P.S CLASSES

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CHAPTER 8

How Do Organisms Reproduce

1. OBJECTIVE QUESTIONS

1. The anther contains
(a) sepals (b) ovules
(c) carpel (d) pollen grains

Ans : (d) pollen grains

2. The development of a seedling from an embryo under appropriate condition is called
(a) regeneration (b) germination
(c) vegetative propagation (d) pollination

Ans : (b) germination

Germination is a process occurring in plants in which the embryo develops into a seedling under appropriate condition.

3. Site of fertilization in mammals is
(a) ovary (b) uterus
(c) vagina (d) fallopian tube

Ans : (d) fallopian tube

4. Which of the following organisms do not depend on reproduction to exchange genetic information
(a) animals (b) plants
(c) bacteria (d) fungi

Ans : (c) bacteria

5. By which method, asexual reproduction occurs in Amoeba
(a) fission (b) budding
(c) germination (d) all of these

Ans : (a) fission

6. Which of the following is not an outcome of variations present in population?
(a) Bacterial resistance to heat
(b) Different colour of eyes
(c) Maintenance of body design fearures
(d) Survival of species over time

Ans : (c) Maintenance of body design fearures

Variations are not responsible for maintenance of body design fearures.

7. Asexual reproduction produces offspring that are
(a) genetically identical to their parents
(b) genetically identical to their siblings
(c) none of the above
(d) both (a) and (b)

Ans : (d) both (a) and (b)

8. Which of the following have buds on their leaves as vegetative reproducing structure?
(a) Rose (b) Strawberry
(c) Bougaincillea (d) Bryophyllum

Ans : (d) Bryophyllum

Bryophyllum reproduces by the buds present in their notches along the leaf margin of Bryophyllum which falls on the soil and develops into new plants.

9. The development of offspring from any part of body is called
(a) asexual reproduction
(b) sexual reproduction
(c) vegetative reproduction
(d) all the above

Ans : (a) asexual reproduction

10. The process of development of organism like itself is called
(a) budding (b) flowering
(c) reproduction (d) none of the above

Ans : (c) reproduction

11. Budding and fission are processes used by
(a) diocious species
(b) hermaphroditic organisms
(c) organisms requiring new gene combinations for each generation
(d) asexually reproducing species

Ans : (d) asexually reproducing species

12. Seminiferous tubules are composed of
(a) Spermatogonia (b) Glandular epithelium
(c) Sensory epithelium (d) Germinal epithelium

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Ans : (d) Germinal epithelium

13. The migration of pollen grains to stigma is called as
(a) fertilization (b) pollination
(c) fusion (d) reproduction

Ans : (b) pollination

14. Cowper's glands are found in
(a) male mammals (b) female mammals
(c) male amphibians (d) female amphibians

Ans : (a) male mammals

15. Which of the following helps in transport and nutrition of sperms?
(a) Mucus (b) Blood
(c) Urine (d) Glandular secretions

Ans : (d) Glandular secretions

Glands like prostate and seminal vesicles add their secretions to vas deferens so sperms are easily transported and nurtured till maturation.

16. Which of the following is embedded in the uterine wall?
(a) Zygote (b) Embryo's head
(c) Placenta (d) Eggs

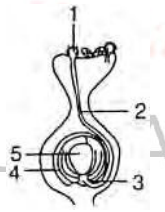
Ans : (c) Placenta

Placenta is embedded in the uterine wall.

17. Acrosome is made up of
(a) mitochondria (b) centrioles
(c) golgi bodies (d) ribosomes

Ans : (c) golgi bodies

18. The diagram shows the cross-section through the carpel of a flower just before fertilisation.



Where will the male and female gametes be just before fertilisation?

	Male gamete	Female gamete
(a)	1	5
(b)	1	4
(c)	2	4
(d)	3	5

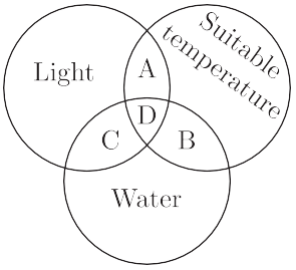
Ans : (d)

The pollen grain germinates to form a pollen tube. This tube grows downward through the tissues the style and ovary wall. As the pollen tube grows, its nucleus divides forming two male gametes. These gametes are released into the ovule. This happens when pollen tube enters the ovule through the micropyle.

19. Oral-contraceptives prevent the
(a) fertilization
(b) ovulation
(c) implantation
(d) entrance of sperms in vagina

Ans : (b) ovulation

20. Which conditions are necessary to activate enzymes when a seed germinates?



(a) *C* (b) *A*
(c) *D* (d) *B*

Ans : (d) *B*

The seeds usually germinates in the soil where light is not needed. However, suitable temperature and water both are needed providing favourable conditions for seed to germinate by activating the enzymes.

21. Fertilization occurs in human beings in
(a) uterus (b) ovary
(c) oviduct (d) vagina

Ans : (c) oviduct

22. Menstrual cycle is generally of
(a) 21 days (b) 28 days
(c) 38 days (d) 40 days

Ans : (b) 28 days

23. Progesterone is secreted by
(a) corpus luteum (b) thyroid
(c) thymus (d) testes

Ans : (a) corpus luteum

24. Given below are certain adaptations in fruits of certain plants. On the basis of information given below, identify the agent of pollination in both situations.
1. Small, dry and light seeds with a parachute of fine hair.
2. Brightly-coloured, sweet and juicy but hard seeds.

(a) 1-insects, 2-animals (b) 1-water, 2-insects
(c) 1-wind, 2-animals (d) 1-birds, 2-insects

Ans : (c) 1-wind, 2-animals

The seeds pollinated by birds are small, dry and light so they can easily float in air and carried away.

They harm feni hair (papers) to increase buoyancy in air.

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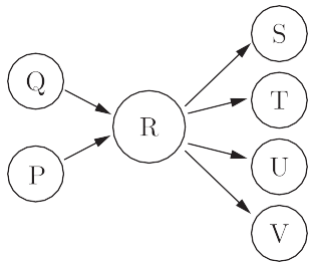
For animal dispersal the seeds are Brightly coloured, sweet and juicy to attract birds and animals.

They are hard so they can pass through animals undigested into the soil.

25. The diagram represents gametes *P* and *Q* fusing to give cell *R* . This cell then produces gametes *S,T,U* and *V* .



Which statement about the number of chromosomes in the cells and gametes is corrects.

(a) The number of chromosomes in *P* and *Q* are different

(b) The number of chromosomes in *P* and *Q* are same

(c) The number of chromosomes in *S* in one quarter of chromosomes in *R*

(d) The number of chromosomes in *T* is half the number of chromosomes in *Q*

Ans : (b) The number of chromosomes in *P* and *Q* are same

P and *Q* are haploid gametes white *R* is zygote and dipolid. Zygote give rise to an individual which further produces gametes by meiosis. in which chromosome number is half i.e. haploid.

26. Like animals, plants produce

(a) many more sperm than eggs

(b) a few more sperm than eggs

(c) equal numbers of sperm and eggs

(d) fewer sperm than eggs

Ans : (a) many more sperm than eggs

27. The vegetative reproduction in sweet potato is done by

(a) stem (b) leaf

(c) root (d) flower

Ans : (c) root

28. Among all the methods of contraception, which one can prevent the implantation of the fertilised egg?

(a) Coil (mechanical) (b) Condom (mechanical)

(c) Spermicide (chemical) (d) Vasectomy (surgical)

Ans : (a) Coil (mechanical)

The coil is an IUD (Intra Uterine Device) made up of a loop or ring of plastic or steel. It is inserted into the uterus by a doctor. It prevents the implantation of the fertilised egg into the uterine wall.

29. In mammals the testes lie in scrotal sacs due to

(a) presence of urinary bladder

(b) presence of rectum

(c) long vas-deferens

(d) requirement of low temperature for spermatogenesis

Ans : (d) requirement of low temperature for spermatogenesis

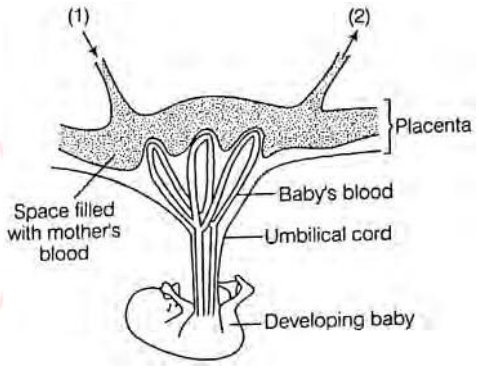
30. Tunica albuginea is the covering around

(a) ovary (b) testes

(c) kidney (d) heart

Ans : (b) testes

31. The diagram shows the arrangement of blood vessels in the uterus wall and placenta of a pregnant women.



Which of the following will increase in concentration in the blood at it flows from 1 and 2?

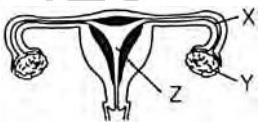
(a) Amino acids (b) Carbon dioxide

(c) Glucose (d) Oxygen

Ans : (b) Carbon dioxide

As the mother's blood passes through placenta, most of the carbon dioxide from foetal blood diffuses into it. Thus the concentration of CO_2 increases in the materanal blood.

32. The diagram show a section through the female reproductive system.



During pregnancy, where does mitosis occur in the cells of the embryo.

	X	*Y*	*Z*
(a)	✓	✓	✓
(b)	✓	✓	#
(c)	✓	#	✓
(d)	#	#	✓

Key { = takes place, # = does not take place.

Ans : (c)

X is the Fallopian tube or oviduct, where after

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fertilisation, zygote develops into embryo by mitosis *Z* is the uterus, where embryo is implanted. it grows in size to foetus and child by mitosis.

2. FILL IN THE BLANK

1. During the birth process, the pituitary hormone ..... signals the uterus to contract.
   Ans : Oxytocin

2. ..... bearing anthers which produce ....., are the male reproductive parts of a flower.
   Ans : Stamen, pollen grains

3. The process of release of eggs from ovary is called .....
   Ans : Ovulation

4. In many in vertebrate organisms, both sexes are found in the same individual. This is called .....
   Ans : Hermaphroditism

5. The development of the ..... egg and ..... fertilization freed the animals from the aquatic environment for reproduction and development.
   Ans : Land, Internal

6. Cross pollination brings about ..... recombination in new plants.
   Ans : Genetic

7. A technique to produce generically alike individuals from a single cell is known as .....
   Ans : Cloning

8. The process of asexual reproduction in Amoeba is .....
   Ans : Binary fission

9. ..... help in survival of the species in changing environment.
   Ans : Variations

10. ..... is common method of multiplication of Yeast and Hydra.
    Ans : Budding

11. Budding is a common method of asexual reproduction in yeast and .....
    Ans : Hydra

12. In..... vegetative propagation occurs by leaves.
    Ans : Bryophyllum

13. By the fusion of male and female gametes, is formed.
    Ans : Zygote

14. Eggs are produced in .....
    Ans : Ovary

15. ..... bearing ovary with ....., are the female reproductive parts of a flower.
    Ans : Carpel, ovules

16. Release of egg from ovary is called as .....
    Ans : Ovulation

17. Surgically when fallopian tube is removed or ligated, it is called .....
    Ans : Tubectomy

18. Ovulation in female human beings stops after the age of .....
    Ans : 45-50

19. .....flowers are underground closed flowers.
    Ans : Cleistogamous

20. Organisms such as ..... can regenerate if they are broken into pieces.
    Ans : Hydra

21. ..... is the periodic discharge of blood, mucous, uterine mucosa pieces, etc. from uterus.
    Ans : Mensturation

22. Fertilization occurs in the..... tube.
    Ans : Fallopian

23. Pollen grains are produced by .....
    Ans : Stamens

24. .....contain half the amount of DNA compared to the parents.
    Ans : Germ cells

25. Pollen grains are transferred from stamens to ..... of carpel.
    Ans : Stigma

26. An egg cell of a plant is contained in an.....present in an ovary.
    Ans : Ovule

27. Transfer of pollen from one flower to stigma of another flower of same species is termed .....
    Ans : Cross-pollination

28. Testes are located outside the abdominal cavity in .....
    Ans : Scrotum

29. Ovaries are also responsible for the production of hormone called .....
    Ans : Estrogen/Progesterone

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30. Plants raised by vegetative propagation bear early ..... and ..... .
Ans : Flowers, Fruits

31. Future shoot hidden in a seed is called ..... .
Ans : Plumule

32. The gametes are formed in most of the multicellular organisms by a process of cell division called ..... .
Ans : Meiosis

33. The two parts tied together during grafting are called ..... and .....
Ans : Stock, Scion

34. If the ..... in the male is blocked, sperms can be prevented to ..... the egg.
Ans : Vas deferens, fertilize

35. A bud in Hydra develops an outgrowth to repeated division at a ....
Ans : Specific site

36. Simply break up into smaller pieces upon maturation is found in .....
Ans : Spirogyra

3. TRUE/FALSE

DIRECTION : Read the following statements and write your answer as true of false.

1. Transfer of pollen grains from one flower to the stigma of another flower is known as cross-pollination.
Ans : True

2. Vegetative propagation by leaves occurs in sweet potato.
Ans : False

3. Transfer of male gametes to the stigma of flower is called pollination.
Ans : True

4. Sexual reproduction involves two individuals for the creation of a new individual.
Ans : True

5. DNA copying mechanisms creates variations which are useful for ensuring the survival of the species.
Ans : True

6. Plants that produce asexually do not produce flower.
Ans : False

7. Placenta is the name of a vital connection between mother and embryo.
Ans : True

8. Rhizopus reproduces by fragmentation.
Ans : False

9. Before cell division copying of DNA is not essential.
Ans : False

10. Birds are oviparous.
Ans : True

11. The only function of the testes is to produce sperm.
Ans : False

12. Sertoli cells are involved in testosterone production.
Ans : True

13. Ovulation occurs in reproductively active females roughly in the middle of menstrual cycle.
Ans : True

14. Acrosome in the sperm carries the genetic material.
Ans : True

15. Embryo gets embedded in the uterine wall.
Ans : True

16. Animal development is limited to the period prior to bird hatching.
Ans : False

17. In fission, many bacteria and protozoa simply divide into two or more doughter cells.
Ans : False

18. Fertilization is the fusion of sperm and ovum.
Ans : True

19. Sperms mature at a temperature higher than that of human body.
Ans : False

20. Reproduction, unlike other life processes, is not essential to maintain the life of an individual organism.
Ans : True

21. One advantage of sexual reproduction is that it allows for genetic sameness.
Ans : False

22. Onset of menstruation is termed as menopause.
Ans : False

23. In Spirogyra, asexual reproduction takes place by fragmentation.
Ans : True

24. The maternal blood supply mixes frequently with the foetal blood supply during the exchange of waste materials and nutrients.
Ans : False

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25. The DNA copying mechanisms create variations which are useful for ensuring the survival of the species.
Ans : True

26. At the time of birth, a baby girl has thousands of immature eggs.
Ans : True

27. Basic event in reproduction is creation of DNA copy.
Ans : True

28. Plasmodium multiplies by binary fission.
Ans : False

29. Bryophyllum propagates through spore formation.
Ans : False

30. Copper-T is a contraceptive device used by women.
Ans : True

31. Hibiscus has unisexual flowers.
Ans : False

32. In mammals including man, fertilization takes place externally.
Ans : False

33. Reproduction, unlike other life processes, is not essential to maintain the life of an individual organism.
Ans : True

34. In fission, many acteria and protozoa simply divide into two or more daughter cells.
Ans : True

35. Sexual reproduction does not lead to variation in a population.
Ans : False

36. The ovary of a flower grows into a fruit.
Ans : True

37. Reproduction is not essential for an Individual but to maintain the species.
Ans : False

38. Regeneration is the same as reproduction.
Ans : False

39. The ovulation takes place 10-12 days after the start of menstruation.
Ans : True

40. In male adults testes are located in scrotum to facilitate sperm formation.
Ans : True

41. Fertilisation of egg takes place in uterus.
Ans : False

42. The male germ-cell produced by pollen grain contains half the amount of DNA as compared to the other body cells of the plant.
Ans : True

43. Vegetative propagation produces plants that are genetically similar to the parent plant.
Ans : True

44. Sexually transmitted diseases can be prevented by using condoms.
Ans : True

45. Reproducing cells don not replicate DNA.
Ans : False

46. Pjants produced by vegetative propagation are genetically similar to the parent plant.
Ans : True

47. In human-beings, male can produce sperms upto the age of 45-50 years.
Ans : False

4. MATCHING QUESTIONS

DIRECTION : Each question contains statements given in two columns which have to be matched. Statements (A, B, C, D) in column-I have to be matched with statements (p, q, r, s) in column II.

1.

Column I		Column II	
(A)	Animals which give birth to young one	(p)	Hydra
(B)	Animal which producess bud	(q)	Planaria
(C)	An animal which shows regeneration	(r)	Placenta
(D)	Provides nutrition to the developing embryo	(s)	Cross-pollina-tion
(E)	The pollen transferred from one flower to another	(t)	Germination
(F)	The process in which embryo develops into seedling	(u)	Viviparous
(G)	Fertilised egg in humans gets implanted in	(v)	Menstruation
(H)	When egg in humans is not fertilised, what happens?	(w)	Uterus

Ans : A-u, B-p, C-q, D-r, E-s, F-t, G-w, H-v

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2.

Column I		Column II	
(A)	Seminal vesicle	(p)	Latex sheath
(B)	Urinogenital duct	(q)	Semen plasma
(C)	Condom	(r)	Protozoan
(D)	Trichomoniasis	(s)	Corpus spongio-sum

Ans : A-q, B-s, C-p, D-r

3.

	Column I		Column II
(A)	Amoeba	(p)	Budding
(B)	Hydra	(q)	Regeneration
(C)	Planaria	(r)	Fission
(D)	Rhizopus	(s)	Fragmentation
(E)	Spirogyra	(t)	Spore formation

Ans : A-r, B-p, C-t D-s, E-q

5. ASSERTION AND REASON

DIRECTION : In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:

(a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
(c) Assertion (A) is true but reason (R) is false.
(d) Assertion (A) is false but reason (R) is true.
(e) Both Assertion and Reason are false.

1. **Assertion :** DNA copying is necessary during reproduction.
Reason : DNA copying leads to the transmission of characters from parents to offspring.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

DNA copying is necessary during reproduction because it leads to the transmission of characters from parents to offsprings and brings about variation.

2. **Assertion :** Holoblastic cleavage with almost equal sized blastomeres is a characteristic of placental animals.
Reason : Eggs of most mamals, including humans, are of centrolecithal type.
Ans : (c) Assertion (A) is true but reason (R) is false.

3. **Assertion :** Sexual reproduction increases genetic diversities and plays a role in origin of new species.
Reason : Sexual reproduction involves formation of gametes and fusion of gametes.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

Sexual reproduction involves two parents that results in the offsprings that are not identical to the parents. If causes variations; which are essential for evolution as well as survival of species under unfavourable conditions.

4. **Assertion :** An embryo is formed from fertilized egg.
Reason : A monocot embryo comprises embryonal axis with two cotyledons.
Ans : (c) Assertion (A) is true but reason (R) is false.

Zygote, a fertilized egg give rise to an embryo, which has the ability to develop into a complete plant. A typical dicot embryo comprises an embryonal axis with two cotyledons.

5. **Assertion :** Scrotum is present outside the abdominal cavity.
Reason : It stores sperms which require a lower temperature than the normal body temperature.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

Scrotum, a pouch containing testis is present outside the abdominal cavity because sperms require a lower temperature than the normal body temperature.

6. **Assertion :** Vagina is also called as birth canal.
Reason : During birth, the baby passes through the vagina.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

Vagina is called as birth canal, because the baby passes through the vagina during birth.

7. **Assertion :** Individuals produced by asexual reproduction are known as clones.
Reason : They are known as clones because they are genetically identical.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

The new individuals produced after cell divisions in asexual reproduction are always genetically identical or clone to each other and their parents.

8. **Assertion :** Vasectomy is a surgical method or birth control.
Reason : In vasectomy, small portion of oviduct is cut or tied properly.
Ans : (c) Assertion (A) is true but reason (R) is false.

Vasectomy is a surgical method or birth control. in which small portion of the sperm duct is cut or tied properly.

9. **Assertion :** HIV-AIDS is a bacterial disease.
Reason : It spreads through sharing of food and water.
Ans : (e) Both Assertion and Reason are false.

HIV-AIDS is viral disease that is transmitted sexually.

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It is one of the STDs.

10. **Assertion :** In human male, there are perianal glands near the anus.
Reason : Perianal glands secrete sex-attractant pheromone which initiates sexual desire in human female.
Ans : (d) Assertion (A) is false but reason (R) is true.

11. **Assertion :** Amobea reproduces by Binary fission.
Reason : All unicellular organisms reproduce asexually.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

Amoeba is a unicellular organism. It reproduces asexually through binary fission. It is the division of one cell into two similar or identical cells.

12. **Assertion :** In morula stage, cells divide without increases in size.
Reason : Zona pellucida remain undivided till cleavage is complete.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

13. **Assertion :** Double fertilisation is unique to angiosperms.
Reason : Triple fusion occurs in both fertilization.
Ans : (c) Assertion (A) is true but reason (R) is false.

Double fertilization is a characteristic feature of flowering plants. In this process, out of the two sperm nuclei, one sperm nucleus fuses with the egg nucleus to form an embryo (process is called syngamy) and another fuses with the secondary nucleus to form an endosperm (process is called triple fusion). Because two kinds of fusion-syngamy and triple fusion-take place, the process is known as double fertilisation.

14. **Assertion :** Unisexual flowers have separate male and female flowers whereas a typical monocot embryo comprises an embryonal axis with single cotyledon.
Reason : Cucumber, pumpkin and water melon are example of unisexual flowers.
Ans : (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

Unisexual flowers have separate male and female flowers. The example includes cucumber, pumpkin and watermelon.

15. **Assertion :** Plants are vegetatively propagated even though they bear seeds.
Reason : Potatoes reproduces through tubers, apples by cutting etc.
Ans : (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

Vegetative reproduction happens through the use of vegetative parts of the plants, such as leaves, stems, and roots to produce new plants or through gowth from specialized vegetative plant parts.

16. **Assertion :** Pollen grains from the carpel stick to the stigma of stamen.
Reason : The fertilised egg cells grow inside the ovules and become seeds.
Ans : (d) Assertion (A) is false but reason (R) is true.

17. **Assertion :** Characteristics of parental plants can be preserved through asexual reproduction.
Reason : Vegetative reproduction involves only mitosis.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

Asexual reproduction involves a single individual, which give rise to new individual that are genetically identical to parents. It is because, when organisms reproduce asexually, only mitotic divisions are involved and the chromosome number remains the same.

18. **Assertion :** Urethra in human male acts as urinogenital canal.
Reason : Urethra carries only urine while sperms are carried by vasa deferentia only.
Ans : (c) Assertion (A) is true but reason (R) is false.

19. **Assertion :** During fertilization only head of spermatozoa enters egg.
Reason : If several spermatozoa hit the egg at same time, all can enter the egg.
Ans : (c) Assertion (A) is true but reason (R) is false.

20. **Assertion :** Asexual reproduction is also called blastogenesis.
Reason : In asexual reproduction, their is no formation and fusion of gametes.
Ans : (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

21. **Assertion :** amoeba shows multiple fission during unfavorable conditions.
Reason : Chances of survival are less during unfavourable conditions.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

22. **Assertion :** Plasmodium reproduces by multiple fission.
Reason : Multiple fission is a type of asexual reproduction.
Ans : (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

Plasmodium prproduces asexually by multiple fission.

23. **Assertion :** In human male, testes are extra-abdominai which are present inside scrotum.
Reason : Scrotum has a relatively lower temperature needed for the production and storage of sperms.
Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion

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(A).

Formation of sperms needs lower temperature than the normal body temperature. Hence, testes lie outside the body cavity in the scrotum.

24. **Assertion :** At puberty, in boys, voice begins to crack and thick hair grows on face.
Reason : At puberty, there is decreased secretion of testosterone in boys.

Ans : (c) Assertion (A) is true but reason (R) is false.

Puberty in boys is regulated by male sex hormone called testosterone, which are secreted by testes. In puberty, secondary sexual characters like growth of hair on face, chest, broadening of shoulders and deepening of voice occurs.

25. **Assertion :** Spores are unicellular bodies.
Reason : The parent body simply breaks up into smaller pieces on maturation.

Ans : (c) Assertion (A) is true but reason (R) is false.

26. **Assertion :** Surgical methods are most effective methods of contraception.
Reason : Surgical method blocks gametes transport and hence prevent fertilisation.

Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

Surgical method like vasectomy in male and tubectomy in female prevent pregnancy. These methods block gamete transport and hence prevent fertilisation. They are very effective but reversibility is very poor.

27. **Assertion :** Asexual reproduction is a primitive type of reproduction.
Reason : Asexual reproduction involves only mitotic cell division.

Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

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28. **Assertion :** Clones are offspring of an organism formed by asexual reproduction.
Reason : Clones have exact copies of DNA as their parent.

Ans : (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

29. **Assertion :** Colonies of yeast multiply in sugar solution.
Reason : Sugar is made of sucrose which provides energy for sustaining all life activities.

Ans : (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).