

QUESTION BANK FOR GOVERNMENT REVISION TEST - 1**XII STD BIO-ZOOLOGY / ZOOLOGY REVISION TEST – 1****TOTAL MARKS : 50****CHAPTERS 1 to 4****TIME : 1 HR****1. In which type of parthenogenesis are only males produced?**

- a) Arrhenotoky (b) Thelytoky (c) Amphitoky (d) Both a and b

2. Animals giving birth to young ones:

- (a) Oviparous (b) Oviviviparous (c) Viviparous (d) Both a and b

3. In which mode of reproduction variations are seen

- a) Asexual (b) Parthenogenesis (c) Sexual (d) Both a and b

4. The mature sperms are stored in the

- (a) Seminiferous tubules (b) Vas deferens (c) Epididymis (d) Seminal vesicle

5. The male sex hormone testosterone is secreted from

- (a) Sertoli cells (b) Leydig cell (c) Epididymis (d) Prostate gland

6. The glandular accessory organ which produces the largest proportion of semen is

- (a) Seminal vesicle (b) Bulbourethral gland (c) Prostate gland (d) Mucous gland

7. The male homologue of the female clitoris is

- (a) Scrotum (b) Penis (c) Urethra (d) Testis

8. The site of embryo implantation is the

- (a) Uterus (b) Peritoneal cavity (c) Vagina (d) Fallopian tube

9. The foetal membrane that forms the basis of the umbilical cord is

- (a) Allantois (b) Amnion (c) Chorion (d) Yolk sac

10. Mammalian egg is

- (a) Mesolecithal and non cleidoic (b) Microlecithal and non cleidoic

- (c) Alecithal and non cleidoic (d) Alecithal and cleidoic

11. The process which the sperm undergoes before penetrating the ovum is

- (a) Spermiation (b) Cortical reaction (c) Spermiogenesis (d) Capacitation

12. The Androgen Binding Protein (ABP) is produced by

- (a) Leydig cells (b) Hypothalamus (c) Sertoli cells (d) Pituitary gland

13. 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.

14. The approach which does not give the defined action of contraceptive is

- (a) Hormonal contraceptive - Prevents entry of sperms, prevent ovulation and fertilization

- (b) Vasectomy - Prevents spermatogenesis

- (c) Barrier method - Prevents fertilization

- (d) Intra uterine device - Increases phagocytosis of sperms, suppresses sperm motility and fertilizing capacity of sperms

15. Read the given statements and select the correct option.**Statement 1: Diaphragms, cervical caps and vaults are made of rubber and are inserted into the female reproductive tract to cover the cervix before coitus.****Statement 2: They are chemical barriers of conception and are reusable.**

- (a) Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1.

- (b) Both statements 1 and 2 are correct but statement 2 is not the correct explanation of statement 1.

- (c) Statement 1 is correct but statement 2 is incorrect. (d) Both statements 1 and 2 are incorrect.

16. Match column I with column II and select the correct option from the codes given below.**Column I****Column II****A. Copper releasing IUD (i) LNG-20****B. Hormone releasing (ii) Lippes loop IUD****C. Non medicated IUD (iii) Saheli****D. Mini pills (iv) Multiload-375**

- (a) A-(iv), B-(ii), C-(i), D-(iii) (b) A-(iv), B-(i), C-(iii), D-(ii)

- (c) A-(i), B-(iv), C-(ii), D-(iii) (d) A-(iv), B-(i), C-(ii), D-(iii)

17. Select the incorrect action of hormonal contraceptive pills from the following

- (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.

18. Haemophilia is more common in males because it is a

- (a) Recessive character carried by Y-chromosome (b) Dominant character carried by Y chromosome

- (c) Dominant trait carried by X – chromosome (d) Recessive trait carried by X- chromosome

19. ABO blood group in man is controlled by

- (a) Multiple alleles (b) Lethal genes (c) Sex linked genes (d) Y-linked genes

20. Three children of a family have blood groups A, AB and B. What could be the genotypes of their parents?
 (a) $I^A I^B$ and ii (b) $I^A I^O$ and $I^B I^O$ (c) $I^B I^B$ and $I^A I^A$ (d) $I^A I^A$ and ii
21. Which of the following is not correct?
 (a) Three or more alleles of a trait in the population are called multiple alleles.
 (b) A normal gene undergoes mutations to form many alleles
 (c) Multiple alleles map at different loci of a chromosome
 (d) A diploid organism has only two alleles out of many in the population.
22. Which of the following phenotypes in the progeny are possible from the parental combination $A \times B$?
 (a) A and B only (b) A, B and AB only (c) AB only (d) A, B, AB and O
23. Which of the following phenotypes is not possible in the progeny of the parental genotypic combination $I^A I^O \times I^A I^B$?
 (a) AB (b) O (c) A (d) B
24. Which of the following is true about Rh factor in the offspring of a parental combination $Dd \times Dd$ (both Rh positive)?
 (a) All will be Rh-positive (b) Half will be Rh positive
 (c) About $\frac{3}{4}$ will be Rh negative (d) About one fourth will be Rh negative
25. 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, B, AB and O (d) A and B only
26. If the child's blood group is 'O' and father's blood group is 'A' and mother's blood group is 'B' the genotype of the parents will be
 (a) $I^A I^A$ and $I^B I^O$ (b) $I^A I^O$ and $I^B I^O$ (c) $I^A I^O$ and $I^O I^O$ (d) $I^O I^O$ and $I^B I^B$
27. XO type of sex determination and XY type of sex determination are examples of.
 (a) Male heterogamety (b) Female heterogamety (c) Male homogamety chromosome (d) Both (b) and (c)
28. 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
29. Father of a child is colourblind and mother is carrier for colourblindness, the probability of the child being colour blind is.
 (a) 25% (b) 50% (c) 100% (d) 75%
30. A marriage between a colourblind man and a normal woman produces
 (a) All carrier daughters and normal sons (b) 50% carrier daughters, 50% normal daughters
 (c) 50% colourblind sons, 50% normal sons (d) All carrier offsprings
31. "Universal Donor" and "Universal Recipients" blood group are and respectively.
 (a) AB, O (b) O, AB (c) A, B (d) B, A
32. ZW-ZZ system of sex determination occurs in
 (a) Fishes (b) Reptiles (c) Birds (d) All of these
33. Co-dominant blood group is
 (a) A (b) AB (c) B (d) O
34. Which of the following is incorrect regarding ZW-ZZ type of sex determination?
 (a) It occurs in birds and some reptiles (b) Females are homogametic and males are heterogametic
 (c) Male produce two types of gametes (d) It occurs in gypsy moth
- (Assertion and reasoning questions: In each of the following questions there are two statements. One is assertion (A) and other is reasoning (R). Mark the correct answer as
 A. If both A and R are true and R is correct explanation for A.
 B. If both A and R are true but R is not the correct explanation for A.
 C. If A is true but R is false. D. If both A and R are false.)
35. **Assertion** : In bee society, all the members are diploid except drones.
Reason: Drones are produced by parthenogenesis.
36. **Assertion** – In human male, testes are extra abdominal and lie in scrotal sacs.
Reason – Scrotum acts as thermoregulator and keeps temperature lower by 2°C for normal sperm production
37. **Assertion** – Ovulation is the release of ovum from the Graafian follicle.
Reason – It occurs during the follicular phase of the menstrual cycle.
38. **Assertion** – Head of the sperm consists of acrosome and mitochondria.
Reason – Acrosome contains spiral rows of mitochondria.
39. External fertilization is seen in
 (a) Mammals and birds (b) Reptiles and sponges (c) Fishes and birds (d) Sponges and amphibians
40. In honey bees, the unfertilized egg produces.
 (a) Queen bee (b) Worker bee (c) Drones (d) Worker bee and male honey bee

- 41. Fusion of morphologically and physiologically similar gametes is called .**
 (a) anisogamy (b) hologamy (c) isogamy (d) merogamy
- 42. Which one of the following is not the function of placenta?**
 a) To facilitate supply of oxygen and nutrients to embryo b) To secrete oestrogen
 c) To facilitate the removal of carbondioxide and material from embryo
 d) To secrete oxytocin during parturition
- 43. The testes in human are situated outside the abdominal cavity inside a pouch called scrotum. The purpose served is for**
 a) escaping any possible compression by the visceral organs.
 b) providing more space for the growth of epididymis.
 c) providing a secondary sexual feature for exhibiting the male sex
 d) maintaining the scrotal temperature lower than internal body temperature
- 44. Hormones secreted by placenta to maintain pregnancy are**
 a) hCG, hPL, progesterone, estrogen b) hCG, hPL, estrogen, relaxin, oxytocin
 c) hCG, hPL, progesterone, prolactin d) hCG, progesterone, estrogen, glucocorticoids
- 45. Which of the following is a hormone releasing Intrauterine Device (IUD)?**
 a) Multiload 375 b) LNG-20 c) Cervical cap d) Vault
- 46. Assisted reproductive technology, IVF involves the transfer of**
 a) Ovum into the fallopian tube b) Zygote into the fallopian tube
 c) Zygote into the uterus d) Embryo with 16 blastomeres into the fallopian tube
- 47. In context of amniocentesis, which of the following statements is incorrect?**
 a) It is usually done when a woman is between 14-16 weeks pregnant
 b) It is used for prenatal sex determination c) It can be used for detection of Down syndrome
 d) It can be used for detection of Cleft palate
- 48. Which one of the following conditions correctly describes the manner of determining the sex in the given example?**
 a) XO type of sex chromosomes determine male sex in grasshopper
 b) XO condition in humans as found in Turner syndrome, determines female sex
 c) Homozygous sex chromosomes (XX) produce male in Drosophila
 d) Homozygous sex chromosomes (ZZ) determine female sex in birds
- 49. A normal-visioned man whose father was blind, marries a woman whose father was also colour blind. They have their first child as a daughter. What are the chances that this child would be colour blind? a) 100% b) 0% c) 25% d) 50%**
- 50. A gene showing codominance has**
 a) Alleles tightly linked on the same chromosome b) Alleles that are recessive to each other
 c) Both alleles independently expressed in the heterozygote d) One allele dominant on the other

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**XII STD ZOOLOGY
 CHAPTERS 1 to 4**

REVISION TEST – 2

MARKS : 50

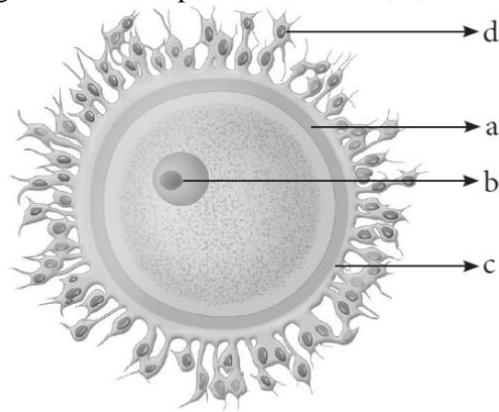
TIME : 1 ½ HRS

WRITE VERY SHORT ANSWER FOR THE FOLLOWING QUESTIONS (25 X 2 = 50)

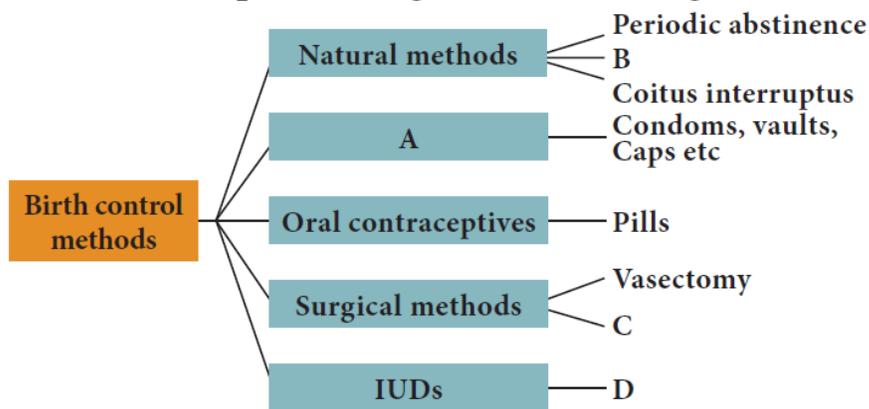
- Name the phenomenon where the female gamete directly develops into a new organism with with an avian example.
- What is parthenogenesis? Give two examples from animals
- Why are the offsprings of oviparous animal at a greater risk as compared to offsprings of viviparous organisms?
- Give reason for the following: Some organisms like honey bees are called parthenogenetic animals
- Give reason for the following: A male honey bee has 16 chromosomes where as its female has 32 chromosomes.
- How is juvenile phase different from reproductive phase?
- What is the difference between syngamy and fertilization?
- Mention the differences between spermiogenesis and spermatogenesis.
- Expand the acronyms : a. FSH b. LH c. hCG d. hPL
- What is inhibin? State its functions.
- Name the hormones produced from the placenta during pregnancy.
- Define gametogenesis.

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13. Identify the given image and label its parts marked as a, b, c and d



14. Select the correct term from the bracket and complete the given branching tree



(Barriers, Lactational amenorrhoea, CuT, Tubectomy)

15. Differentiate foeticide and infanticide.

16. What is haplodiploidy?

17. What is criss-cross inheritance?

18. Scrotum acts as a thermo-regulator for spermatogenesis. Why?

19. Differentiate ZIFT and GIFT.

20. Differentiate Intersexes from Supersexes

21. Explain male heterogamety.

22. Enumerate the cause for male infertility.

23. Why do we call Parthenogenesis as a special type of sexual reproduction in animals?

24. Write Wiener hypothesis for Rh⁺ phenotype.

25. Y – linked genes are non-homologous. Why?

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XII STD ZOOLOGY

REVISION TEST – 3

MARKS : 75

CHAPTERS 1 to 4

TIME : 1 ½ HRS

WRITE SHORT ANSWER FOR THE FOLLOWING QUESTIONS (25 X 3 = 75)

1. Which type of reproduction is effective -Asexual or sexual and why?
2. At what stage of development are the gametes formed in new born male and female?
3. How is polyspermy avoided in humans?
4. Placenta is an endocrine tissue. Justify.
5. Draw a labeled sketch of a spermatozoan.
6. Mention the importance of the position of the testes in humans.
7. What is the composition of semen?
8. Give a schematic representation of spermatogenesis and oogenesis in humans.
9. Which method do you suggest the couple to have a baby, if the male partner fails to inseminate the female or due to very low sperm count in the ejaculate?
10. The procedure of GIFT involves the transfer of female gametes into the fallopain tube, can gametes be transferred to the uterus to achieve the same result? Explain.
11. Amnicentesis, the foetal sex determination test, is banned in our country, Is it necessary? comment.
12. Distinguish between heterogametic and homogametic sex determination systems.
13. What is Lyonisation?
14. Why are sex linked recessive characters more common in the male human beings?
15. What are holandric genes?

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16. How is sex determined in human beings?
17. Brief about female heterogamety.
18. Give an account of genetic control of Rh factor.
19. Explain the mode of sex determination in honeybees.
20. What are the applications of Karyotyping?
21. Draw the F₁ and F₂ generation flow chart for $X^C X^C \times X^C Y$
Colour Blind
22. Meiosis cell division does not take place during the gametes formation of drone bees. Give reason.
23. Explain the penetration mechanism of a sperm into an egg.
24. Explain the role of placenta during pregnancy.
25. a) What is amniocentesis?
b) Why a statutory ban is imposed on this technique?
c) How to do Amniocentesis ?

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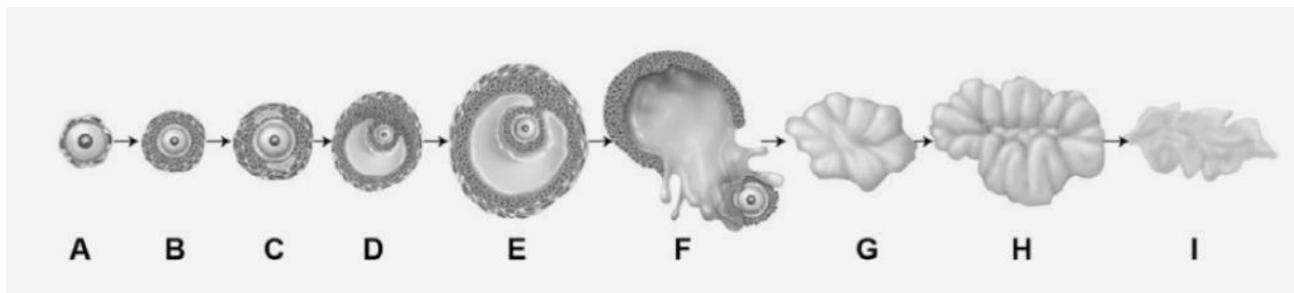
XII STD ZOOLOGY
CHAPTERS 1 to 4

REVISION TEST – 4

MARKS : 50
TIME : 2 HRS

WRITE DETAIL ANSWER FOR THE FOLLOWING QUESTIONS (10 X 5 = 50)

1. The following is the illustration of the sequence of ovarian events (a-i) in a human female.



- a) Identify the figure that illustrates ovulation and mention the stage of oogenesis it represents.
- b) Name the ovarian hormone and the pituitary hormone that have caused the above-mentioned events.
- c) Explain the changes that occurs in the uterus simultaneously in anticipation.
- d) Write the difference between C and H.
2. Describe the structure of the human ovum with a neat labelled diagram.
3. A) What are the strategies to be implemented in India to attain total reproductive health?
B) Expand the following : a) ZIFT b) ICSI
4. A) Explain the inheritance of sex linked characters in human being.
B) Correct the following statements
a) Transfer of an ovum collected from donor into the fallopian tube is called ZIFT.
b) Transferring of an embryo with more than 8 blastomeres into uterus is called GIFT.
c) Multiload 375 is a hormone releasing IUD.
5. What is extra chromosomal inheritance? Explain with an example.
6. Discuss the genic balance mechanism of sex determination with reference to Drosophila.
7. Explain the genetic basis of ABO blood grouping man.
8. Explain the role of hormones in the maintenance of human male fertility.
9. Explain the anatomy of testis with the help of a diagram.
10. Briefly explain the mechanism of fertilization and implantation in human beings.

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