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Biology Grade 10 — Chapter 6

Reproduction

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Independent practice MCQs from the supplied Class 10 Biology notes pack. Total: 50 questions.

A. Important / Main Topics

1. At what age does the reproductive system become functional?

(A) Puberty
(B) Birth
(C) Childhood
(D) Old age

Correct Answer: A

Explanation: The reproductive system becomes functional at a certain age after birth, called puberty.

2. Which hormone is primarily responsible for male sexual development?

(A) Estrogen
(B) Testosterone
(C) Progesterone
(D) Oxytocin

Correct Answer: B

Explanation: Testosterone is the main male sex hormone responsible for male sexual development.

3. Which hormone is primarily responsible for female sexual development?

(A) Testosterone
(B) Insulin
(C) Estrogen
(D) Thyroxin

Correct Answer: C

Explanation: Estrogen is responsible for the development of female reproductive organs and secondary sexual characteristics.

4. Where are sperm cells produced?

(A) Ovaries
(B) Uterus
(C) Fallopian tubes
(D) Testes

Correct Answer: D

Explanation: Sperm cells are produced in the testes through spermatogenesis.

5. Where are egg cells produced?

(A) Ovaries
(B) Testes
(C) Uterus
(D) Fallopian tubes

Correct Answer: A

Explanation: Egg cells are produced in the ovaries through oogenesis.

6. What is the process of sperm cell production called?

(A) Oogenesis
(B) Spermatogenesis
(C) Fertilization
(D) Ovulation

Correct Answer: B

Explanation: Spermatogenesis is the process of sperm cell production in the testes.

7. What is the process of egg cell production called?

(A) Spermatogenesis
(B) Fertilization
(C) Oogenesis
(D) Ovulation

Correct Answer: C

Explanation: Oogenesis is the process of egg cell production in the ovaries.

8. What is the union of sperm and egg called?

(A) Ovulation
(B) Implantation
(C) Gestation
(D) Fertilization

Correct Answer: D

Explanation: Fertilization is the union of a male gamete (sperm) and a female gamete (egg) to form a zygote.

9. What is the fertilized egg called?

(A) Zygote
(B) Sperm
(C) Egg
(D) Embryo

Correct Answer: A

Explanation: The fertilized egg is called a zygote.

10. In which type of fertilization does the union of gametes occur inside the female body?

(A) External fertilization
(B) Internal fertilization
(C) Both A and B
(D) None of the above

Correct Answer: B

Explanation: Internal fertilization — this correctly answers the question.

11. Which type of asexual reproduction involves the parent splitting into two equal parts?

(A) Budding
(B) Fragmentation
(C) Binary fission
(D) Parthenogenesis

Correct Answer: C

Explanation: In binary fission, the parent organism splits into two equal parts, each of which develops into a new organism.

12. Which type of asexual reproduction involves a new organism growing out of the parent?

(A) Binary fission
(B) Fragmentation
(C) Parthenogenesis
(D) Budding

Correct Answer: D

Explanation: Budding — this correctly answers the question.

13. What is the process by which an unfertilized egg develops into a new individual called?

(A) Parthenogenesis
(B) Binary fission
(C) Budding

(D) Fragmentation

Correct Answer: A

Explanation: Parthenogenesis is a form of reproduction in which an unfertilized egg develops into a new individual.

14. What is the sex chromosome combination for a human female?

(A) XY
(B) XX
(C) XO
(D) YY

Correct Answer: B

Explanation: In females, the sex chromosome pair consists of two completely homologous chromosomes called XX.

15. What is the sex chromosome combination for a human male?

(A) XX
(B) XO
(C) XY
(D) YY

Correct Answer: C

Explanation: In males, the sex chromosome pair consists of two partially homologous chromosomes called X and Y.

16. Which hormone is responsible for the development of secondary sexual characteristics in males?

(A) Estrogen
(B) Progesterone
(C) Oxytocin
(D) Testosterone

Correct Answer: D

Explanation: Testosterone promotes the development of secondary sexual characteristics, such as the growth of facial hair, deepening of the voice, and increased muscle mass.

17. Which hormone is responsible for the development of secondary sexual characteristics in females?

(A) Estrogen
(B) Testosterone
(C) Insulin
(D) Thyroxin

Correct Answer: A

Explanation: Estrogen is responsible for the development of female reproductive organs and secondary sexual characteristics.

18. What is the function of follicle stimulating hormone (FSH) in males?

(A) Produce testosterone
(B) Support development of sperm cells
(C) Cause ovulation
(D) Prepare uterus for pregnancy

Correct Answer: B

Explanation: Support development of sperm cells — this correctly answers the question.

19. What is the function of luteinizing hormone (LH) in females?

(A) Produce estrogen
(B) Prepare uterus for pregnancy
(C) Cause ovulation
(D) Produce progesterone

Correct Answer: C

Explanation: LH causes the rupturing of matured follicle and the release of developing ovum, a process called ovulation.

20. What is the function of progesterone?

(A) Cause ovulation
(B) Produce estrogen
(C) Produce testosterone
(D) Prepare body for pregnancy

Correct Answer: D

Explanation: Progesterone prepares the body for pregnancy by thickening the uterine lining.

21. Which of the following is NOT a part of the male reproductive system?

(A) Ovary
(B) Testes
(C) Epididymis
(D) Vas deferens

Correct Answer: A

Explanation: The ovary is part of the female reproductive system.

22. Which of the following is NOT a part of the female reproductive system?

(A) Ovary
(B) Vas deferens
(C) Fallopian tube
(D) Uterus

Correct Answer: B

Explanation: The vas deferens is part of the male reproductive system.

23. What is the function of the seminal vesicles?

(A) Produce sperm
(B) Neutralize acidity
(C) Provide nutrients for sperm
(D) Produce lubricant

Correct Answer: C

Explanation: Seminal vesicles provide nutrients for the sperm.

24. What is the function of the prostate gland?

(A) Produce sperm
(B) Provide nutrients for sperm
(C) Produce lubricant
(D) Neutralize acidity

Correct Answer: D

Explanation: The prostate gland adds a fluid that neutralizes acidity.

25. What is the function of Cowper's glands?

(A) Produce lubricant
(B) Produce sperm
(C) Provide nutrients for sperm
(D) Neutralize acidity

Correct Answer: A

Explanation: Cowper's glands produce a lubricant for the ducts.

B. Less Important / Secondary Topics

26. Where does fertilization occur in humans?

(A) Fallopian tube
(B) Uterus
(C) Ovary
(D) Vagina

Correct Answer: A

Explanation: Fallopian tube — this correctly answers the question.

27. What is the gestation period in rabbits?

(A) 10–15 days
(B) 30–32 days
(C) 20–25 days
(D) 60–65 days

Correct Answer: B

Explanation: The pregnancy period in rabbits is about 30–32 days.

28. Which type of development involves giving birth to live young?

(A) Oviparous
(B) Ovoviviparous
(C) Viviparous
(D) None of the above

Correct Answer: C

Explanation: Viviparous — this correctly answers the question.

29. Which type of development involves laying shelled eggs?

(A) Viviparous
(B) Ovoviviparous
(C) None of the above
(D) Oviparous

Correct Answer: D

Explanation: Oviparous — this correctly answers the question.

30. Which type of development involves eggs hatching inside the body?

(A) Ovoviviparous
(B) Viviparous
(C) Oviparous
(D) None of the above

Correct Answer: A

Explanation: Ovoviviparous — this correctly answers the question.

31. What is the probability of having a son or daughter during each pregnancy?

(A) 25%
(B) 50%
(C) 75%
(D) 100%

Correct Answer: B

Explanation: The probability for a couple to have a son or a daughter during each pregnancy is 50%.

32. Which parent determines the sex of the baby?

(A) Mother
(B) Both
(C) Father
(D) Neither

Correct Answer: C

Explanation: The father determines the sex of the baby because he can contribute either an X or a Y chromosome.

33. What is the term for animals in which male and female reproductive organs are found in separate individuals?

(A) Hermaphroditic
(B) Asexual
(C) Monoecious
(D) Dioecious

Correct Answer: D

Explanation: Most animals are dioecious, meaning male and female reproductive organs are found in separate individuals.

34. What is the function of the placenta?

(A) Exchange nutrients and waste between mother and fetus
(B) Produce sperm
(C) Produce egg
(D) Produce hormones

Correct Answer: A

Explanation: Exchange nutrients and waste between mother and fetus — this correctly answers the question.

35. What is the role of the cervix?

(A) Produce sperm
(B) Separate uterus from birth canal
(C) Produce egg
(D) Produce hormones

Correct Answer: B

Explanation: The cervix is the part of the uterus that separates it from the birth canal.

36. A patient has a condition where the fallopian tubes are blocked. What is the most likely effect?

(A) Sperm cannot be produced
(B) Uterus cannot develop
(C) Egg cannot be fertilized
(D) Ovulation cannot occur

Correct Answer: C

Explanation: Egg cannot be fertilized — this correctly answers the question.

37. A person has a condition where the testes are not producing testosterone. What is the most likely effect?

(A) Reduced sperm production
(B) Reduced egg production
(C) Reduced female secondary sexual characteristics
(D) Reduced male secondary sexual characteristics

Correct Answer: D

Explanation: Testosterone is responsible for male secondary sexual characteristics. Reduced production would lead to reduced male secondary sexual characteristics.

38. Which of the following would prevent ovulation?

(A) Decreased LH
(B) Increased FSH
(C) Increased LH
(D) Increased estrogen

Correct Answer: A

Explanation: Decreased LH — this correctly answers the question.

39. A patient has a condition where the uterus lining does not thicken. What is the most likely effect?

(A) Sperm cannot be produced
(B) Embryo cannot implant
(C) Egg cannot be fertilized
(D) Ovulation cannot occur

Correct Answer: B

Explanation: The uterus lining must thicken for embryo implantation. If it does not thicken, implantation cannot occur.

40. Which of the following is the correct sequence of sexual reproduction?

(A) Fertilization → Gametogenesis → Development
(B) Development → Fertilization → Gametogenesis
(C) Gametogenesis → Fertilization → Development
(D) Gametogenesis → Development → Fertilization

Correct Answer: C

Explanation: Gametogenesis → Fertilization → Development — this correctly answers the question.

41. A person has a condition where the vas deferens is blocked. What is the most likely effect?

(A) Sperm cannot be produced
(B) Testosterone cannot be produced
(C) Ovulation cannot occur
(D) Sperm cannot be transported

Correct Answer: D

Explanation: Sperm cannot be transported — this correctly answers the question.

42. Which of the following is the correct order of the stages of HIV infection?

(A) Stage 1 → Stage 2 → Stage 3 → Stage 4
(B) Stage 4 → Stage 3 → Stage 2 → Stage 1
(C) Stage 2 → Stage 1 → Stage 4 → Stage 3
(D) Stage 3 → Stage 2 → Stage 1 → Stage 4

Correct Answer: A

Explanation: Stage 1 → Stage 2 → Stage 3 → Stage 4 — this correctly answers the question.

43. A patient has a condition where the ovaries are not producing estrogen. What is the most likely effect?

(A) Reduced sperm production
(B) Reduced female secondary sexual characteristics
(C) Reduced male secondary sexual characteristics
(D) Reduced egg production

Correct Answer: B

Explanation: Estrogen is responsible for female secondary sexual characteristics. Reduced production would lead to reduced female secondary sexual characteristics.

44. Which of the following would increase the chance of fertilization?

(A) Blocked fallopian tube
(B) Low sperm count
(C) Healthy sperm and egg
(D) Abnormal egg

Correct Answer: C

Explanation: Healthy sperm and egg — this correctly answers the question.

45. A person has a condition where the pituitary gland is not producing FSH. What is the most likely effect?

(A) Reduced sperm production
(B) Reduced egg production
(C) None of the above
(D) Both A and B

Correct Answer: D

Explanation: FSH is essential for both spermatogenesis and oogenesis. Reduced FSH would affect both sperm and egg production.

46. Which of the following is the correct sequence of the ovarian cycle?

(A) Follicular phase → Ovulation → Luteal phase
(B) Ovulation → Follicular phase → Luteal phase
(C) Luteal phase → Ovulation → Follicular phase

(D) Follicular phase → Luteal phase → Ovulation

Correct Answer: A

Explanation: Follicular phase → Ovulation → Luteal phase — this correctly answers the question.

47. A patient has a condition where the cervix is not producing mucus. What is the most likely effect?

(A) Sperm cannot be produced
(B) Sperm cannot reach the egg
(C) Egg cannot be fertilized
(D) Ovulation cannot occur

Correct Answer: B

Explanation: Sperm cannot reach the egg — this correctly answers the question.

48. Which of the following is the correct sequence of the male reproductive system?

(A) Testes → Vas deferens → Epididymis → Urethra
(B) Epididymis → Testes → Vas deferens → Urethra
(C) Testes → Epididymis → Vas deferens → Urethra
(D) Vas deferens → Testes → Epididymis → Urethra

Correct Answer: C

Explanation: Sperm travels from the testes to the epididymis, then through the vas deferens, and finally through the urethra.

49. A patient has a condition where the prostate gland is enlarged. What is the most likely effect?

(A) Reduced sperm production
(B) Reduced testosterone production
(C) Reduced egg production
(D) Difficulty in urination

Correct Answer: D

Explanation: The prostate gland surrounds the urethra. Enlargement can cause difficulty in urination.

50. Which of the following is the correct sequence of the female reproductive system?

(A) Ovary → Fallopian tube → Uterus → Cervix → Vagina
(B) Ovary → Uterus → Fallopian tube → Cervix → Vagina
(C) Fallopian tube → Ovary → Uterus → Cervix → Vagina
(D) Uterus → Ovary → Fallopian tube → Cervix → Vagina

Correct Answer: A

Explanation: The egg travels from the ovary to the fallopian tube, then to the uterus, through the cervix, and out through the vagina.