

Q 32. When the testes of the males are removed before puberty, which of the following conditions occur?

- (a) Sterile male with masculine characteristics is developed
- (b) Male with feminine characteristics is developed
- (c) A fertile male is developed
- (d) Tumors of the adrenals degenerate

Ans - (b) Male with feminine characteristics is developed.

Q

Q 33. Which of the following can control the sex determination in one or the other species?

- (a) Hormone
- (b) Metabolism
- (c) Environment
- (d) All of the above

Ans - (d) All of the above.

Q 34. Which of the following statements about chromosomes of man is true?

- (a) The X-chromosomes are comparatively larger than Y-chromosomes.
- (b) Both X and Y-chromosomes are of the same length.
- (c) The Y-chromosome is larger than X-chromosome.
- (d) The Y-chromosome shows lampbrush-loop-like structures.

Ans - (a) The x - chromosomes are comparatively larger than y - chromosomes of man - is true ?

Q.35. Which of the following is a false statement ?

- (a) Both X and Y chromosomes have homologous regions.
- (b) Both X and Y chromosomes have differential regions.
- (c) The Synapsis and crossing over is restricted to differential regions.
- (d) The genes of the homologous regions do not always inherit along with other genes.

Ans - (c) The Synapsis and crossing over is restricted to differential regions.

Q.36. Sex - linked genes reside in the

- (a) Differential region of X - chromosome
- (b) Differential region of Y - chromosomes
- (c) Homologous region of X - chromosome
- (d) Homologous region of Y - chromosome

Ans - (a) Differential region of X - chromosome.

Q.37. Genes for total colour blindness are located on.

- (a) X - chromosome
- (b) Y - chromosome
- (c) XY - chromosome
- (d) Autosomes.

Ans - (c) XY - chromosome

Q 38. Hypertrichosis is a condition associated with
(a) X-linked genes (b) Y-linked genes
(c) XY linked genes (d) Genes of autosomes

Ans - (b) XY linked genes

Q 39. The first X-linked gene found in *Drosophila* was.

- (a) The dominant white eye mutation
- (b) The recessive white eye mutation
- (c) The dominant red eye mutation
- (d) The recessive red eye mutation.

Ans - (b) The recessive white eye mutation.

Q 40. Which of the following is a disease associated with X-linked recessive gene?

- (a) Red-green blindness
- (b) Haemophilia
- (c) Night blindness
- (d) All of the above.

Ans - (d) All of the above.

Q 41. What could be the condition of parents, if all their F₁ sons are colour-blind and daughters are normal?

- (a) Colour-blind mother and carrier father
- (b) Colour-blind mother and normal visioned father

(c) Normal visioned mother and colour-blind father.

(d) Both father and mother are colour-blind.

Ans - (b) Colour-blind mother and normal visioned father.

Q 42. Gynandromorphs are

(a) Male (b) females

(c) female on one side of the body and male on the other

(d) Sterile individuals intermediate between females and males.

Ans - (c) female on one side of the body and male on the other

Q 43. When the ratio of the number of X-chromosomes to the number of sets of autosomes in *Drosophila* is 0.5, it is

(a) A male (b) A female

(c) An intersex (d) A gynandromorph

Ans - (a) A male.

Q 44. The ratio of the number of X-chromosome to the number of autosomes in super females of *Drosophila* is.

(a) 0.5

(b) 1.0

(c) 1.5

(d) 2.0

Ans - (c) 1.5