

**CHENGALPATTU DISTRICT  
SECOND ASSESSMENT TEST – JANUARY.2022**

CLASS: XII

ZOOLOGY

Max. Marks:70

Time: 3 Hours

**PART – I**

**CHOOSE THE CORRECT ANSWER AND WRITE WITH OPTION CODE 15 X 1 = 15**

1. XO type of sex determination and XY type of sex determination are examples of
  - a) Male heterogamety
  - b) Female heterogamety
  - c) Male homogamety
  - d) Both (b) and (c)
2. The process which the sperm undergoes before penetrating the ovum is
  - a) Spermiation
  - b) Cortical reaction
  - c) Spermiogenesis
  - d) Capacitation
3. The mature sperms are stored in the
  - a) Epididymis
  - b) Seminiferous tubules
  - c) Prostate gland
  - d) Vas deferens
4. The wall of the uterus which exhibits strong contractions during parturition
  - a) Perimetrium
  - b) Myometrium
  - c) Mesovarium
  - d) Endometrium
5. In which mode of reproduction variations are seen
  - a) Asexual
  - b) Parthenogenesis
  - c) Sexual
  - d) Both a and b
6. The male sex hormone testosterone is secreted from
  - a) Sertoli cells
  - b) Leydig cells
  - c) Epididymis
  - d) Prostate gland
7. Find the mismatching pair
  - a) Monocystis - Isogamy
  - b) Trichonympha - Hologamy
  - c) Vorticella - Conjugation
  - d) Solenobia - Amphitoky
8. **Assertion (A):** – In human male, testes are extra abdominal and lie in scrotal sacs.  
**Reason (R):** – Scrotum acts as thermo regulator and keeps temperature lower by 2°C for normal sperm production.
  - a). A and R are true, R is the correct explanation of A
  - b). A and R are true, R is not the correct explanation of A
  - c). A is true, R is false
  - d). Both A and R are false
9. Select the incorrect action of hormonal contraceptive pills from the followings
  - a) Inhibition of spermatogenesis.
  - b) Inhibition of ovulation.
  - c) Changes in cervical mucus impairing its ability to allow passage and transport of sperms.
  - d) Alteration in uterine endometrium to make it unsuitable for implantation.
10. Progestasert and LNG 20 are
  - a) Hormone releasing IUDs
  - b) Non medicated IUDs
  - c) Copper releasing IUDs
  - d) Oral contraceptives
11. What can be the blood group of offspring when both parents have AB blood group?
  - a) AB only
  - b) A, B and AB
  - c) A and B only
  - d) A, B, AB and O
12. In an accident there is great loss of blood and there is no time to analyse the blood group which blood can be safely transferred?
  - a) O and Rh negative
  - b) O and Rh positive
  - c) B and Rh negative
  - d) AB and Rh positive
13. Who is the founder of Modern Eugenics movement?
  - a) Mendel
  - b) Darwin
  - c) Francis Galton
  - d) Karl Pearson
14. A contraceptive pill prevents ovulation by
  - a) Blocking fallopian tube
  - b) Inhibiting release of FSH and LH
  - c) Stimulating release of FSH and LH
  - d) Causing immediate degeneration of released ovum
15. The mode of reproduction in bacteria is by
  - a) Formation of gametes
  - b) Endospore formation
  - c) Conjugation
  - d) Zoospore formation

**PART – II**

**II. ANSWER ANY SIX OF THE FOLLOWINGS:****6 X 2 = 12**

(QUESTION NUMBER: 18 IS COMPULSORY)

16. Mention the importance of the position of the testes in humans.
17. Differentiate foeticide and infanticide.
18. What are holandric genes?
19. How is juvenile phase different from reproductive phase?
20. What is the composition of semen?
21. What is haplodiploidy?
22. Enlist the natural contraceptive methods.
23. What is criss-cross inheritance?
24. What is inhibin? State its functions.

**PART – III****III. ANSWER ANY SIX OF THE FOLLOWINGS:****6 X 3 = 18**

(QUESTION NUMBER: 30 IS COMPULSORY)

25. Expand the acronyms: (a). LH (b). FSH (c). hCG
26. What is conjugation? Give an example.
27. Enlist the male accessory glands?
28. Name the hormones produced from the placenta during pregnancy.
29. What are the applications of Karyotyping?
30. Amniocentesis, the foetal sex determination test, is banned in our country, Is it necessary? Comment.
31. Classify fertilization based upon the place of occurrence.
32. Draw a labelled sketch of human sperm.
33. Explain the mode of sex determination in honeybees.

**PART – IV****IV. ANSWER THE FOLLOWINGS:****5 X 5 = 25**

34. What is parthenogenesis? Describe the various types of parthenogenesis.

**(Or)**

Enumerate the different kinds of syngamy are prevalent among living organisms.

35. Describe the structure of human ovum with a neat labelled diagram.

**(Or)**

Give a schematic representation of Spermatogenesis and Oogenesis in humans

36. Explain the process of fertilization and prevention of polyspermy in human.

**(Or)**

What is birth control? Describe the permanent birth control methods.

37. How is sex determined in human beings?

**(Or)**

Explain the genetic basis of ABO blood grouping in man.

38. If a marriage between normal visioned man and colour blind woman, what would be the result of F<sub>1</sub> and F<sub>2</sub>? Explain with the help of flowchart.

**(Or)**

Comment on the methods of Eugenics.