to stigma in another flower.
2.	It occurs either in the same flower or another flower of the same plant.	It occurs between two flowers which are on different plants but are of the same species.
3.	It occurs in the flowers which are genetically same.	It occurs between flowers which are genetically different.

65. Label any four parts.



Ans : [Sample Paper 2010]

1. Stigma 2. Anther 3. Style 4. Filament 5. Petal 6. Ovary 7. Sepal (any four)

66. What are the functions of the following in male reproductive system?
a. Seminal vesicles
b. Prostate gland

Ans : [All India 2009]

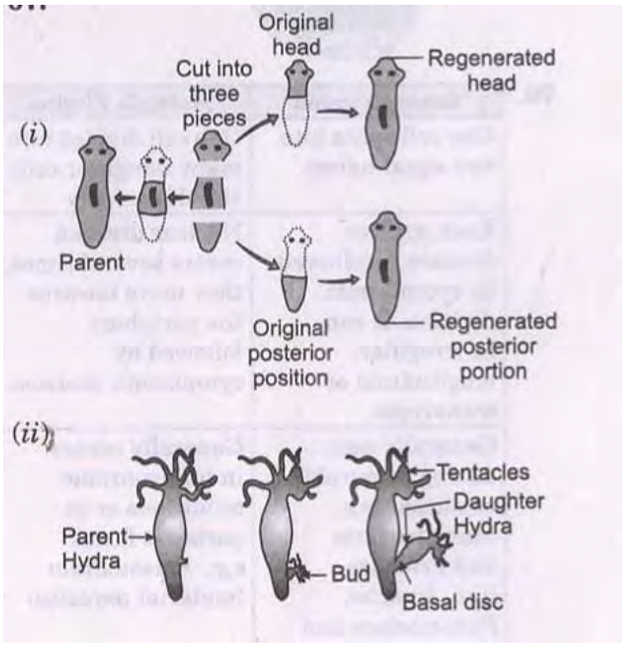
a. In human males, seminal vesicles store sperms temporarily before ejaculation.
b. Both seminal vesicles and prostate gland add their secretions so that the sperms remain in a fluid which makes their transport easier and also this fluid provides nutrition.

67. Draw a labelled diagram of
a. Regeneration in Planaria
b. Budding in Hydra **[CBSE 2008 C]**

or

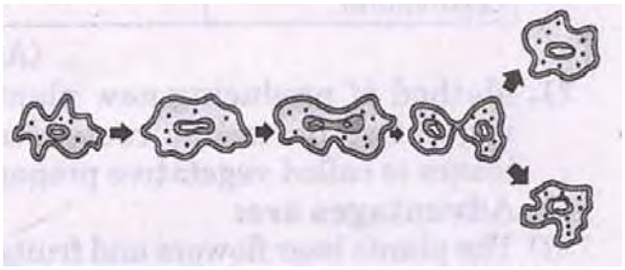
Explain budding in Hydra with the help of labelled diagrams only.

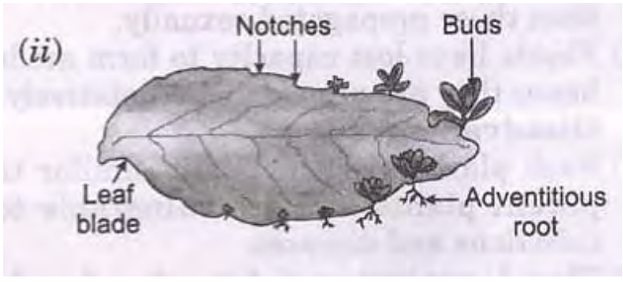
Ans : [Delhi 2015]



68. Draw a labelled diagram of (i) Binary fission in Amoeba (ii) leaf of Bryophyllum with buds.

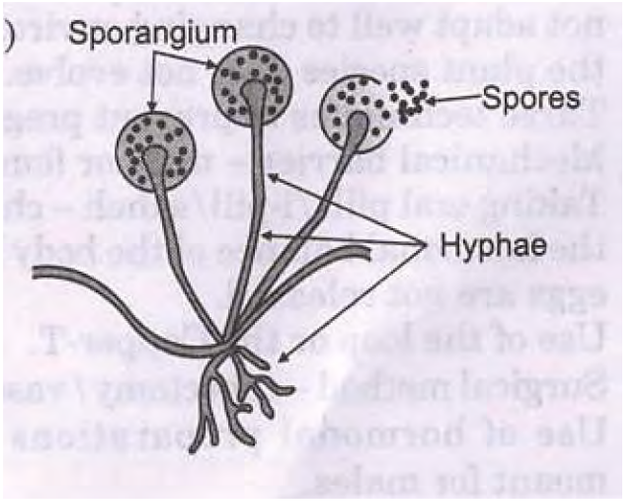
Ans : [CBSE 2008 C]

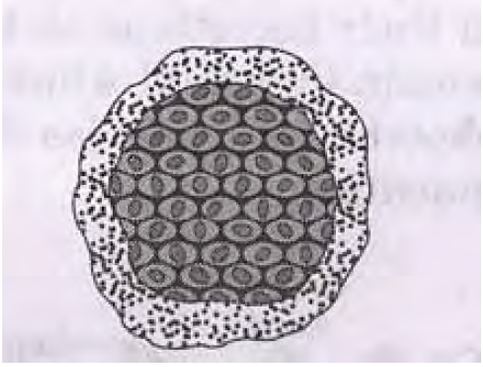




69. Draw a labelled diagram of
a. Spore formation in Rhizop us
b. Multiple fission in Plasmodium.

Ans : [CBSE 2008 C]





70. Write two differences between binary fission and multiple fission in a tabular form as observed in the cells of the organisms.

Ans : [All India 2008, 2010]

	Binary Fission	Multiple Fission
1.	One cell splits into two equal halves.	One cell divides into many daughter cells simultaneously

	Binary Fission	Multiple Fission
2.	Each nuclear division is followed by cytoplasmic division. It can be irregular, longitudinal or transverse.	Nuclear division occurs several times, they move towards the periphery followed by cytoplasmic division.
3.	Generally seen during favourable conditions e.g., Many bacteria and Protozoa like, Amoeba, Paramecium and Leishmania.	Generally occurs in unfavourable conditions or in parasitic forms e.g., Plasmodium (malarial parasite)

THREE MARKS QUESTIONS

71. What is vegetative propagation? List two advantages and two disadvantages of vegetative propagation.

Ans : [All India 2017]

Method of producing new plants from vegetative parts like roots, stem and leaves is called vegetative propagation.

Advantages are:

a. The plants bear flowers and fruits earlier than those propagated sexually.
b. Plants have lost capacity to form seeds hence they are propagated vegetatively.

Disadvantages are:

a. Such plants are genetically similar to parent plants and are vulnerable to infections and diseases.
b. They do not have variations therefore do not adapt well to changing environment, the plant species does not evolve.

72. List three techniques to prevent pregnancy. Which of them is not meant for males? How does the use of such techniques have an impact on health and prosperity of a family? **[All India 2017]**

or

List any four methods of contraception used by humans. How does their use have a direct effect on the health and prosperity of a family?

Ans : [Delhi 2015, All India 2014]

Three techniques to prevent pregnancy:

a. Mechanical barrier — male or female.
b. Taking oral pills/i-pill/saheli - changing the hormonal balance of the body so that eggs are not released.
c. Use of the loop or the Copper-T.
d. Surgical method - tubectomy / vasectomy

Use of hormonal preparations is not meant for males.

Effect on Health and Prosperity:

a. Health of women is maintained
b. Parents can give more attention to children
c. More resources can be made available.

73. Reproduction is one of the most important characteristics of the living beings. Give three reasons in support of your answer. **[All India 2017]**

or

Define reproduction. How does it help in providing stability to the population of species?

Ans : [CBSE 2015 C]

a. Reproduction is the process of producing individuals of its own kind. Through reproduction, the continuity is maintained.
b. Members of population are eliminated due to old age, disease, accidents and other reason. They have to be replaced by new members in order to maintain a stable population.
c. Reproduction brings variation so that population may adapt better and evolution in species takes place. Ultimately new species originate from pre-existing ones.
d. Reproduction is not essential for an individual as its survival is not dependent upon it but is essential for a species for its survival.

74. Mention the total number of chromosome along with sex chromosome. Explain how in a sexually reproducing organism chromosome number of parents and their offsprings is the same.

Ans : [Delhi 2017]

Total number chromosomes is 23 pairs. The last pair is called sex chromosome. If they are similar, they are termed as XX chromosome. They are present in the females. If they are dissimilar, they are called XY. They are present in the males. DNA doubling is always followed by cell division. But multicellular organisms have special linkages of cells in specialised organs which have only half the number of chromosomes and half the amount of DNA. Thus, when these germ-cells from two individuals combine during sexual reproduction to form a new individual, it results in re-establishment of number of chromosome and DNA content.

75. State the basic requirement for sexual reproduction. Write the importance of such reproduction in nature.

Ans : [Delhi 2017]

Sexual reproduction takes place in multicellular organisms with complex body design. There are specialized (sex) organs in which through a special type of cell division, number of chromosome is reduced to half and male and female germ cells/gametes form. These gamete fuse to form zygote on fertilization, thus the characteristic number of chromosome and the normal DNA content for a cell is regained.

Sexual reproduction gives rise to more variations which are essential for evolution as well as survival of species under unfavorable conditions. Species reproducing sexually have better chances of survival.

76. What happens when:

a. Accidentally Planaria is cut into three different pieces.
b. Bryophyllum leaf fall on the wet soil.
c. On maturation sporangia of Rhizopus burst.

Ans : [Delhi 2017]

a. Three new Planaria will form due to regeneration.
b. New plantlets will form from these buds helping the plant to propagate vegetatively.

c. Spores are released which upon finding suitable substratum germinates to form new individual.

77. List four steps in sexual reproduction. Write two of its advantages.

Ans : [Delhi 2017]

a. Four steps in sexual reproduction :
b. Formation of gametes in the sex organs.
c. Transfer of male gamete to female gamete which involves release of both types of gametes in the medium outside.
d. Fusion of gametes, either inside or outside the female parents body.
e. Development of zygote to embryo and then complete individual.

Advantages:

a. Variations are produced among the progeny.
b. Such populations are able to adapt well to changing environment and thus evolves faster.

78. Write one main difference between asexual and sexual mode of reproduction. Which species is likely to have comparatively better chances of survival - the one reproducing asexually or the one reproducing sexually? Give reason to justify your answer.

Ans : [CBSE 2017]

	Sexual reproduction	Asexual reproduction
1.	It involves two parents and causes genetic variation.	It involves only one parent and does not causes genetic variation.
2.	Fertilization/zygote formation is observed.	No fertilization/zygote formation is observed.

The species having sexual mode of reproduction have better chances of survival because sexual reproduction leads to variations which give better survival advantage to the species over time.

79. Explain the term "Regeneration" as used in relation to reproduction of organisms. Describe briefly how regeneration is carried out in multicellular organisms like Hydra.

Ans : [All India 2016]

The ability to give rise to new individuals from the body parts of the parent individual is called regeneration, e.g., Hydra and Planaria, if their bodies get broken into many pieces, each piece is capable of re-growing into a complete individual.

80. Compare the following:

a. Unisexual and bisexual flower.
b. Self-pollination and cross pollination.
c. Style and filament.

Ans : [All India 2016-17]

a. Unisexual flowers have either stamens or carpels, e.g., Papaya and Watermelon. Bisexual Flowers have both stamens and carpels, e.g., Mustard and Hibiscus.
b. Self-Pollination is transfer of pollen grains from the stamen to the stigma of same flower. Cross Pollination is transfer of pollen grains to another flower by agents like wind, water or animals.
c. Style is the middle elongated part of the carpel. It acts as a passage for pollen to reach ovary for the fertilization. Filaments is the elongated part of stamen.

81. a. Trace the path of sperms from where they are produced in human body to the exterior.
b. Write the functions of secretions of prostate gland and seminal vesicles in humans.

Ans : [CBSE 2016]

a. The formation of sperms takes place in testes and delivered through the vas deferens which unites with a tube coming from urinary bladder to form urethra from where they are excreted out of the body.
b. Prostate gland and seminal vesicles add their secretions to make the sperms motile in a fluid which makes their transport easier and provides nutrition.

82. Give two examples each of the following:

a. Plants having unisexual flowers
b. Agents of pollination
c. Physical changes on puberty that are common to both boys and girls.

Ans : [CBSE 2016]

a. Papaya, watermelon
b. Insects, air, water, etc.
c. (i) Appearance of pubic hair.
(ii) Skin becomes oily and may develop pimples.

83. Why are the testes located outside the abdominal cavity? Mention the endocrine and exocrine function of testes.

Ans : [CBSE 2016]

Sperm formation requires a lower temperature than the normal body temperature. This temperature is 1-3°C lower than the temperature of the body. Testes are thus located outside so that scrotum provides an optimal temperature for the formation of the sperms.

Endocrine function:

Production of male hormone (testosterone).

Exocrine function:

Production of male gametes (sperms).

84. List six specific characteristics of sexual reproduction.

Ans : [All India 2015, CBSE 2016]

Characteristics of sexual reproduction:

a. Two parents are involved.
b. Two dissimilar gametes are formed by meiosis.
c. Variations are produced.
d. Occurs in all the higher and some of the lower organisms.
e. Fertilization / fusion of gametes leading to zygote formation.

85. List four points of significance of reproductive health in a society. Name any two areas related to reproductive health which have improved over the past 50 years in our country.

Ans : [All India 2015, CBSE 2016]

Significance:
a. Prevent STDs.
b. Advantage of small family.
c. Less mortality among new-borns.
d. Reduces the cases of maternal mortality.

Areas which have improved:
a. Family Planning.
b. Decrease in STD cases.

86. What is placenta? Explain its function in human female. **[Foreign 2015, All India 2014]**

or

State the role of placenta in the development of embryo. **[All India 2013]**

or

What is placenta? Describe its structure. State its functions in case of a pregnant human female.

Ans : [All India 2016]

Placenta is a specialized tissue embedded in the uterine wall. It contains villi on the embryo's side and blood spaces on the mother's side.

Function:
a. Helps in passing of nutrients from mother to foetus.
b. Exchange of oxygen and carbon dioxide gases.
c. Passing of waste materials from embryo to the mother.

87. Write one main difference between asexual and sexual mode of reproduction. Which species is likely to have comparatively better chances of survival- the one reproducing sexually or the one reproducing asexually? Justify your answer. **[Foreign 2015, All India 2018]**

or

How is sexual reproduction better than asexual reproduction?

Ans : [All India 2013]

a. Asexual reproduction does not involve genetic fusion while sexual reproduction involves fusion of male and female gametes to form a zygote.
b. Species reproducing sexually have better chances of survival.
Reason :
Sexual reproduction gives rise to more variations which are essential for evolution as well as survival of species under unfavorable conditions.

88. What are chromosomes? Explain how in sexually reproducing organisms, the number of chromosomes in the progeny is maintained?

Ans : [CBSE 2015]

Chromosomes are thread like structures made-up of DNA found in the nucleus. The original number of chromosomes becomes half during gamete formation. Hence, when the gametes combine, the original number of chromosome gets restored in the progeny.

89. List four categories of contraceptive methods. State in brief two advantages of adopting such preventive methods.

Ans : [CBSE 2015]

Four categories of contraceptive methods are:
a. Barrier method (Condoms)
b. Surgical method (Vasectomy in males and Tubectomy in females)
c. Withdrawal method
d. Calendar method
e. Hormonal method
f. IUCD/Copper-T/Loop (any four)

Two advantages:
a. Helps in maintaining health of women.
b. Helps in preventing STDs especially AIDS.
c. Helps in birth control.

90. List any two modes of asexual reproduction. Under which mode of reproduction is vegetative propagation placed and why? List two advantages of vegetative propagation.

Ans : [All India 2014]

Two modes of asexual reproduction are fission Regeneration

Vegetative propagation is placed under asexual reproduction as reproduction happens from any part of a plant. It may be either leaf, shoot or root.

Advantages are:
a. The plants bear flowers and fruits earlier than those propagated sexually.
b. Plants have lost capacity to form seeds hence they are propagated vegetatively.

91. "Regeneration is not same as reproduction".
a. Justify the statement.
b. What is meant by regeneration?
c. How is this process different from fragmentation?

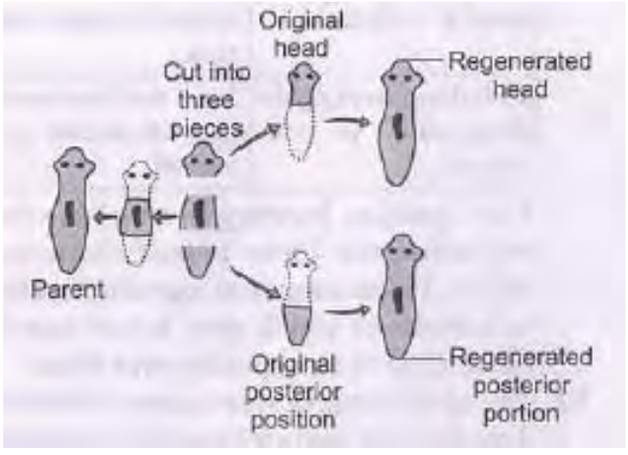
Ans : [All India 2015]

a. Regeneration is not the same as reproduction, since most organisms would not normally depend on being cut up to be able to reproduce.
b. The ability to give rise to new individuals from the body parts of the parent individual is called regeneration.
c. In fragmentation, the body of a simple multicellular organism breaks down onto many 'fragments'. All cells undergo division and the organism develops from each fragment. Regeneration occurs only through some specialised cells.

92. Explain the process of regeneration in Planaria. How is this process different from reproduction?

Ans : [All India 2014, CBSE 2008]

Regeneration is the ability to give rise to new individuals from the body parts of the parent individual e.g., Hydra and Planaria, if their bodies get broken into many pieces, each piece is capable of re-growing into a complete individual.



In some organism regeneration occurs but only to regain lost body parts like in tail of lizard, arm of a star fish. In the case of Planaria, it is a way of reproduction that is producing organisms of its own kind.

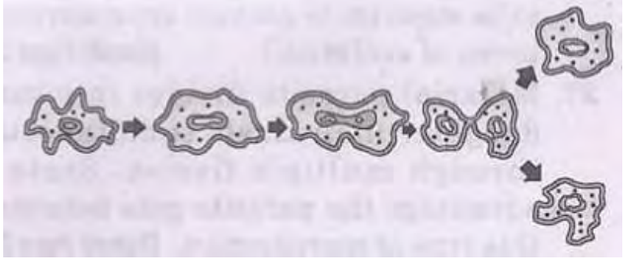
93. In the process of reproduction as used by Spirogyra, the organism splits itself into small pieces.
a. What is this process of reproduction called?
b. Is this type of reproduction sexual or asexual? Answer with reason.
c. Is this process same as regeneration?

Ans : [All India 2014-15]

a. Fragmentation.
b. Asexual as only one parent is involved,
c. In fragmentation, the body of a simple multicellular organism breaks down into many 'fragments'. All cells undergo division and the organism develops from each fragment.

In regeneration, body of a multicellular organism get broken into many pieces, each piece is capable of re-growing into a complete individual.

94. Study the diagram given below:



a. Identify the process.
b. Which organism uses the above method of reproduction?
c. How is the above method different from the process of fragmentation? **[All India 2014-15]**

or

In context of reproduction of species, state the main difference between fission and fragmentation. Also give one example of each.

Ans : [All India 2016]

a. Binary fission.
b. Amoeba.
c. Binary fission occurs in unicellular organisms only. In fragmentation the body of a simple multicellular organism breaks down into many 'fragments'. All cells undergo division and the organism develops from each fragment.

95. DNA content has the tendency to double itself during sexual reproduction due to combining of the genetic materials from the two parents. How the problem of DNA doubling can be solved to maintain the consistency of the genetic material throughout the species?

[All India 2014-15]

or

"The chromosome number of the sexually reproducing parents and their offsprings is the same". Justify the statement.

Ans : [All India 2014]

DNA doubling is always followed by cell division. Due to this special cell division, gametes form with half the content of DNA and single set of chromosomes. These gamete fuse to form zygote on fertilization. Thus the characteristic number of chromosome and the normal DNA content for a cell is regained.

Thus the consistency of the genetic material throughout the species is maintained and for the same reason the chromosome number of the sexually reproducing parents and their offsprings is the same.

96. Explain the structure of the female reproductive system of humans.

Ans : [All India 2014-15]

Female Reproductive System consists of ovaries, fallopian tubes, uterus and vagina.
a. Ovaries are located inside the abdominal cavity, near the kidney. It performs two functions:
   - Produce female germ - cells/eggs. Every month one egg is produced
   - Secrete hormones like Estrogens which stimulate the development of secondary sexual characteristics at puberty.
b. Fallopian Tubes carry the egg from ovary to the womb; egg gets fertilized in the oviducts only if it meets a sperm.
c. Uterus is a elastic bag like structure. The fertilized egg, the zygote gets implanted in the fining of uterus and develops into an embiyo.
d. Vagina (Birth Canal) receives the sperms as well as child is borne through it.

97. Give the functions of the following in the process of reproduction:
a. Pollen tube.
b. ovary,
c. Stigma.

Ans : [All India 2015]

a. Pollen tube carries male gamete from stigma to ovule.
b. Ovary has ovule and forms fruit to protect and dispersal of seeds.

c. Stigma receives pollen during pollination.

98. Justify the following statements:
a. Variation is beneficial for the species over a period of time.
b. New offsprings produced are similar to their parents but not identical.
c. Binary fission is different in Amoeba and Leishmania.

Ans : [All India 2014-15]

a. Variations help a population in the process of natural selection and accumulation of adaptations in a population. It leads to evolution of a species.
b. Offspring, especially when produced sexually, have minor differences or variations among themselves hence they may not look identical. By virtue of them being from same species they look similar.
c. Binary fission in Amoeba is in any plane but in Leishmania it is in a fixed plane.

99. What happens when:
a. APlanaria is cut into three different pieces,
b. Leaf of the Bryophyllum with notches fall on the soil.
c. Testosterone is released in the male reproductive system.

Ans : [All India 2014-15]

a. Three new Planaria will form due to regeneration.
b. New plantlets will form from these buds helping the plant to propagate vegetatively.
c. The male shows masculine features and attains fertility. Sperm starts forming in testis.

100. What is the effect of DNA copying, which is not perfectly ccurate, on the reproduction process? How does the amount of DNA remain constant though each new generation is a combination of DNA copies of two individuals?

Ans : [CBSE 2014]

a. DNA copying leads to more variations in the offspring.
b. Sexually reproducing organisms have special lineage of cells which have only half the number of chromosomes as the parent cell.
c. When such germ cells fused, a new individual is formed with the same amount of DNA as that of parent.

101. Differentiate between the following:
a. Placenta and uterus
b. Unisexual and bisexual flowers
c. Fertilization and germination

Ans : [CBSE 2014]

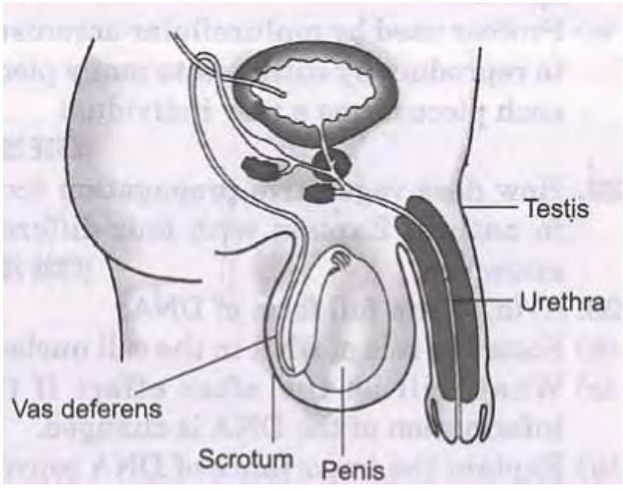
a. Placenta and uterus : The embryo gets nutrition from the mother's blood with the help of a special tissue called placenta.

After fertilization, embryo gets attached to the walls of uterus.

b. Unisexual flowers contain either stamens or carpels. Bisexual flowers contain both stamens and carpels.
c. Fertilization and germination : The fusion of male gamete with female gamete leading to the formation of zygote is known as fertilization.

The growth of embryo (present in the seed) into seedling under appropriate conditions is known as germination.

102. A part of the male reproductive system is shown below. Study the diagram and answer the questions that follow.



a. Two part have been incorrectly labelled. Identify them.
b. Give the function of urethra.
c. Which hormone is released by testis?

Ans : [CBSE 2014]

a. Testis, penis.
b. Urethra serves as a common passage for both sperms and urine.
c. Testosterone.

103. Mention one function each of the following parts with respect to the female reproductive system:
a. Vagina
b. Ovary

Ans : [CBSE 2014]

a. The uterus open into vagina through the cervix. The sperms enter through the vaginal passage during sexual intercourse.
b. One egg (female gamete) is produced every month by one of the ovaries.

104. List and explain in brief three methods of contraception. **[All India 2013]**

or

List any four methods of contraception. How are they helpful to young couples?

Ans : [All India 2014]

Four methods of contraception:
a. Condoms
b. Copper-T
c. Diaphragm
d. Oral pills

All these help in family planning as it helps in keeping gap between two children. They help in proper utilization of family resources.

105. Write scientific name for malarial parasite. How is fission in amoeba different from that of malarial

parasite?

Ans : [All India 2013]

a. Plasmodium,
b. Fission in amoeba produces two daughter cells - binary fission. Fission in Plasmodium produce many daughter cells - multiple fission,

106. a. Give the functions of the following:
1. Pollen tube
2. Ovary

b. List any two changes observed in the body of a female during puberty.

Ans : [CBSE 2013]

a. (i) Transfer of male gamete. (ii) Production of female gamete.
b. (i) Growth of mammary glands. (ii) Onset of menstrual cycle.

107. What is meant by DNA copying? Mention its importance in reproduction.

Ans : [CBSE 2013,14]

Cells use chemical reactions to build copies of their DNA. This creates two copies of the DNA in a reproducing cell. DNA copying is accompanied by the creation of an additional cellular apparatus to facilitate the DNA copies to separate with its own cellular apparatus. DNA copying gives rise to some inbuilt tendency for variation during reproduction which is the basis for evolution.

108. Distinguish between the functions of ovary and testis.

Ans :

	Ovary	Testis
1.	Ovary is the primary sex organ in females which produces eggs	Testis is the primary sex organ in males which produces sperms.
2.	It also secretes hormone such as estrogen (which imparts female secondary sexual characters) and progesterone (which maintains pregnancy).	It also secretes hormone testosterone which imparts male secondary sexual characters.
3.	Ovary remains functional up to 50 years of age.	Testis remains functional even more than 70 years of age.

109. a. What are sexually transmitted diseases? Name any one which is caused by bacteria and one caused by viral infection.
b. Mention any two methods to avoid such diseases.

Ans : [CBSE 2013]

a. Diseases that spread through the sexual contact are called sexually transmitted diseases.
(i) Gonorrhoea or syphilis is caused by bacteria.
(ii) Warts, HTV, AIDS is caused by virus.
b. (i) Use of condoms on penis.
(ii) Use covering on vagina.

110. a. How do organisms reproduced by fission?
b. Write names of any two organisms which reproduce by this method.
c. Differentiate between the fission of Leishmania and Plasmodium.

Ans : [CBSE 2013]

a. Cell division takes place which leads to creation of new individuals.
b. Bacteria, Protozoa.
c. Leishmania — binary fission occurs in a definite orientation.
Plasmodium — undergoes multiple fission,

111. Give reasons:
a. Wind acts as a pollinating agent.
b. Variation is essential and beneficial to a species.
c. Use of condoms prevents pregnancy.

Ans : [CBSE 2013]

a. Transfer of pollen grains from anther to stigma.
b. Helps in evolution and survival.
c. Prevents fertilization - Barrier method.

112. What are secondary sexual characters in humans? Name one such character of male and female.

Ans : [CBSE 2013]

The characters which distinguish a male from female are called secondary sexual characters.

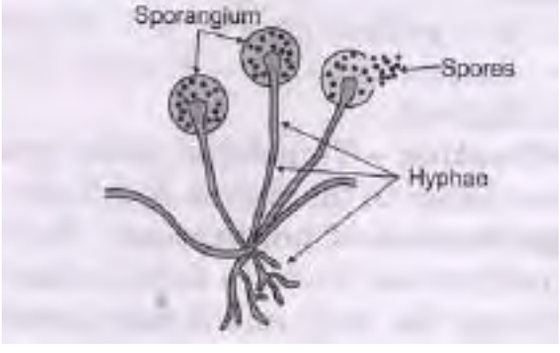
Secondary sexual characters of male are moustache, beard, thick growth of hair on body, strong muscles and harsh voice.

Secondary sexual characters of female are less hair on body, broad hips, development of breasts and soft voice.

113. Name and explain the method by which Rhizopus reproduces.

Ans : [CBSE 2013]

Rhizopus reproduces by spore formation. Method: It is a method of asexual reproduction.



Spores are produced in a structure called sporangium.

114. a. Give the functions of: (i) Stigma (ii) Ovary
b. State in brief the formation of seed in a flower.

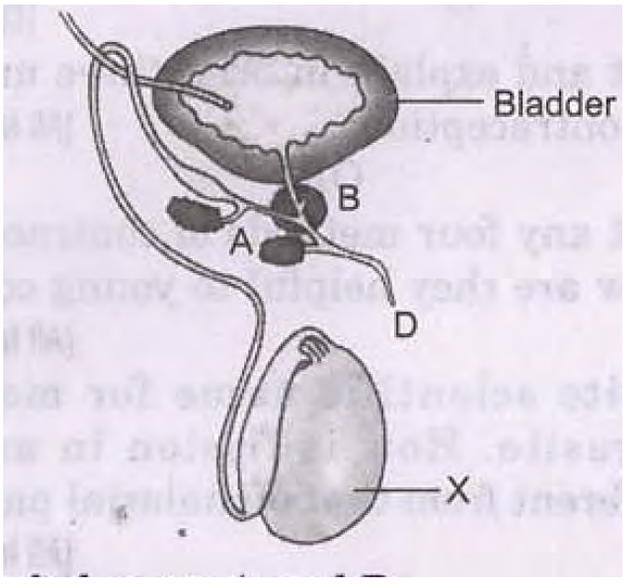
Ans : [CBSE 2011]

a. (i) The sticky terminal part of the carpel is called stigma. It receives pollen.
(ii) The swollen bottom part of the carpel is called ovary. It contains female germ cells

which form seed after fertilization.

b. After fertilization, the zygote divides several times to form an embryo within the ovule. The ovule develops a tough coat and is gradually converted into a seed.

115. In the diagram of human male reproductive system given below:



a. Label parts A and B.
b. Name the hormone produced by organ "X'. What is the role of this hormone in human male?
c. Mention the name of substances that are transported by tubes (i) C and (ii) D.

Ans : [CBSE 2011]

a. A - seminal vesicle, B - prostate gland.
b. Testosterone: It controls gamete formation/ secondary sex organs/ accessory glands.
c. C - sperms, D - sperms/semen and urine.

116. a. Identify the asexual method of reproduction in each of the following organisms:
(i) Rose (ii) Yeast (iii) Planaria
b. What is fragmentation? Name a multicellular organism which reproduces by this method.

Ans : [CBSE 2011]

a. (i) Vegetative propagation by stem.
(ii) Budding
(iii) Regeneration
b. Fragmentation is a asexual method of reproduction in which an organism simply breaks up into smaller pieces/ fragments upon maturation. These pieces or fragments grow into new individuals. Spirogyra is the multicellular organism with relatively simple body organisation which reproduces through this simple method of reproduction, i.e., fragmentation.

117. a. Give one example each of sexually transmitted diseases in each of following cases
(i) Bacterial infections (ii) Viral infections
b. How can spread of these diseases be prevented?
[All India 2011]

or

Name one sexually transmitted disease each caused due to bacterial infection and viral infection. How can they be prevented?

Ans : [All India 2008]

a. Bacterial infections: Syphilis, Gonorrhoea.
Viral infections: Warts, AIDS, Hepatitis B, Herpes.
b. Spread of these diseases can be prevented by using physical barrier, avoiding sex with multiple partners.

FIVE MARKS QUESTIONS

118. Name the type of asexual reproduction demonstrated by the following organisms:
a. Amoeba
b. Rhizopus
c. Planaria
d. Plasmodium
e. Bryophyllum

Ans : [All India 2016-17]

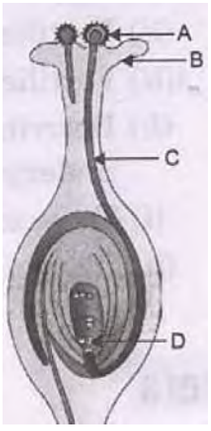
a. Binary fission
b. Spore formation
c. Fragmentation
d. Multiple fission
e. Vegetative propagation

119. Answer the following:
a. How is zygote formed?
b. State the function of placenta in the mother's body.
c. At what interval the egg is formed in human female ovary?
d. Name two STDs caused by bacterial infection.
e. Why is prenatal sex determination prohibited?

Ans : [All India 2017]

a. Zygote is formed by the fusion of male and female gamete.
b. Placenta is a special tissue through which the developing embryo/foetus gets nutrition from mother's blood. It also transports wastes of the embryo into mother's blood.
c. Ovulation releases mature ovum from ' the ovary. It happens once during a menstrual cycle that is for roughly 28 days.
d. STDs caused by bacterial infection are Gonorrhoea and Syphilis.
e. Prenatal sex determination is misused and it may be the reason for female foeticide.

120. a. List two reasons for the appearance of variations among the progeny formed by sexual reproduction.



b. (i) Name the part marked A in the diagram.
(ii) How does "A" reaches part B?
(iii) State the importance of , the part C.
(iv) What happens to the part marked D after fertilization is over?

Ans : [All India 2016]

a. Sexual reproduction confers new characteristics on the offspring due to genetic recombination occurring during gamete formation in the sex organs. Moreover it involves union of two gametes coming from two parents which different genetic combination. Thus it ensures more diversity in characteristics.

b. (i) Pollen
(ii) Pollination
(iii) Pollen tube carries male gametes to the ovule in ovary.
(iv) Ovule turns into seeds.

121. Identify the following methods and giving one example of each:

a. Process in which reproduction takes place by breaking up of parent into fragments.
b. Process of dividing of organisms into many cells simultaneously.
c. Process of reproduction by formation of bud on parent body.
d. Process of reproduction by formation of spores.
e. Process used by multicellular organisms to reproduce by cutting into many pieces each piece forms a new individual.

Ans : [CBSE 2016]

a. Fragmentation, Spirogyra
b. Multiple fission, Plasmodium
c. Budding, Hydra
d. Spore formation, Rhizopus
e. Regeneration, Planaria.

122. How does vegetative propagation occur in nature? Explain with four different examples.

Ans : [CBSE 2016]

There are many plants in which parts like the root, stem and leaves develop into new plants under appropriate conditions. This is called as vegetative propagation. Examples of vegetative propagation:

a. Adventitious buds: In Bryophyllum, adventitious buds grow in the notches along the leaf margin, which when fall on the soil, develop into new plants.
b. Cutting: A piece of stem, root, leaf or even a bulb scale is placed partly under moist soil which grows into a new plant, e.g., rose.
c. Layering: A part of the stem is pulled out and buried in the soil. The layered stem grows into a new plant, e.g., Pudina.
d. Grafting: In grafting, two parts from two different plants are joined together so that they can unite and grow into a new plant, e.g., sugarcane.

123. a. (i) Write full form of DNA.
(ii) State the role of DNA in the cell nucleus,
(iii) What will be the after effect if the information of the DNA is changed.
b. Explain the importance of DNA copying in reproduction.

Ans : [CBSE 2016]

a. (i) Deoxyribo Nucleic Acid.
(ii) Informational source for making proteins.
(iii) Proteins will be changed.
b. Its only due to DNA copying that body designs are similar because DNA cell nucleus carries information for making proteins if DNA copying will not take place then body design will change.

124. List five distinguishing features between sexual and asexual types of reproductions in tabular form.

Ans : [CBSE 2016]

	Sexual reproduction	Asexual reproduction
1.	It involves two parents and causes genetic variation.	It involves only one parent and does not causes genetic variation.
2.	Fertilization/zygote formation is observed.	No fertilization/zygote formation is observed.
3.	Gametes are formed in both males (sperms) and females (ova).	No gametes are produced.
4.	Meiosis occurs during gamete formation.	Meiosis does not occur at any stage of reproduction.
5.	Genetic variation occurs.	Genetic variation does not occur.

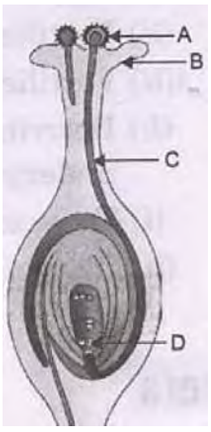
125. a. Name the human male reproductive organ that produces sperms and also secretes a hormone. Write the functions of the secreted hormone.
b. Name the parts of the human female reproductive system where
(i) Fertilization takes place,
(ii) Implantation of the fertilized egg occurs. Explain how the embryo gets nourishment inside the mother's body.

Ans :

a Testis - secrete male hormone - testosterone.
Functions : (i) Formation of sperms, (ii) Development of secondary sexual characters.
b. (i) fallopian tube/oviduct. (ii) uterus.

Placenta is a special disc like tissue embedded in the mother's uterine wall and connected to the foetus/embryo. Placenta provides a large surface area for glucose and oxygen/ nutrients to pass from the mother's blood to the embryo/ foetus.

126. a. Identify A,B,C and D in the given diagram and write their names.



b. What is pollination? Explain its significance.
c. Explain the process of fertilization in flowers. Name the parts of flower that develop after fertilization into (i) seed (ii) fruit

Ans : [Foreign 2015, CBSE 2017, All India 2014,]

a. A - pollen grain; B - stigma; C - Pollen tube, D - Female germ cell/Egg cell.
b. Pollination - Transfer of pollen grains from anther to the stigma of a flower.
Significance of pollination - Process of pollination leads to fertilization as it brings the male and female gametes together for fusion.
c. After a pollen falls on a suitable stigma, the pollen tube grows out of the pollen grain and travels through the style to reach the ovule in the ovary. Here the male germ cell (carried by the pollen tube) fuses with the female germ cell to form a zygote.

127. a. Write the function of following parts in human female reproductive system: (i) Ovary (ii) Oviduct (iii) Uterus
b. Describe in brief the structure and function of placenta.

[All India 2018]

or

Write the functions of the following in human female reproductive system: Ovary, oviduct, uterus
How does the embryo get nourishment inside the mother's body? Explain in brief.

Ans : [Delhi 2015]

a. Functions of Ovary, oviduct, uterus
Functions of Ovary
(i) Production of female hormone, oestrogen and progesterone.
(ii) Production of female gamete / egg /germ cell.
Functions of Oviduct:
(i) Transfer of female gamete from the ovary.
(ii) Site of fertilization.
Functions of Uterus:
(i) Implantation of Zygote/ embryo.
(ii) Nourishment of developing embryo.
b. Placenta is a special disc like tissue embedded in the mother's uterine wall and connected to the foetus / embryo.
Placenta provides a large surface area for glucose and oxygen/nutrients to pass from the mother's blood to the embryo/ foetus.

128. Differentiate between:
a. Pollen tube and Style
b. Fission of Amoeba and Plasmodium
c. Fragmentation and regeneration
d. Bud of Hydra and bud of Bryophyllum
e. Vegetative propagation and spore formation.

Ans : [All India 2015]

a. Pollen tube forms and male gametes are carried by it to the ovule.
Style is part of female part- carpel through which pollen tube passes.
b. Amoeba shows binary fission where one cell splits into two equal halves.
Plasmodium (malarial parasite) shows multiple fission where one cell divides into many daughter cells simultaneously.
c. Fragmentation occurs in multi-cellular organisms with simple body organisation like Spirogyra (a filamentous alga). It involves breaking up of a filament into many fragments and each fragment growing into new individual.
Regeneration is the ability to give rise to new individuals from the body parts of the parent individual, e.g., Hydra and Planaria, if their bodies get broken into many pieces, each piece is capable of regrowing into a complete individual.
d. In Hydra, a bud is formed at a specific site by repeated cell division and develops into a tiny hydra.
In Bryophyllum, vegetative buds arise from the notches of its leaves and develops into a new plantlet.
e. Vegetative Propagation is the development of new plants from parts like root, leaf and stem under suitable conditions, e.g., Bryophyllum vegetative buds arise from the notches of its leaves. In potato, ginger, garlic etc. it occurs through stems.
Spore formation: A spore is a special cell protected by thick coating. It is capable of germinating into a new plant when comes in contact with suitable and environment conditions and moist surface, e.g., in Rhizopus (bread mould), they are formed inside reproductive, bob¬like sacs called sporangia.

129. What happens when
a. Testosterone is released in the male reproductive system.
b. Pollen grain falls on the stigma of flower.
c. Egg fuses with the sperm cell.
d. A Planaria is cut into three different pieces.
e. Buds are formed on the notches of leaf of the Bryophyllum.

Ans : [All India 2014-15]

a. The male shows masculine features and attains

fertility/ sperm starts forming in testis.
b. Pollen tube forms and male gametes are carried by it to the ovule.
c. Fertilization occurs and a zygote forms.
d. Three new Planaria will form due to regeneration.
e. New plantlets will form from these buds helping the plant to propagate vegetatively.

130. Explain what happens when:
a. Testosterone is released in males.
b. Pollen grain falls on the stigma of the flower.
c. Egg fuses with sperm cell.
d. Planaria is cut into many pieces.
e. Buds are formed on the notches of the Bryophyllum leaf.

Ans : [CBSE 2014, 2015]

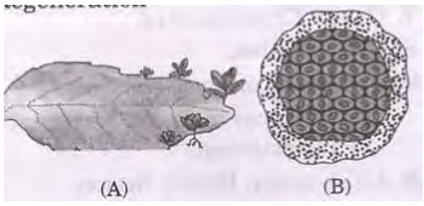
a. (i) Formation of sperms, change in appearance.
(ii) Thick hair growth on the face and voice begin to crack.
b. A tube grows out of the pollen grain and travel through the style to reach the ovary.
c. Zygote is formed (fertilization).
d. Each piece grows into a complete organism.
e. Buds may fall on the soil and develop into new plants.

131. Define the following processes:
a. Fertilization
b. Menstruation
c. Binary fission
d. Vegetative propagation
e. Regeneration

Ans :

a. The fusion of male gamete with female gamete is known as fertilization.
b. Menstruation cycle takes place every month when egg is not fertilized. It lasts for about two to eight days and during this cycle the lining of uterus slowly breaks and comes out through the vagina as blood and mucus.
c. Binary fission is the splitting of nucleus into two daughter cells which can take place in any plane. It can be observed in Amoeba.
d. When vegetative part of a plant like the root, stem or leaves develops into new plant under appropriate conditions, it is known as vegetative propagation.
e. When body of an organism cuts into any number of pieces and each piece grows into a complete organism. This is known as regeneration. Hydra and Planaria reproduce through this process.

132. a. Identify the organisms A, B and the mode of asexual reproduction exhibited by them.

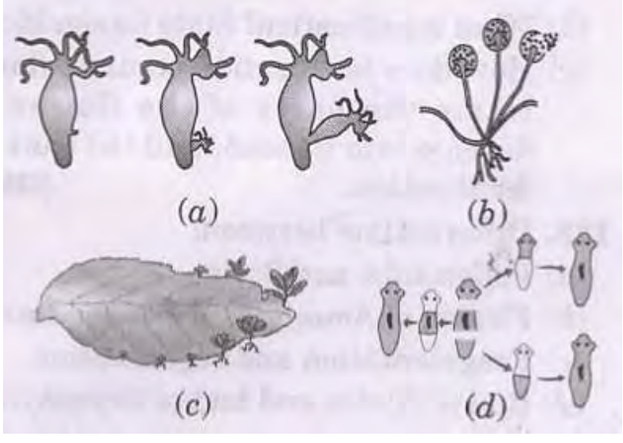


b. How will an organism be benefitted if it reproduces through spores?
c. Mention the two asexual methods by which hydra can reproduce. Explain briefly any one such method.

Ans : [CBSE 2013]

a. (i) Bryophyllum - vegetative propagation. (ii) Plasmodium - multiple fission.
b. Spores are covered with thick walls that protect them until they come into contact with a moist surface.
c. Budding and Regeneration.
Budding : A bud develops as an outgrowth due to repeated cell division at a specific site, these buds develop into tiny individuals, mature and detach from the parent to become new individuals.
Regeneration: Specialized cells divide to form large number of cells and undergo changes to become various cell types and tissues.

133. a. Identify the organisms in figure A, B, C and D.



b. Identify the life process commonly shown in all the figures,
c. How is this life process .advantageous to the organisms? Mention any two advantages.

Ans :

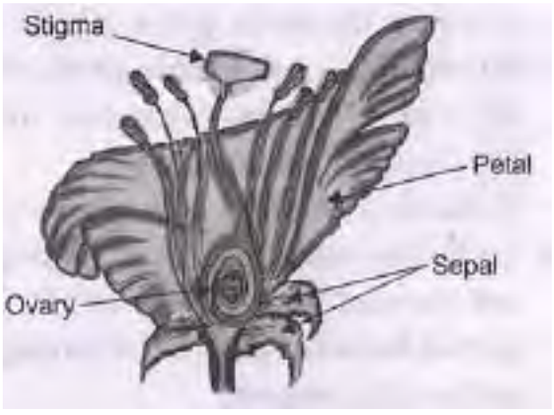
a. (A) Hydra (B) Rhizopus
(C) Bryophyllum (D) Planaria
b. Asexual mode of reproduction
c. (i) Only one individual is required. (ii) Progeny is identical like parents (iii) Produced in large number (Any two)

134. a. Draw a diagram of the longitudinal section of a flower and label on it sepals, petal, ovary and stigma.
b. Write the names of male and female parts of a

flower.

Ans : [All India 2010, 2015]

a.



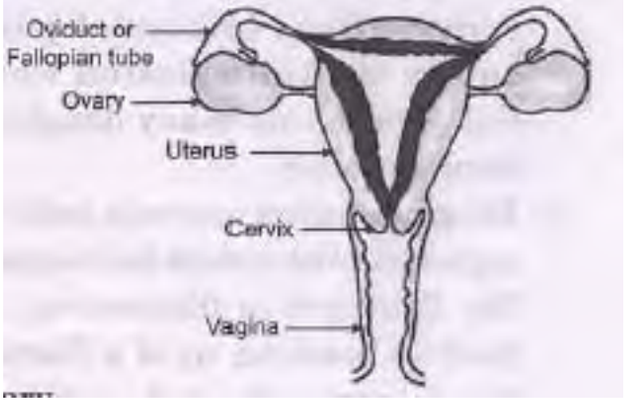
b. Male Part : Stamen; Female Part : Carpel/pistil

135. a. Draw a sectional view of human female reproductive system and label the part where:
(i) Eggs develop
(ii) Fertilization takes place
(iii) Fertilized eggs get implanted.

b. Describe in brief, the changes the uterus undergoes:
(i) To receive the zygote
(ii) If zygote is not formed.

Ans : [Delhi 2008, All India 2014, CBSE 2015]

a.



(i) Ovary
(ii) Oviduct or fallopian tube
(iii) Uterus or uterus wall

b. (i) It becomes thicker due to development of blood vessels and glands in it.
(ii) It gets peeled and shed off along with mucus, blood, dead ovum during menstruation