Chapter: 18

Reproduction

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MCQs

1. Reproduction is very important to the survival of ..... .
   (A) Community (B) Population (C) Individual **(D) Species**

2. Rapid aging and low resistance to environmental stress and disease are limitations for...
   (A) Fragmentation (B) Budding **(C) Cloning** (D) Regeneration

3. Evolution of pollen tube is parallel to the evolution of ..... .
   (A) Gamete **(B) Seed** (C) Fruit (D) Pollen

4. In which of the following , sporophyte is completely depend upon the gametophyte?
   (A) Bryophytes (B) Gymnosperms (C) Angiosperms (D) Thallophytes

5. Vehicle for transport of male gamete in land plants is:
   (A) Water **(B) Pollen tube** (C) Pollen grain (D) Wind

6. In spermatophytes , important step in land adaption is the evolution of ..... .
   (A) Seed coat (B) Fruit **(C) Pollen tube** (D) Flower

7. The process in which seeds are not found in banana is called?
   (A) See Dormancy **(B) Parthenocarpy**
   (C) Fruit Ripening (D) Photoperiodism

8. Which one is not parthenogenic fruit ?
   (A) Banana **(B) Mango** (C) Pineapple (D) Grape

9. Parthenocarpy is the development of fruit without.
   (A) Pollination (B) Germination **(C) Fertilization** (D) Hormones

10. Which one is Parthenogenic Fruit.
    (A) Apple (B) Peach (C) Mango **(D) Pineapple**

11. The special condition of rest , which enables an embryo to survive the long periods of unfavourable environment condition , is called?
    (A) Bud dormancy **(B) Seed dormancy** (C) Leaf dormancy (D) Stem dormancy

12. Which hormones stimulates ripening of tomatoes and citrus fruits?
    (A) Auxins (B) Cytokinins **(C) Ethene** (D) Gibberellines

13. Fruit ripening is often accompanied by a burst of respiratory activity called the .
    (A) Climactric (B) Dimetric (C) Climax (D) Trimetric

14. Germinating pollen grain is a rich source of ..... .
    (A) Gibberellins **(B) Auxins** (C) Abscisic acid (D) Cytokinin

15. Developing seeds are a rich source of..... .
    (A) Auxins (B) Gibberellins **(C) All of these** (D) Cytokinins

16. Which one of the following is a type of asexual reproduction?
(A) Fertilization (B) Vernalization **(C) Apomixes** (D) Photoperiodism

17. In honey bee sperms are produced by ..... .
(A) Meiosis **(B) Parthenogenesis** (C) Mitosis (D) Apomixis

18. Haploid Parthenogenesis is present in
(A) Wasp **(B) Bee** (C) Aphid (D) Ants

19. During oogenesis , the total non-disjunction of chromosomes occur is:
(A) Queen bee (B) Ants (C) Wasps **(D) Aphids**

20. In honey bee , males are haploid and produce sperms by ..... .
(A) Meiosis **(B) Mitosis** (C) Parthenogenesis (D) Apomixis

21. Development of an egg into embryo without fertilization is called as:
(A) Parthenogenesis (B) Meiosis (C) Parthenocarpy (D) Fragmentation

22. In honey bee male sperms are produced by ..... .
(A) Meiosis **(B) Mitosis** (C) Apomixis (D) Parthenocarpy

23. Diploid parthenogensis occurs in .
(A) Wasp (B) Ant (C) Bee **(D) Aphid**

24. Haploid males produce sperms by mitosis in .
(A) Hydra (B) Earthworm **(C) Honey bee** (D) Human

25. Which one is the method of sexual reproduction in the following?
(A) Fission (B) Sporulation **(C) Conjugation** (D) Budding

26. Reptiles and birds are.
(A) Viviparous **(B) Oviparous** (C) Vibiparity (D) Ovoviviparous

27. Oviparous animals.
(A) Give larva **(B) Lay eggs** (C) Give birth to young (D) Give pupa

28. Ovoviviparity is shown by.
(A) Duck bill platypus (B) Reptile (C) Bird (D) Human

29. The animals that lay shelled eggs to protect the developing embryo from harsh terrestrial conditions are called?
(A) None of these (B) Ovoviviparous **(C) Oviparous** (D) Viviparous

30. The Sac-like scrotum is present in
(A) Ovary (B) Lung (C) Kidney **(D) Testis**

31. The hormone responsible for production of sperm cells and male secondary sexual characteristics during puberty is:
(A) Testosterone (B) Progesterone (C) Thyroxine (D) Estrogens

32. Which hormone is male stimulates the interstitial cells of the testes to secrete

testosterone.

Ⓐ TSH Ⓑ FSH **Ⓒ ICSH** Ⓓ LH

33. The cells provide liquid medium for protection and nourishment to sperms.

Ⓐ Placenta **Ⓑ Sertoli** Ⓒ Edididymis Ⓓ Vas

34. Between the seminiferous tubules are interstitial cells , which secrete.

Ⓐ Estrogen **Ⓑ Testosterone** Ⓒ Aldostrone Ⓓ Corticosteriod

35. Sertoli cells are cells of

Ⓐ Ovaries **Ⓑ Testes** Ⓒ Urethra Ⓓ Bladder

36. Fluid secreted by sertoli cells provides liquid medium protection and nurishment to.

Ⓐ Oocyte **Ⓑ Sperms** Ⓒ Polar body Ⓓ Spermatids

37. The first convoluted part of vas - deference is called?

Ⓐ Scrotum Ⓑ Epididymis Ⓒ Seminiferous Tubules **Ⓓ Ureter**

38. Germs cells in the ovary produce many.

Ⓐ Ornithine Ⓑ Spermatogonia Ⓒ Zoospores Ⓓ Zygospores

39 Second meiotic division in oocytes , unitl fertilization proceeds are far as:

Ⓐ Prophase **Ⓑ Metaphase** Ⓒ Anaphase Ⓓ Telophase

40. Oviduct opens intob.

Ⓐ Ureter **Ⓑ Uterus** Ⓒ Ovary Ⓓ Vagina

41. Gonorrhoa is caused by ….. .

Ⓐ Clostridium **Ⓑ Neisseria** Ⓒ T.Pallidum Ⓓ Herpes simplex

42. The disease caused by a gram positive bacterium Neisseria is called?

Ⓐ Syphilis **Ⓑ Gonorrhea** Ⓒ Herpes Ⓓ AIDS

43. Syphilis is caused by a spirochaete named as:

Ⓐ Nisseria gonorrhoeae Ⓑ Escheria coli

Ⓒ Treponema pallidum Ⓓ Hyphomicrobiam

44. Corpus luteum secretes a hormone called?

Ⓐ Oxytocin Ⓑ Oestrogen **Ⓒ Progesterone** Ⓓ Testosterone

45. Release of egg from follicle is called as:

Ⓐ Ovulation Ⓑ Menstruation Ⓒ Follicle artesia Ⓓ Fertilization

46. Lutenizing hormone in human female induces.

Ⓐ Menstrution Ⓑ Menopause Ⓒ Oogenesis **Ⓓ Ovulation**

47. The increase of level of estrogen stimulates secretion of.

Ⓐ LH Ⓑ ACTH Ⓒ FSH Ⓓ Progesterone

48. Developing Seeds are rich source of.

Ⓐ All of these Ⓑ Auxins Ⓒ Cytokinins Ⓓ Gibberellins

49. Oviduct open into.
(A) Bladder (B) Vagina **(C) Uterus** (D) Cervix

50. Reproduction is necessary for the survival of.
(A) Individual **(B) Species** (C) Community (D) Biome

51. Luteinizing hormone induces.
(A) Ovulation (B) Flowering (C) Vernalization (D) Menopause

52. In plants photoperiod and temperature affect.
(A) Flowering (B) Fruit and seed production
(C) All of these (D) Buds and seed dormancy

53. Reproduction is very important to the survival of ..... .
(A) **Flowering** (B) Population (C) Individual **(D) Both A & B**

54. Developing seeds are rich source of.
(A) All of these (B) Auxins (C) Cytokinin (D) Gibberellins

55. Common methods of asexual reproduction are.:
(A) All of these (B) Tissue culturing (C) Identical twins (D) Cloning

56. Photoperiod affect flowering when shoot meristem start producing.
(A) Both B & C (B) Lateral (C) Leaves **(D) Floral buds**

Fill in the blanks.

1. Asexual reproduction requires only a single ..... organism

2. Sexual reproduction usually involves ..... parents.

3. Phytochromes are the special ..... sensitive pigments.

4. I External fertilization occurs in ..... environment.

5. ..... and ..... animals provide more protection to their young one during development.

6. A placenta is established between the uterine and ..... tissues for the exchange of oxygen.

7. The reduction of progesterone level, stimulates the ..... gland to produce oxytocin hormone.

Answers

1.	**Parental**	**2.**	**Two**	**3.**	**Blue light**
4.	**Aquatic**	**5.**	**Viviparous, Ovoviviparous**	**6.**	**Foetal**
7.	**Pituitary**				

Chapter : 18 Reproduction Short Questions Answers

1. **What changes occur in ovulation and menstruation during pregnancy?**

Ans: Both ovulation and menstruation do not occur during pregnancy.

2. **What is the difference between oogenesis and spermatogenesis in human?**

Ans: During oogenesis only one egg is produced from primary oocyte through meiotic division while in spermatogenesis four sperms are produced from primary spermatocyte.

3. **How a seed is formed?**

Ans: A seed is formed after fertilization of egg in ovule.

4. **What is importance of seed in the life cycle of a plant?**

Ans: It enables an embryo to survive the long periods of unfavorable conditions such as scarcity or low temperature.

5. **Differentiate between isomorphic and heteromorphic alternation of generations.**

Ans: Isomorphic Alternation of Generation:

- ❖ Diploid sporophyte and haploid gametophyte are vegetatively similar.
- ❖ Mostly occurs in green algae.

Heteromorphic Alternation of Generation:

- ❖ Diploid sporophyte and haploid gametophyte generations are vegetatively dissimilar.
- ❖ This occurs in all plants.

6. **What is the importance of evolution of pollen tube?**

Ans: Pollen tube is a tool of success for seed plants. In spermatophytes it acts as vehicle for male gametes for their safe transport to female gamete in ovule in hostile land environment.

7. **Why in every STD eyes of neonate are effected?**

Ans: In women suffering from STD's birth canal is infected. As the baby passes through this canal its eyes becomes infected also.

8. **What is seed dormancy? What is its importance?**

Ans: It is special condition of rest in which embryo ceases or limits its growth in seed. It enables an embryo to survive long periods of unfavorable environmental conditions such as water scarcity or low temperature.

9. **Differentiate between identical twins and fraternal twins.**

Ans:

Identical Twins	Internal Twins
❖ Identical twins are produced by separation and development of two blastomeres of the same embryo at two celled stage. ❖ These are the product of asexual reproduction. ❖ They are called monozygotic as both develop from sing zygote.	❖ Fraternal twins are formed by fertilization of two eggs separately by two sperms. ❖ These are the product of sexual reproduction. ❖ They are called dizygotic as each develops from separate zygote.

10. **Differentiate between viviparous and ovoviviparous.**

Ans:

viviparous	ovoviviparous
Mammals in which internal fertilization leads to internal development of the embryo inside body of the female which gives birth to young ones are called as viviparous.	In some mammals like duckbill platypus and spiny anteater internal fertilization leads to internal development of young ones in a shelled egg and when development is completed shelled egg is laid which hatches to offspring. This is called as ovoviviparous condition.

11. **What is lactation? Which hormones stimulate it?**

Ans: Secretion or formation of milk from mammary glands is called as lactation. Prolactin from anterior pituitary and human placental lactogen from placenta stimulate it.

12. **Name the maternal hormones involved in triggering of birth.**

Ans: A decrease in the production of progesterone by mother and increase in the production of oxytocin triggers the birth.

13. **What is placenta?**

Ans: In placental mammals placenta is a tissue that develop between uterus of mother and foetus for exchange of materials between mother and fetus.

14. **What is after birth?**

Ans: After 10-45 minutes after birth, the uterus contracts, separates and expels the placenta and fetal remain from the uterus. This is called after birth.

15. **What is a test tube baby?**

Ans: A baby developed from an egg that was fertilized outside the body and then implanted in the uterus of the mother is called as test tube baby.

16. **What are STDs. Write names?**

Ans: Sexually transmitted disease (STD) is a term used to describe different infections that are transmitted through exchange of semen, blood and other body fluids, or by direct contact with the affected body areas of people. Sexually transmitted diseases are called venereal diseases.

Examples : Gonorrhea, Syphilis, Genital Herpes and AIDS etc.

17. **Explain one bacterial and one viral STD.**

Ans: **Syphilis:**

It is caused by a bacterium spirochete Treponeme pallidum. It damages the reproductive organs, eyes, bone joints, central nervous system, heart and skin. Source of dissemination is sexual contact.

Genital Herpes:

It is caused by herpes simplex type 2 viruses. It is most frequently transmitted by sexual contact causing infection of the genitalia. It produces genital soreness and ulcers in the infected areas.

18. **What is AIDS?**

Ans: AIDS or Acquired Immunodeficiency Syndrome is caused by HIV. It is characterized by weakened immune system and may lead to fatal infections by other pathogens. It is one of the sexually transmitted diseases.

19. **Define parthenocarpy. How it can be induced?**

Ans: **Parthenocarpy:**

Development of fruit without fertilization and without seed formation is called parthenocarpy.

Induction:

It is artificially induced by application of auxins

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20. **Write name of two LDPs (Long day plant) and two SDPs(Short day plant).**

Ans: **LDPs:**

- Henbane.
- Cabbage.

SDPs:

- Cocklebur.
- Soyabean.

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21. **What is apomixes?**

Ans: It is one of the forms of parthenogenesis in flowering plants. In this a diploid cell of the ovule, either from the nucellus or megaspore, develops into a functional embryo in the absence of a male gamete.

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22. **What is estrous cycle?**

Ans: It is a reproductive cycle found in all female mammals except human beings. In this cycle, the estrogen production prepares the uterus for conception partly.

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23. **Define Menopause.**

Ans: The end or complete stop of the menstrual cycle is called menopause.

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24. **What is ovulation? In human where fertilization occurs?**

Ans: **Ovulation:**

- The release of ovum from the follicles is called ovulation.

Fertilization in Human:

- Fertilization in humans commonly occurs at proximal part of oviduct.

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25. **Name fetal hormones involved in triggering of birth.**

Ans: The ACTH released from fetal pituitary stimulates the fetal adrenal gland to release corticosteroids, which cross placental barrier and enter the maternal blood circulation causing a decrease in progesterone production. The reduction of progesterone level stimulates the pituitary gland to produce oxytocin hormones.

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26. **What is phytochrome? What are its types?**

Ans: **Phytochrome:**

These are blue light sensitive protein pigments involved in flowering.

Types:

Phytochromes exist in two forms i.e. P660 and P730. P660 a quiescent form absorb red light and is converted to active P730, P730 absorb far red light and is converted to P660.

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27. **What is reproduction? What is its importance?**

Ans: **Reproduction:**

- ❖ It is the mechanism that produces new generation and maintains a species.

Importance:

- ❖ It is very important to the survival of a species or a population.

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28. **What is Vernalisation?**

Ans: The low temperature treatment of plants for stimulating flowering in them is called vernalisation.

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29. **Define cloning.**

Ans: The type of asexual reproduction in which genetically identical copies of organism is produced by genetic engineering is known as cloning.

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30. **Differentiate between oviparous and viviparous animals.**

Ans: **Oviparous Animals:**

- ❖ In these animals external development takes place. They lay shelled eggs. This shell protects the developing embryo from harsh terrestrial conditions. Such animals are called oviparous.

Exp:

- ❖ Reptiles, Birds.

Viviparous Animals:

- ❖ In these animals internal development takes place. The development of embryo is completed inside the body of female. The female gives birth to young one. Such animals are called viviparous.

Exp:

- ❖ Mammals

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31. **What us tissue culturing?**

Ans: The culturing of tissues for reproducing new identical varieties is called tissue culturing.

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32. **Explain the disease gonorrhoea.**

Ans: It is caused by a gram positive bacteria Neisseria gonorrhoeae. It mainly affects the mucous membrane of urinogenital tract. New born infact may acquire serious eye infections if they pass through the infected birth canal. It is highly contagious sexual disease. It is transferred through sexual contacts.

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33. **What are spermatophytes?**

Ans: The seed producing plants are known as spermatophytes.

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34. **What is the function of germinating pollen grain?**

Ans: Germinating pollen grain is not only an important structure for safe transfer of gametes and insurance for fertilization but also a rich source of auxins as well as commonly stimulating the tissues of the style and ovary to produce more auxin. This auxin is necessary for fruit set, i.e. retention of ovary, which becomes the fruit after fertilization.

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35. **What is diploid parthenogenesis?**

Ans: Diploid parthenogenesis is that in which the egg-producing cells of the female undergo a modified form of meiosis involving total non-dis-junction of the chromosomes, they retain the diploid number of chromosomes. Egg develops into young females.

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36. **Which are fraternal twins or triplets?**

Ans: In some case, the female produces more than one egg and all eggs are independently fertilized forming two or more zygotes. These zygotes develop into new offspring's but with different genetic combinations. Such twins or triplets are called fraternal twins or triplets.

37. **What do you mean by Hermaphrodite?**

Ans: Organisms, which contain both the sexes (testes and ovaries), in the same individual are known as hermaphrodite or bisexual.

38. **What is fertilization?**

Ans: Fertilization is the process, which leads to union of gametes. Fertilization may occur outside the body or inside the body of the female.

39. **What is ovoviviparous condition?**

Ans: In some mammals like Duckbill platypus, internal fertilization leads to internal development of the young one in a shelled egg and when development is completed, shelled egg is laid which hatches the offspring. This is called ovoviviparous condition.

40. **Which method of reproduction is primitive asexual, or sexual?**

Ans: It is thought that asexual method of reproduction is a primitive form of reproduction than the sexual reproduction.

41. **What is asexual reproduction?**

Ans: Asexual reproduction requires only a single parental organism which gives rise to offspring by mitotic cell division, during which the complete adult number of chromosomes is exactly replicated and passed on, so that the offspring are genetically identical to the parent.

42. **What are different methods of asexual reproduction?**

Ans: **Methods of asexual reproduction are as follow:**

- ❖ Fission.
- ❖ Sporulation.
- ❖ Budding.
- ❖ Vegetative Propagation.
- ❖ Artificial Propagation.
- ❖ Parthenogenesis.
- ❖ Apomixis.

43. **What is sexual reproduction?**

Ans: Sexual reproduction usually involves two parents. A fertilized egg is produced through the union of meiotically produced specialized sex cells from each parent.

Or

It is the mechanism which has evolved enabling nucleic acid to be exchanged between organisms followed by meiosis and leading to production and union of gametes.

44. **What is fruit set?**

Ans: Fruit set is the retention of the ovary. which becomes the fruit after fertilization. After fertilization, the ovary and the ripe seeds continue to produce auxins which stimulate fruit development.

45. **Define climatric.**

Ans: Fruit ripening is often accomplished by a burst of respiratory activity called the climatric. This is associated with ethane production, which helps in ripening of the fruit.

46. **Define photoperiodism.**

Ans: The variations in day length are called photoperiod and the phenomenon is called photoperiodism.

47. **What is florigen?**

Ans: Florigen is a hormone in leaves, which travel through phloem to the floral buds and initiates flowering.

48. **Give some advantages of cloning?**

Ans: **Advantages of cloning:**

- ❖ Production of desirable animals.
- ❖ Quantitative study of the action of hormones, drugs and antibodies.
- ❖ Identical offspring.

49. **Give some disadvantages of cloning?**

Ans: **Disadvantages of cloning:**

- ❖ Offspring have environmental hazard.
- ❖ Clone development not fully known.

50. **What is external genitalia in human male?**

Ans: External genitalia consist of a pair of testes which lie outside the body, in the sac like scrotum,

51. **What are spermatocytes and spermatids?**

Ans: The spermatogonia present in seminiferous tubules differentiate into primary spermatocytes which undergo meiotic division to form secondary spermatocytes and spermatids which ultimately form sperms.

52. **What are sertoli cells?**

Ans: Sertoli cells are present in testes. They secrete fluid that provides liquid medium, protection and nourishment to sperms while they are in the tubules.

53. **What is testosterone?**

Ans: The interstitial cells of testes secrete testosterone. This hormone is essential for the successful production of sperms and also control the development of male secondary characteristics during puberty.

54. **What are various parts of the female reproductive system?**

Ans: The ovaries, the oviducts, uterus and the external genitalia.

55. **What is FSH?**

Ans: The pituitary gland on the onset of puberty, releases follicle stimulating hormone (FSH) which stimulates the development of several primary follicles.

56. **What is foetus?**

Ans: From beginning of the 3rd month of pregnancy the human embryo is referred to as the

foetus. Most of the major organs are being formed in it.

57. **What is the average loss of blood during delivery?**

Ans: During delivery, average loss of blood is about 350 cm(3).

58. **What is Syphilis?**

Ans: It is caused by a spirochete, Treponema pallidum, It damages the reproductive organs, eyes, bones, joints, central nervous system, heart and skin. Sexual contact is the major source of its dissemination.

59. **What is Genital Herpes?**

Ans: It is caused by a herpes simply type 2 virus, most frequently transmitted by sexual contact causing infection of the genitalia. It produces genital soreness and ulcers in the infected area.

60. **What is menstrual cycle?**

Ans: In human females the periodic reproductive cycle is completed in approximately 28 days and involves changes in the structure and function of the whole reproductive system. It is called menstrual cycle and can be divided into four phases.