

**PRACTICE EXERCISE – 1**

- Q1. What is DNA?
- Q2. Are the two cells formed by division of reproductive cells identical?
- Q3. How is variation useful?
- Q4. Name the type of asexual reproduction found in the following organisms:  
(i) Amoeba      (ii) Hydra      (iii) Spirogyra      (iv) Rhizopus      (v) Planaria.
- Q5. What is multiple fission?
- Q6. Name the organism showing fragmentation mode of reproduction?
- Q7. Name two organism showing regeneration mode of reproduction.
- Q8. Name two plants which can grow by grafting.
- Q9. What is grafting?
- Q10. What is the function of pollen grains in flowers?
- Q11. Give one example of each plant which propagates artificially by (a) cutting (b) layering.
- Q12. Name a plant which reproduces naturally by vegetative propagation of stem.
- Q13. What is the end product of double fertilisation?
- Q14. What is tissue culture?
- Q15. What is a callus?
- Q16. What is vegetative propagation?
- Q17. What is sexual reproduction?
- Q18. Name the reproductive part of a flower.
- Q19. What is self pollination?
- Q20. What is cross-pollination?
- Q21. What is a seed?
- Q22. What is germination?
- Q23. What is double fertilization?
- Q24. What is triple fusion?
- Q25. What is puberty?
- Q26. What do you mean by sexual maturation?
- Q27. Where are testis found in human male?
- Q28. Where are sperms formed?
- Q29. What is male reproductive organ called?
- Q30. What is placenta?
- Q31. Where does the embryo develop in a human female?
- Q32. What is Menstruation?
- Q33. Mention some STDs.
- Q34. Mention secondary sexual characters in male and female.

**PRACTICE EXERCISE – 2**

- Q1. Write the names of one male and one female sex hormones.
- Q2. Where are pollen grains produced in a flower?
- Q3. Which parts of bryophyllum is vegetative?
- Q4. Name the various parts of male reproduction system.
- Q5. What is the function of testis?
- Q6. What are sperms?
- Q7. State the function of fallopian tube.
- Q8. Name the various parts of female reproductive system.
- Q9. What is the function of human ovary?
- Q10. Name the type of fission carried out by amoeba.
- Q11. Define layering in vegetative propagation.
- Q12. What is the site of implantation in the female reproductive tract?
- Q13. Name the tissue through which the foetus gets all the requirement from the mother's body?
- Q14. Name the type of vegetative propagation used in rose plant, grapes.
- Q15. What is scion in grafting?
- Q16. What is stick in grafting?
- Q17. Name two plants which are propagated by cutting.
- Q18. Name two plants which are propagated by grafting.
- Q19. What is the advantage of grafting?
- Q20. How do the contraceptive pills prevent conceptions?
- Q21. What is implantation?
- Q22. What is ovulation?
- Q23. What is internal fertilisation?
- Q24. Name an organism showing internal fertilisation.
- Q25. What are the different types of asexual reproduction?
- Q26. Explain budding in yeast with the help of diagram.
- Q27. Explain the process of regeneration in planaria.
- Q28. List two advantages of vegetative propagation.
- Q29. What is vegetative propagation? Name the two types of vegetative propagation.
- Q30. How do following organisms reproduce by asexual reproduction?
- (i) Hydra      (ii) Planaria      (iii) Plasmodium      (iv) Amoeba
- Q31. List four methods of artificial vegetative propagation which are exploited by man in propagating plants in garden and nurseries.
- Q32. What is grafting? Write any two uses of this process.
- Q33. How does vegetative propagation take place in hydrophyllum? Explain with a well-labelled diagram.
- Q34. What is tissue culture? Explain how new plants are obtained by this technique?

**PRACTICE EXERCISE – 3**

- Q1. What are carpel? Explain the structure of carpel.
- Q2. Draw a well-labelled diagram showing the structure of carpel.
- Q3. What is pollination? What are the types of pollination?
- Q4. Differentiate between self pollination and cross-pollination.
- Q5. What is fission? What are the different types of fission? Explain them with the help of diagrams?
- Q6. Explain double fertilisation in plants.
- Q7. What is fertilisation? Differentiate between external and internal fertilisation.
- Q8. Draw a labelled diagram of a longitudinal section of pistil flower showing the germination of pollen on stigma.
- Q9. What are sexually transmitted disease? Name few of them.
- Q10. Describe the different parts of flower with a well-labelled diagram.
- Q11. Name the main reproductive organ of male reproductive system. State two functions of it?
- Q12. Explain what happen when the egg does fertilised?
- Q13. Name the main reproductive organ of human female. State two functions of it?
- Q14. Explain the surgical methods to avoid pregnancy.
- Q15. Draw a well-labelled diagram to show the reproductive system of human female.
- Q16. What is placenta? What are its functions?
- Q17. What are the important functions of uterus?
- Q18. Define the term: (i) Syngamy (ii) Triple fusion (iii) Double fertilisation
- Q19. How does vegetative propagation takes place in sweet potato?
- Q20. What are the various methods of vegetative propagation? Discuss any one method with example.
- Q21. Describe briefly three methods of plant propagation which are commonly used for growing garden plants.
- Q22. What is double fertilisation? How does it different from normal fertilisation? After fertilisation name the part in each case which develops. (i) the fruits (ii) the seeds.
- Q23. Describe the human male reproductive system with the help of a labelled diagram.
- Q24. Describe fertilisation in human female. What happen to the ovum, menstruation, after the fertilisation of the ovum?
- Q25. Name the different types of techniques developed to prevent and control pregnancy.
- Q26. Explain the different artificial propagation.
- Q27. How does natural vegetative propagation takes place in plants?
- Q28. How does sperm encounter egg is fertilisation occur and a zygote is formed?
- Q29. Give example of 2 plants each for the following types of natural vegetative propagation:  
(i) By roots (ii) By stem (iii) By leaves.
- Q30. What is cutting method in vegetative propagation? Name four plants which are usually propagated by cutting method.
- Q31. What is the function of pollen grain in flowers?

**PRACTICE EXERCISE – 4**

- Q1. What is DNA?
- Q2. Name an unicellular organism having a whip like structure at one end of cell and which cause kala-a-zar?
- Q3. Name the organs which produce female sex cells?
- Q4. Name the type of reproduction which takes place in plasmodium?
- Q5. Write the name of organisms which reproduces asexually by budding?
- Q6. Where are pollen grain produced?
- Q7. Name the hormones secreted by testis and ovaries?
- Q8. What do the ovules become after fertilisation?
- Q9. Write the full form of AIDS.
- Q10. What is pollination?
- Q11. What is the age of puberty in males and females.
- Q12. What is the effect of DNA copying which is not perfectly accurate on the reproduction process?
- Q13. Bryophyllum can produce new plants by leaves while rose do not. Why?
- Q14. What is vegetative propagation? State any two advantages of it.
- Q15. (a) Draw a diagram showing longitudinal section of a flower and label it.  
(b) How is the process of pollination different from fertilization?
- Q16. In sexual reproduction, the offspring carries copies of DNA from both the parents. Even then the amount of DNA in the next generation offspring does not get doubled. Why?
- Q17. What changes are common to both boys and girls at puberty?
- Q18. Draw a labelled diagram of longitudinal section of pistil of a flower.
- Q19. Name one sexually transmitted disease each caused due to bacterial infection and viral infection. How can these be prevented?
- Q20. Name these parts of the flower which serve the same function as the following do in the animals:  
(i) testis                      (ii) Ovary                      (iii) eggs                      (iv) sperms
- Q21. Describe briefly the different types of asexual reproduction in plants with the help of diagram?
- Q22. Describe the process of Double fertilization?
- Q23. Illustrate the following with help of diagram?  
(i) Regeneration in Planaria                      (ii) Budding of Hydra
- Q24. Describe the human male reproductive system with the help of labelled diagram.
- Q25. Why do woman avoid frequent pregnancy? Explain the following methods of contraception giving one example  
(i) Barrier method                      (ii) Chemical method                      (iii) Surgical method
- Q26. What are advantages of sexual reproduction?

## MULTIPLE CHOICE QUESTION'S

- Q1.** Asexual reproduction is:  
(a) a fusion of specialised cells  
(b) a method by which all types of organisms reproduce  
(c) a method producing genetically identical offspring  
(d) a method in which more than one parent are involved
- Q2.** The micro-organism which reproduces by multiple fission is the one which causes the disease known as:  
(a) Kala-azar (b) marasmus  
(c) malaria (d) amoebiasis
- Q3.** In the list of organisms given below, those which reproduce by the asexual method are:  
(i) banana (ii) yak  
(iii) yeast (iv) Amoeba  
(a) (i) and (iv)  
(b) (i), (iii) and (iv)  
(c) (i) and (iv)  
(d) (ii), (iii) and (iv)
- Q4.** The disease kala-azar is caused by a micro-organisms known as:  
(a) Planaria (b) Leech  
(c) Leishmania (d) Plasmodium
- Q5.** The unicellular organisms which reproduces by budding is:  
(a) Spirogyra (b) Hydra  
(c) Planaria (d) Yeast
- Q6.** The offsprings formed by asexual reproduction method have greater similarity among themselves because  
(i) asexual reproduction involves only one parent  
(ii) asexual reproduction involves two parents  
(iii) asexual reproduction involves gametes  
(iv) asexual reproduction does not involve gametes  
(a) (i) and (ii) (b) (i) and (iii)  
(c) (ii) and (iv) (d) (i) and (iv)
- Q7.** One of the following does not reproduce by spore formation method. This is:  
(a) Rhizopus fungus  
(b) Penicillium fungus  
(c) Yeast fungus  
(d) Mucor fungus
- Q8.** One of the following reproduces by forming spores. This is:  
(a) Fern (b) Planaria  
(c) Spirogyra (d) Potato
- Q9.** A feature of reproduction that is common to Amoeba, Yeast and Bacterium is that:  
(a) they are all multicellular  
(b) they are all unicellular  
(c) they reproduce only sexually  
(d) they reproduce asexually
- Q10.** An animal which reproduces by the process of budding is:  
(a) Plasmodium (b) Yeast  
(c) Hydra (d) Planaria
- Q11.** The ability of a cell to divide into several cells during reproduction in Plasmodium is called:  
(a) budding  
(b) fragmentation  
(c) binary fission  
(d) multiple fission
- Q12.** Vegetative propagation refers to the formation of new plants from the following existing organs of the old plants:  
(a) stems, roots and flowers  
(b) stems, roots and leaves  
(c) stems, flowers and fruits  
(d) stems, leaves and flowers
- Q13.** The two types of organisms which produce colonies by the process of budding are:  
(a) hydra and corals  
(b) yeast and sponges  
(c) corals and sponges  
(d) hydra and yeast

- Q14.** An alga which reproduces by the asexual reproduction method called fragmentation is:  
 (a) Rhizopus (b) salmonella  
 (c) plasmodium (d) Spirogyra
- Q15.** Binary fission describes the type of reproduction where the organism divides to form:  
 (a) many spores (b) two daughters  
 (c) many buds (d) two hyphae
- Q16.** The cut part of a plant stem (having roots and fixed to ground) which is used in the process of grafting is known as:  
 (a) stock (b) scion  
 (c) cutting (d) bud
- Q17.** An organism having a whip-like structure at one end which reproduces by the process of binary fission is  
 (a) Hydra (b) Paramecium  
 (c) Leishmania (d) Plasmodium
- Q18.** An organism which can reproduce by two asexual reproduction methods one similar to the reproduction in yeast and the other similar to the reproduction in Planaria is:  
 (a) Spirogyra (b) Bryophyllum  
 (c) Hydra (d) Sea anemone
- Q19.** In asexual reproduction, two offsprings have the same genetic material and the same body features are called:  
 (a) callus (b) twins  
 (c) clones (d) chromosomes
- Q20.** A Planaria worm is cut horizontally in the middle into two halves P and Q such that the part P contains the whole head of the worm. Another Planaria worm is cut vertically into two halves R and S in such a way that regenerate to form the complete respective worms?  
 (a) only P (b) only R and S  
 (c) P, R and S (d) P, Q, R and S
- Q21.** Which of the following is not a part of the female reproductive system in human beings?  
 (a) ovary (b) uterus  
 (c) vas deferens (d) oviducts
- Q22.** Which of the following is not a sexually transmitted disease?  
 (a) gonorrhoea (b) hepatitis  
 (c) syphilis (d) AIDS
- Q23.** In which one of the following birth control methods, a small portion of oviducts of a woman is removed by surgical operation and the cut ends are ligated?  
 (a) copper-T  
 (b) tubectomy  
 (c) vasectomy  
 (d) diaphragm
- Q24.** Fertilisation results immediately in the formation of:  
 (a) a zygote (b) an embryo  
 (c) a placenta (d) a foetus
- Q25.** The sexually transmitted disease which is caused by bacteria is:  
 (a) malaria (b) diarrhoea  
 (c) gonorrhoea (d) AIDS
- Q26.** The advantage that internal fertilization has over external fertilization is that in internal fertilization:  
 (a) new off-springs are exactly like the parent  
 (b) production of large numbers of gametes is unnecessary  
 (c) copulation and fusion of gametes is passive  
 (d) fewer individual are produced
- Q27.** In a flower, the parts that produce male and female gametes are respectively:  
 (a) sepal and anther  
 (b) filament and stigma  
 (c) anther and ovary  
 (d) stamen and style
- Q28.** The characteristics transmitted from parents to offspring are present in:  
 (a) cytoplasm (b) ribosome  
 (c) golgi bodies (d) genes
- Q29.** The number of chromosomes in parents and offsprings of a particular species remains



constant due to:

- (a) doubling of chromosomes after zygote formation
- (b) halving of chromosomes during gamete formation
- (c) doubling of chromosomes after gamete formation
- (d) halving of chromosomes after gamete formation

**Q30.** Which of the following statements are true for flowers?

- (i) flowers are always bisexual
- (ii) they contain sexual reproductive organs
- (iii) they are produced in all groups of plants
- (iv) after fertilisation they give rise to fruits
- (a) (i) and (iv)                      (b) (ii) and (iii)
- (c) (i) and (iii)                    (d) (ii) and (iv)

**Q31.** In human males, the testes lie in the scrotum outside the body because it helps in the:

- (a) process of mating
- (b) formation of sperms
- (c) easy transfer of sperms
- (d) all the above

**Q32.** During adolescence, several changes occur in the human body. Mark one change from the following associated with sexual maturation in boys:

- (a) loss of milk teeth
- (b) increase in height
- (c) cracking of voice
- (d) weight gain

**Q33.** The offspring formed as a result of sexual reproduction exhibit more variations because:

- (a) sexual reproduction is lengthy process
- (b) genetic material comes from two parents of different species.
- (c) genetic material comes from two parents of same species
- (d) genetic material comes from many parents

**Q34.** Which among the following statements are true for unisexual flowers?

- (i) They possess both stamen and pistil
- (ii) They possess either stamen or pistil
- (iii) They exhibit cross pollination
- (iv) Unisexual flowers possessing only stamens cannot produce fruits

- (a) (i) and (iv)                      (b) (ii), (iii) and (iv)
- (c) (ii) and (iii)                    (d) (i), (iii) and (iv)

**Q35.** One of the following process does not lead to the formation of clones. This is:

- (a) fission                              (b) fertilisation
- (c) fragmentation                    (d) tissue culture

**Q36.** The correct sequence of reproductive stages occurring in flowering plants is:

- (a) gametes, zygote, embryo, seed embryo, seed
- (b) zygote, gametes
- (c) seed, embryo, zygote, gametes
- (d) gametes, embryo, zygote, seed

**Q37.** The male gametes in a flower and in a human are produced respectively in:

- (a) stigma and ovary
- (b) anther and style
- (c) ovary and testes
- (d) anther and testes

**Q38.** The normal body cell of an organism contains 28 pairs of chromosomes. The number of chromosomes present in its germ cell will be:

- (a) 28                                      (b) 14
- (c) 56                                      (d) 42

**Q39.** Bryophyllum can be propagated vegetatively by the

- (a) stem                                      (b) leaf
- (c) root                                      (d) flower

**Q40.** Vegetatively propagated plants

- (a) do not bear roots
- (b) do not bear buds
- (c) are genetically similar
- (d) are genetically dissimilar

**Q41.** In Rhizopus, tubular thread like structures

bearing sporangia at their tips are called	<b>ANSWERS</b>				
(a) filaments (b) hyphae					
(c) rhizoids (d) roots	1. (c)	2. (c)	3. (b)	4. (c)	5. (d)
<b>Q42.</b> The flower of the Hibiscus plant is	6. (d)	7. (c)	8. (a)	9. (d)	10. (c)
(a) bisexual (b) unisexual					
(c) neuter (d) very small	11. (d)	12. (b)	13. (c)	14. (d)	15. (b)
<b>Q43.</b> The seed that contains the future plant is called the	16. (a)	17. (c)	18. (c)	19. (c)	20. (d)
(a) cotyledons (b) seed coat					
(c) germ cells (d) embryo	21. (c)	22. (b)	23. (b)	24. (a)	25. (c)
<b>Q44.</b> The process of release of eggs from the ovary is called	26. (d)	27. (c)	28. (d)	29. (b)	30. (d)
(a) menstruation (b) reproduction					
(c) insemination (d) ovulation	31. (b)	32. (c)	33. (c)	34. (b)	35. (b)
<b>Q45.</b> In human beings, the fertilization occurs in the	36. (a)	37. (d)	38. (a)	39. (b)	40. (c)
(a) uterus (b) ovaries					
(c) fallopian tubes (d) vagina	41. (b)	42. (a)	43. (d)	44. (d)	45. (c)
<b>Q46.</b> The embryo in humans get nutrition from the mother's blood with the help of a special tissue called	46. (a)	47. (c)	48. (d)	49. (b)	50. (d)
(a) Placenta (b) Villi					
(c) Uterus (d) Womb					
<b>Q47.</b> Leishmania reproduce asexually by					
(a) multiple fission					
(b) binary fission in any plane					
(c) binary fission in a definite orientation.					
(d) budding					
<b>Q48.</b> Which of the following is a sexually transmitted disease?					
(a) Syphilis (b) Gonorrhoea					
(c) Warts (d) All of these					
<b>Q49.</b> Asexual reproduction by budding is seen in					
(a) Bryophyllum (b) Hydra					
(c) Planaria (d) Sponge					
<b>Q50.</b> AIDS is a deadly disease which is caused by:					
(a) a protozoan (b) a fungus					
(c) a bacterium (d) a virus					