

**CAREERS**360  
**PREPARATION** Series

# Odisha CHSE

---

Zoology Question Paper 2024

---

**Council of Higher Secondary Education, Odisha**  
**Question Bank**

**Zoology**

**Class – XII**

**Group –A**

**Choose the correct answer from the choices given under each question**

1. The mammalian corpus luteum produces
  - (i) Estrogen
  - (ii) Progesterone
  - (iii) Luteotropic hormone
  - (iv) Luteinizing hormone
2. The function of the secretion of Prostate gland is to
  - (i) stimulate sperm activity
  - (ii) attract sperms
  - (iii) inhibit sperm activity
  - (iv) nourish sperms
3. The major part of the semen is the secretion of
  - (i) Cowper's gland
  - (ii) prostate gland
  - (iii) perineal gland
  - (iv) seminiferous tubules
4. In most mammals the testes are located in scrotal sac for
  - (i) sex differentiation
  - (ii) spermatogenesis
  - (iii) more space to visceral organ
  - (iv) independent functioning of kidney
5. Corpus luteum is developed from
  - (i) Leftover oocyte
  - (ii) nephrostome
  - (iii) Leftover Graafian follicle after release of ovum
  - (iv) none of these
6. The sperm become motile in human being in
  - (i) seminiferous tubules
  - (ii) vas deferens
  - (iii) epididymis
  - (iv) seminal vesicles
7. Which of the following has haploid chromosome?
  - (i) oogonia
  - (ii) primary oocyte
  - (iii) secondary oocyte
  - (iv) primary spermatocyte
8. Egg released by Graafian follicle is surrounded by
  - (i) Zona pellucida
  - (ii) Vitelline membrane
  - (iii) Plasma membrane
  - (iv) all of the above
9. A human female reaches menopause around the age of
  - (i) 70 years
  - (ii) 25 years

- (iii) 15 years  
(iv) 50 years
10. The differentiation of sex takes place  
(i) at the time of gamete fusion  
(ii) before fertilization  
(iii) at the time of gamete formation  
(iv) none of the above
11. During the ovulatory phase, the structure called corpus luteum is formed from  
(i) ruptured Graffian follicle  
(ii) epididymis  
(iii) isogametes  
(iv) endometrium
12. Seminiferous tubules are found in  
(i) Testis  
(ii) Ovary  
(iii) Liver  
(iv) Kidney
13. Sterilisation technique is  
(i) Loop  
(ii) Diaphragm  
(iii) Tubectomy  
(iv) Cervical cap
14. Causes of world population explosion is  
(i) Better health care  
(ii) increased agricultural production  
(iii) more jobs  
(iv) fewer wars
15. A contraceptive pill contains  
(i) progesterone and estrogen  
(ii) spermicidal salts  
(iii) chemicals that cause automatic abortion  
(iv) chemicals that prevent fertilization of ovum.
16. An IUCD is  
(i) Copper – T  
(ii) Condom  
(iii) Vasectomy  
(iv) Pill.
17. Purpose of tubectomy is to prevent  
(i) Coitus  
(ii) Egg formation  
(iii) Fertilization  
(iv) Embryonic development
18. Which is related to males?  
(i) Oral pill  
(ii) Tubectomy  
(iii) Vasectomy  
(iv) None of the above
19. The test which is used for study of genetic and metabolic defects of an unborn baby is  
(i) Amniocentesis  
(ii) Erythroblastosis  
(iii) cystic fibrosis  
(iv) phenylketonuria
20. In which of the following methods Zygotes or early embryo and blastomeres could be transferred into the fallopian tube?

- (i) GIFT
  - (ii) IUT
  - (iii) ZIFT
  - (iv) ICSI
21. Which of the following can be used as an emergency contraceptives to avoid possible pregnancy:
- (i) Progestogens
  - (ii) IUD within 72 hours
  - (iii) Diaphragms
  - (iv) (i) & (ii)
22. Couple unable to produce children inspite of unprotected sexual cohabitation is termed as:
- (i) Impotency
  - (ii) Infertility
  - (iii) STD
  - (iv) PID
23. In injectable form of the hormone based contraceptive is
- (i) Norplant
  - (ii) Depo-provera
  - (iii) Mala-D
  - (iv) Saheli
24. Test tube baby is the one
- (i) Who is reared on artificial medium outside the womb
  - (ii) Growth of human baby inside the fallopian tube instead of uterus
  - (iii) Ova from wife/ donor(female) and sperme from husband/ donor(male) and are induced to form zygote by (INF) and then implanted in female.
  - (iv) Baby born after artificial insemination.
25. The tendency of population to remain in genetic equilibrium may be disturbed by
- (i) random mating
  - (ii) Lack of migration
  - (iii) Lack of mutation
  - (iv) Lack of random mating
26. According to Darwin, the organic evolution is due to
- (i) Intraspecific competition
  - (ii) Interspecific competition
  - (iii) Competition within closely related species
  - (iv) Reduced feeding efficiency in one species due to the presence of interfering species.
27. The process by which organisms with different evolutionary history evolved similar phenotypic adaptation in response to a common environmental challenge is called
- (i) natural selection
  - (ii) convergent evolution
  - (iii) nonrandom evolution
  - (iv) adaptive radiation
28. Evolution of different species in a given area starting from a point and spreading to other geographical areas is known as
- (i) adaptive radiation
  - (ii) natural selection
  - (iii) migration
  - (iv) divergent evolution
29. Which one of the following scientists name is correctly matched with the theory put forth by him?
- (i) Weismann – Theory of continuity of germplasm
  - (ii) Pasteur – Inheritance of acquired characters

- (iii) Devries – Natural selection  
(iv) Mendel – Theory of pangenesis
30. Darwin's finches are an excellent example of  
(i) adaptive radiation  
(ii) seasonal migration  
(iii) broad parasitism  
(iv) connecting link
31. When two species of different genealogy come to resemble each other as a result of adaptation the phenomenon is termed  
(i) divergent evolution  
(ii) co-evolution  
(iii) micro-evolution  
(iv) convergent evolution
32. Evolutionary history of an organism is known as  
(i) ancestry  
(ii) paleontology  
(iii) ontogeny  
(iv) phylogeny
33. What kind of evidence suggested that man is more closely related with chimpanzee than with other hominoid apes?  
(i) Evidence from DNA from sex chromosomes only  
(ii) Comparison of chromosomes morphology only  
(iii) Evidence from fossil remains and the fossil mitochondrial alone  
(iv) Evidence from DNA extracted from sex chromosomes, autosomes and mitochondria.
34. Darwin in his 'Natural selection Theory' did not believe in any role of which one of the following in organic evolution?  
(i) Discontinuous variations  
(ii) Parasites and predators as natural enemies  
(iii) Survival of the fittest  
(iv) Struggle for existence
35. In which era reptiles were dominant?  
(i) Coenozoic era  
(ii) Mesozoic era  
(iii) Paleozoic era  
(iv) Archeozoic era
36. Homo sapiens evolved during  
(i) Pleistocene  
(ii) Pliocene  
(iii) Oligocene  
(iv) Miocene
37. Which of the following are homologous organs?  
(i) Wings of insects and bat  
(ii) gills of fish and lungs of rabbit  
(iii) pectoral fins of fish and fore limbs of horse  
(iv) wings of grasshopper and crow.
38. Life originated on earth about  
(i) 2.5 billion years ago  
(ii) 3.5 billion years ago  
(iii) 4.5 billion years ago  
(iv) 5.5 billion years ago
39. Which is not a case of chromosomal aberration?  
(i) Recombination  
(ii) Inversion

- (iii) Duplication
- (iv) Translocation
- 40. Random genetic drift in a population probably results from
  - (i) large population size
  - (ii) highly genetically variable
  - (iii) interbreeding within this population
  - (iv) constant low mutation rate
- 41. Monocytes differentiate into which kind of phagocytic cells?
  - (i) B – cells
  - (ii) macrophages
  - (iii) neutrophils
  - (iv) T – cells
- 42. If a graft is always rejected, it is called:
  - (i) Homograft
  - (ii) Isograft
  - (iii) Autograft
  - (iv) Heterograft
- 43. The principal lines of defence in our body are
  - (i) one
  - (ii) two
  - (iii) three
  - (iv) numerous
- 44. Which is an autoimmune disease?
  - (i) Asthma
  - (ii) Cancer
  - (iii) Rheumatoid arthritis
  - (iv) None of the above
- 45. General defence system of body forms
  - (i) Acquired immunity
  - (ii) Innate immunity
  - (iii) Both (i) and (ii)
  - (iv) none of these
- 46. The major phagocytic cells are
  - (i) Lymphocytes
  - (ii) Macrophages
  - (iii) Plasma cells
  - (iv) Mast cells
- 47. Immunoglobulins are
  - (i) antibodies
  - (ii) antigen
  - (iii) antibiotic
  - (iv) antiseptic
- 48. LSD is derived from
  - (i) Cocoa plant
  - (ii) Poppy plant
  - (iii) Hemp plant
  - (iv) Fungus
- 49. Excessive consumption of alcohol damages
  - (i) Liver
  - (ii) Heart
  - (iii) Lung
  - (iv) Kidney
- 50. Which part of the brain has earliest ill effects in a drunk person:
  - (i) Cerebrum

- (ii) Cerebellum
  - (iii) Medulla
  - (iv) Mid brain
51. At which stage of HIV infection does one usually show symptoms of AIDS?
- (i) within 15 days of sexual contact with an infected person
  - (ii) when the infected retro virus enters host cells
  - (iii) when HIV damages large number of helper T-lymphocytes
  - (iv) when the viral DNA is produced by reverse transcriptase
52. Infection of *Ascaris* usually occurs by
- (i) drinking water containing egg of *Ascaris*
  - (ii) eating imperfectly cooked park
  - (iii) tse – tse fly
  - (iv) mosquito bite
53. Ringworm in humans is called by
- (i) bacteria
  - (ii) fungi
  - (iii) nematodes
  - (iv) viruses
54. A certain patient is suspected to be suffering from acquired immune deficiency syndrome. Which diagnostic technique will you recommend for its detection?
- (i) MRI
  - (ii) Ultra sound
  - (iv) ELISA
55. A person likely to develop tetanus is immunized by administering
- (i) dead germs
  - (ii) performed antibodies
  - (iii) wide spectrum antibodies
  - (iv) weakened germs
56. Which of the following is a pair of viral diseases?
- (i) Ringworm, AIDS
  - (ii) Common cold, AIDS
  - (iii) Dysentery, Common Cold
  - (iv) Typhoid, tuberculosis
57. *Salmonella* is related with
- (i) Typhoid
  - (ii) Polio
  - (iii) TB
  - (iv) Tetanus
58. Which one of the following is not correctly matched?
- (i) Glossina palpalis – Sleeping Sickness
  - (ii) Culex pipiens – Filariasis
  - (iii) Aedes aegypti – Yellow fever
  - (iv) Anopheles culicifacies – Leishmaniasis
59. ELISA is used to detect viruses where the key reagent is
- (i) DNA probe
  - (ii) RNase
  - (iii) Alkaline phosphatase
  - (iv) Catalase
60. Which of these is most infectious disease?
- (i) Hepatitis – B
  - (ii) AIDS
  - (iii) Cough & Cold
  - (iv) Malaria
61. Typhoid fever is caused by



- (i) Giardia
  - (ii) Salmonella
  - (iii) Shigella
  - (iv) Escherichia
62. If a person shows production of interferons in his body, the chances are that he got an infection of
- (i) typhoid
  - (ii) measles
  - (iii) tetanus
  - (iv) malaria
63. Which of the following disease is now consider hearly eradicated from India?
- (i) Smallpox
  - (ii) Polia myelitis
  - (iii) Plasue
  - (iv) Kal-azar
64. Passive immunity was discovered by
- (i) Edward Jenner
  - (ii) Emil von Behring
  - (iii) Robert Koch
  - (iv) Louis Pasteur
65. In which one of the following pairs of diseases both are caused by viruses?
- (i) Tetanus & typhoid
  - (ii) Whooping cough and sleeping sickness
  - (iii) Syphills and AIDS
  - (iv) Measles and rabies
66. Which of the following diseases is due to an allergic reaction?
- (i) Goitre
  - (ii) Skin cancer
  - (iii) Hay fever
  - (iv) Enteric fever
67. Botulism caused by clostriadium botulinum affects the
- (i) Spleen
  - (ii) intestine
  - (iii) lymphgland
  - (iv) neuromuscular junction
68. Cercbral malaria is caused by plasmodium
- (i) Vivax
  - (ii) Ovale
  - (iii) Falciparum
  - (iv) All of the above
69. Anthrax is caused by
- (i) Vibrio
  - (ii) Bacillus
  - (iii) Salmonella
  - (iv) Virus
70. Entamoeba histolytica infection occurs through
- (i) Mosquito bite
  - (ii) Bird droppings
  - (iii) Sweat
  - (iv) Contaminated food and water
71. Which masquito species are primarily responsible for dengue fever?
- (i) Aedes albopictus
  - (ii) Anopheles gambiae
  - (iii) Aedes aegypti



- (iv) *Culiseta annulata*
72. Which of the following are the diagnostics methods for dengue?
- (i) RT – PCR
  - (ii) Nucleic acid amplification tests (NAATS)
  - (iii) Enzyme – linked immunosorbent assays (ELISA)
  - (iv) All of the above
73. What is the causative agent of Chikungunya fever?
- (i) virus
  - (ii) bacteria
  - (iii) fungus
  - (iv) parasite
74. What is the incubation period for Chikungunya virus?
- (i) 1 – 2 days
  - (ii) 3 – 7 days
  - (iii) 1 – 2 weeks
  - (iv) 2 – 3 weeks
75. Diphtheria is caused by
- (i) Poisons released dead bacterial cells into the host tissue
  - (ii) Poisons released by living bacterial cells into the host tissue.
  - (iii) Poisons released by virus into the host tissues
  - (iv) Excessive immune response by the host's body.
76. Which vector can clone only a small fragment of DNA?
- (i) Bacterial artificial chromosome
  - (ii) Yeast artificial chromosome
  - (iii) Plasmid
  - (iv) Cosmid
77. A single strand of nucleic acid tagged with a radioactive molecule is called
- (i) vector
  - (ii) plasmid
  - (iii) selectable marker
  - (iv) probe
78. Which one of the following is used as vector for cloning genes into higher organisms?
- (i) Baculovirus
  - (ii) *Salmonella typhimurium*
  - (iii) *Rhizopus nigricans*
  - (iv) Retrovirus
79. Manipulation of DNA in genetic engineering became possible due to the discovery of
- (i) restriction endonuclease
  - (ii) DNA ligase
  - (iii) transcriptase
  - (iv) primase
80. The process of replication in plasmid DNA, other than initiation, is controlled by
- (i) mitochondrial gene
  - (ii) bacterial gene
  - (iii) plasmid gene
  - (iv) none of the above
81. Two bacteria found to be very useful in genetic engineering experiments are
- (i) *Nitrosomonas* and *Klebsiella*
  - (ii) *Escherichia* and *Agrobacterium*
  - (iii) *Nitrobacter* and *Azotobacter*
  - (iv) *Rhizobium* and *Diplococcus*
82. Which of the following is related to genetic engineering?
- (i) mutation
  - (ii) plasmid

- (iii) plastid  
(iv) heterosis
83. Nandankanan Zoo is famous for  
(i) White tiger  
(ii) Whale  
(iii) Hippopotamus  
(iv) Nilgiri tahr
84. The organization which publishes the Red List of species is  
(i) ICFRE  
(ii) IUCN  
(iii) UNED  
(iv) WWF
85. An ex-situ method of conservation of endangered species is:  
(i) Biosphere reserve  
(ii) Wildlife sanctuary  
(iii) National park  
(iv) Cryopreservation

### ANSWER

Q. No.	Key	Q. No.	Key	Q. No.	Key	Q. No.	Key
1	ii	23	ii	45	ii	67	iv
2	i	24	iii	46	ii	68	iii
3	ii	25	iv	47	i	69	ii
4	ii	26	ii	48	iv	70	iv
5	iii	27	ii	49	i	71	i
6	iii	28	iv	50	i	72	iii
7	iii	29	i	51	iii	73	i
8	iv	30	i	52	i	74	ii
9	iv	31	iv	53	ii	75	ii
10	i	32	iv	54	iv	76	iii
11	i	33	iv	55	ii	77	iv
12	i	34	i	56	ii	78	iv
13	iii	35	ii	57	i	79	i
14	i	36	i	58	iv	80	ii
15	i	37	iii	59	iii	81	ii
16	i	38	ii	60	i	82	ii
17	iii	39	i	61	ii	83	i
18	iii	40	iii	62	ii	84	ii
19	i	41	iii	63	i	85	iv
20	iii	42	iv	64	i		
21	iv	43	iii	65	iv		
22	ii	44	iii	66	iii		

**Fill in the blanks with correct answer. (1 mark Questions)**

1. The degenerated corpus luteum is called \_\_\_\_\_.
2. The testis of man are connected with the scrotal sac by \_\_\_\_\_.
3. Sacs in which testis are lodged are called \_\_\_\_\_.
4. The \_\_\_\_\_ is the cavity of gastrula.
5. Failure of descending testis into the scrotum is called \_\_\_\_\_.
6. The mature follicles are termed as \_\_\_\_\_.
7. External genitalia of female is \_\_\_\_\_.
8. Human seminal fluid is \_\_\_\_\_ in nature.
9. Embryonic membranes are formed from \_\_\_\_\_ of blastula.
10. Gestation period of human female is \_\_\_\_\_ days.
11. During maturation the sperms get nourishment from \_\_\_\_\_.
12. Acrosome of sperm is formed from \_\_\_\_\_.
13. Development of fertilized ovum starts with \_\_\_\_\_.
14. The process which transforms zygote to morula is called \_\_\_\_\_.
15. Vasectomy is the surgical cutting of \_\_\_\_\_.
16. Immediately after parturition, women experience \_\_\_\_\_ amenorrhoea.
17. A state of healthy reproductive organs with normal function is \_\_\_\_\_.
18. Genital warts are caused by \_\_\_\_\_.
19. *Trichomonas vaginalis* lives in \_\_\_\_\_ of female.
20. Methods of preserving sperm in frozen condition is called \_\_\_\_\_.
21. Fertility treatment with donor eggs is usually done using \_\_\_\_\_.
22. The mutation theory was proposed by \_\_\_\_\_.
23. Theory of recapitulation was postulated by \_\_\_\_\_.
24. \_\_\_\_\_ in support of evolution is in form of \_\_\_\_\_.
25. Natural selection operates only in \_\_\_\_\_ traits.
26. Abiogenesis of simple organic molecules was experimentally supported by \_\_\_\_\_.
27. A reducing atmosphere lacks free \_\_\_\_\_.
28. Origin of life occurred in \_\_\_\_\_ period.
29. Life originated in \_\_\_\_\_.
30. The raw material for evolutionary change is \_\_\_\_\_.
31. The sum total of all the genes in a population is \_\_\_\_\_.
32. Ultimate source of variation is \_\_\_\_\_.
33. Concept of genetic drift was introduced by \_\_\_\_\_.
34. Different species occurring in different geographical areas are known as \_\_\_\_\_.
35. Mutation theory cannot explain \_\_\_\_\_.
36. Sedimentary rock is the richest source of \_\_\_\_\_.
37. \_\_\_\_\_ parasite causes Malaria.
38. Vaccine was first discovered by \_\_\_\_\_.
39. \_\_\_\_\_ transmit filarial worm.
40. \_\_\_\_\_ antibody is the largest antibody.
41. Father of immunology is \_\_\_\_\_.
42. HIV virus causes \_\_\_\_\_ disease.
43. Red data book was compiled by \_\_\_\_\_.
44. Dolphins are found in \_\_\_\_\_ sanctuary of Odisha.
45. Wild life week is observed in \_\_\_\_\_ month of every year.
46. \_\_\_\_\_ is a bird sanctuary in Odisha.
47. The concept of "Biosphere reserve" was suggested by \_\_\_\_\_.
48. World Environment day is observed on \_\_\_\_\_.
49. World biodiversity day is observed on \_\_\_\_\_.
50. Project tiger was launched by the Central Government in the year \_\_\_\_\_.

51. MAB stands for \_\_\_\_\_.
52. Dengue is transmitted by \_\_\_\_\_.
53. Typhoid fever could be confirmed by \_\_\_\_\_.
54. \_\_\_\_\_ responsible for disease pneumonia.
55. Malignant malaria is caused by \_\_\_\_\_.
56. The causative agent of Chikungunya is \_\_\_\_\_.
57. Filaria is caused by \_\_\_\_\_.
58. Cells involved in immune mechanism are \_\_\_\_\_.
59. The term antibiotic was coined by \_\_\_\_\_.
60. Interferons are \_\_\_\_\_.

**Answers of fill in the blanks.**

1. Corpus albican
2. Gubernaculum
3. Scrotal sac
4. Archenteron
5. Cryptorchidism
6. Graffian follicle
7. Vulva
8. Alkaline
9. Trophoblast
10. 280 days
11. Sertoli cells
12. Galgibody
13. Cleavage
14. Cleavage
15. Vas deferens
16. Lactational
17. reproductive health
18. HPV
19. vagina
20. crypreservation
21. IVF
22. Hugo de vries
23. Haeckel
24. Fossils
25. inherited
26. Stanley
27. oxygen
28. Pre-cambrian
29. Water
30. Variation
31. Gene pool
32. mutation
33. sewall wright
34. Allopatric
35. Mimicry
36. fossils
37. Plasmodium
38. Edward Jenner
39. Culex masquito
40. IgM
41. Sir Edward Jenner

42. AIDS
43. IUCN
44. Bhitarkanika
45. October
46. Nalabana
47. UNESCO
48. 5<sup>th</sup> June
49. 29<sup>th</sup> December
50. 1973
51. Man and Biosphere programme
52. Aedes Mosquito
53. Widal test
54. Streptococcus pneumoniae
55. Plasmodium falciparum
56. Chikungunya virus (CHIKV)
57. Wuchereria bancrofti
58. Lymphocytes
59. Selman Waksman
- 60.

### **Group – B**

**Write notes on the following (Restrict each answer within 2 to 3 important sentences)**

#### **Human Reproduction**

1. What is a Placenta?
2. What are the function of Placenta?
3. What is Puberty?
4. What are composition of Semen?
5. What is a Corpus luteum?
6. What is follicular atresia?
7. Explain “Placenta is an endocrine gland”.
8. Explain LH surge.
9. Explain the role of LH in both male and female.
10. What is Menopause?
11. What is Luteal phase?
12. Define Lactation.
13. What is Graafian follicle?
14. What is amphimixis?
15. Explain the importance of fertilizin and anti-fertilizing.
16. What is implantation?
17. What is an umbilical cord?
18. What is amnion?

#### **Reproductive Health**

1. What is amniocentesis?
2. What is tubectomy?
3. What are STDs? Give example.
4. What are the significances of IUDs?
5. Define MTP.
- 6.
7. Mention the different barrier methods of family planning.

8. Mention the different natural methods of birth control.
9. Explain chemical method of birth control.
10. What is IVF?
11. What is surrogate mother?
12. What is ZIFT?
13. What is GIFT?

### **Genetion**

1. What is Criss-cross inheritance?
2. What is free martin?
3. Define Genic balance theory.
4. What is Thalassemia?
5. What is gynandromorphy?
6. What is Downin syndrome?
7. What is Turnerin syndrome?
8. What is Klinefelter's syndrome?
9. What do you mean by autosomes?
10. What is Holoandric gene?
11. What is Sex reversal?
12. What is barr body?

### **Evolution**

1. Explain genetic drift.
2. What is bottleneck effect?
3. What is adaptive radiation?
4. What is founder effect?
5. What is gene flow?
6. What is Hardy Weinbergo principle?
7. What is speciation?
8. Explain the theory of recapitulation.
9. Write three Crdticism's of Darwinism.
10. Explain Vestigeal organs.
11. Define Homologous Organs.
12. Define analogous organs.
13. Define Atavism.
14. What are Coacervates?
15. What are fossils?
16. Explain Miller-urey experiment.
17. What do you mean by chemical evolution?

### **Human Health and Diseases**

1. What is Immunity?
2. What is allergy?
3. What are the different types of cancer?
4. Give a note on antibody.
5. What are the Common problems of adolescence?
6. How can AIDS be prevented?
7. How one can prevent mosquito bite?
8. What are the effects of tobacco use in the body?
9. What are the effects of alcoholism in the body?
10. Write a short note on amoebiasis.

11. What are the different species of malaria's parasite?
12. What are the reasons of drug abuse by the youth?
13. What kind of psychological changes characterize adolescence?

### **Bio-technology Principles and Processes**

1. What are essential features of a vector?
2. What is gene cloning?
3. What is recombinant DNA?
4. What are Plasmids?
5. What is genetic engineering?
6. Explain PCR.
7. Define gel electrophoresis.
8. What is a Palindrome?

### **Biodiversity and its Conservation**

1. Define biodiversity.
2. What is Red data book?
3. Define biosphere reserves.
4. Define sanctuaries.
5. What are Ramsar sites?
6. Define Sacred groves.
7. Write a note on biodiversity hot spot of Odisha.

### **Group – B**

#### **Differentiate between**

#### **Human Reproduction**

1. Spermatogenesis and Spermiogenesis
2. Corpus Luteum and Corpus albicans
3. Sertoli Cell and Leydig Cell
4. Follicular phase and Luteal phase
5. Spermatogenesis and Oogenesis
6. Sperm and Ovum
7. Vas deferens and Vas efferentia
8. Testes and Ovary
9. Fertilizin and Antifertilizin

#### **Reproductive Health**

1. Tubectomy and Vasectomy
2. Safe Period and Unsafe Period
3. Chemical method and Natural method
4. Spacing method and Terminal method
5. ZIFT and GIFT

### **Genetics**

1. Phenotype and Genotype
2. Autosomal and Allopolyploid
3. Super male and Super female



4. Gynandromorph and Free martin
5. Down Syndrome and Turner Syndrome
6. 'X' Chromosome and 'Y' Chromosome

### **Evolution**

1. Convergent evolution and Divergent evolution
2. Somatic variation and Germinal variation
3. Abiogenesis and Biogenesis
4. Homologous organs and Analogous organs
5. Fossils and Living Fossils
6. Natural selection and Genetic drift
7. Chromosomal aberration and Gene mutation
8. Euploidy and Aneuploidy
9. Moulds and Costs

### **Human Health and Diseases**

1. Vaccination and Immunization
2. Innate immunity and Acquired immunity
3. Cell mediated immunity and Humoral immunity
4. Benign tumour and Malignant tumour
5. Carcinoma and Sarcoma
6. T-Lymphocytes and B-Lymphocytes
7. Antigen and Antibody
8. Active Immunity and Passive Immunity
9. Communicable and non – Communicable disease
10. Infection and Infestation

### **Biotechnology – Principles and Processes**

1. DNA polymerase and DNA ligase
2. Plasmid and Cosmid

### **Biodiversity and Its Conservation**

1. In situ and ex situ Conservation
2. National park and Sanctuary
3. Genetic diversity and Species diversity
4. National Park and biosphere reserves

### **Group – C**

#### **Long Answer type Questions**

#### **Human Reproduction**

1. Describe the male Reproductive system in human.
2. Describe the female Reproductive system in human.
3. Describe the process of spermatogenesis.
4. Describe the process of oogenesis.
5. Describe the process of Fertilization.

#### **Genetics**

1. Discuss the chromosomal theory of sex determination.

2. What is genic balance theory and explain its role in sex determination?
3. What is sex linked inheritance? Explain inheritance of haemophilia in man.
4. What is sex linked inheritance? Explain inheritance of colour blindness in man.
5. Explain chromosomal disorders in man.

### **Evolution**

1. Discuss the evidences of organic evolution from comparative anatomy and morphology.
2. Give an account of the embryological evidences of organic evolution.
3. Describe palaeontological evidences of organic evolution.
4. Describe Darwin's theory of natural selection and origin of species and discuss about the criticism.

### **Human Health and Diseases**

1. Define Immunity? Explain Innate immunity.
2. Define Immunity? Explain acquired Immunity.
3. What is adolescence? Discuss the common problems of adolescence.
4. Mention the factors causing cancer. Add a note on diagnosis and prevention of cancer.
5. What are pathogens? Classify diseases and give a note on this.
6. Describe the symptoms, diagnosis, treatment and control of malaria.
7. Give the symptoms, infection, prevention and control of typhoid.

### **Biotechnology – principles and Processes**

1. Describe the mechanism of recombinant DNA technology.

### **Biodiversity and Its Conservation**

1. What is biodiversity? Explain its importance and loss of biodiversity.
2. Define biodiversity and its types and add a note on biodiversity conservation.

### **Short Notes**

1. Implantation
2. Parturition
3. Menstrual Cycle
4. Birth Control
5. STD
6. Infertility
7. Free martin
8. Sex reversal
9. Genetic drift
10. Hardy – weinberg's principle
11. Variation
12. Adaptive radiation
13. Origin of life
14. Vaccines
15. AIDS
16. Dengue
17. Antigen antibody interaction
18. Genetic engineering
19. Bt crops

- 20. Red data book
- 21. Ramsar sites
- 22. Sacred groves

\*\*\*