

III Revision

12th Standard

Date : 20-Feb-23

Reg.No. : **ZOOLOGY**

Exam Time : 03:00:00 Hrs

Total Marks : 70

PART-I

15 x 1 = 15

Choose the correct answer:

- 1) The glandular accessory organ which produces the largest proportion of semen is
(a) Seminal vesicle (b) Bulbourethral gland (c) Prostate gland (d) Mucous gland
- 2) The male sex hormone testosterone is secreted from
(a) Sertoli cells (b) Leydig cell (c) Epididymis (d) Prostate gland
- 3) Patau's syndrome is also referred to as
(a) 13-Trisomy (b) 18-Trisomy (c) 21-Trisomy (d) None of these
- 4) What is the basis for the difference in the synthesis of the leading and lagging strand of DNA molecules?
(a) Origin of replication occurs only at the 5' end of the molecules
(b) DNA ligase works only in the 3' → 5' direction
(c) DNA polymerase can join new nucleotides only to the 3' end of the growing strand.
(d) Helicases and single-strand binding proteins that work at the 5' end
- 5) The wings of birds and butterflies is an example of
(a) Adaptive radiation (b) convergent evolution (c) divergent evolution (d) variation
- 6) Cyclosporin - A is an immunosuppressive drug produced from _____
(a) Aspergillus niger (b) Monascus purpureus (c) Penicillium notatum
(d) Trichoderma polysporum
- 7) Which one of the following statements is true regarding DNA polymerase used in PCR?
(a) It is used to ligate introduced DNA in recipient cells (b) It serves as a selectable marker
(c) It is isolated from a Virus (d) It remains active at a high temperature
- 8) Conservation of biodiversity within their natural habitat is
(a) In situ conservation (b) Ex situ conservation (c) In vivo conservation (d) In vitro conservation
- 9) Which of the following forests is known as the lungs of the planet earth?
(a) Tundra forest (b) Rain forest of north east India (c) Taiga forest (d) Amazon rain forest
- 10) Right to Clean Water is a fundamental right, under the Indian Constitution
(a) Article 12 (b) Article 21 (c) Article 31 (d) Article 41
- 11) Which one of the following is not a correct pair?
(a) African sleeping sickness - Tsetse fly (b) Amoebiasis - House fly (c) Kala-azar - Sand fly
(d) Malaria - Aedes mosquito
- 12) Which of the following is not involved in nitrogen fixation?
(a) Pseudomonas (b) Azotobacter (c) Anabaena (d) Nostoc
- 13) Kaziranga national park is famous for
(a) tiger (b) musk deer (c) elephant (d) rhinoceros
- 14) Which type of parthenogenesis only females are produced?
(a) Arrhenotoky (b) Amphitoky (c) Thelytoky (d) Both (a) and (b)
- 15) The _____ glands in human female are homologous to the prostate gland in male.
(a) Bartholin's glands (b) Skene's glands (c) mammary glands (d) Cowper's gland

PART-II

6x 2 = 12

Answer any SIX of the following questions: Q.no.24 is compulsory

- 16) Mention the differences between spermiogenesis and spermatogenesis
- 17) Draw a labeled sketch of a spermatozoan.

- 18) What are interferons? Mention their role.
- 19) Define pedigree and pedigree analysis.
- 20) What are the most important causes for biodiversity loss?
- 21) Name the types of recombinant vaccines.
- 22) Name the active chemical found in the medicinal plant Rauwolfia vomitoria. What type of diversity it belongs to?
- 23) Explain the different steps involved during primary treatment Phase of sewage.
- 24) Define fossilization and mention its types.

PART-III

6x3=18

Answer any SIX of the following questions: Q.no.33 is compulsory

- 25) What is a Paedogenesis?
- 26) What are all the future challenges of HGP?
- 27) The unicellular organisms which reproduce by binary fission are considered immortal. Justify
- 28) Name the different types of twins formed.
- 29) How "Rosie" differs from normal cow? Explain.
- 30) Draw a sketch to show J and S shaped growth form of a population.
- 31) Why do we find a decrease in biodiversity distribution, if we move from the tropics towards the poles?
- 32) What is Biomagnification? Write about Biomagnification of DDT.
- 33) Write about three way of control and management of nuclear wastes.

PART-IV

5x5=25

Answer all questions:

- 34) a) What is binary fission? What are all the different types of binary fission? Explain.
(OR)
b) Explain the various phases of the menstrual cycle.
- 35) a) Discuss briefly the following :
a. Catalytic converter
b. Ecosan toilets
(OR)
b) List any five viral diseases, their causative agents, site of infection, mode of transmission and symptoms
- 36) a) Describe the stages of Sewage treatment process
(OR)
b) List the adaptations of aquatic animals.
- 37) a) Fingerprinting technique is inevitable in the detection of criminal activities. Explain how?
(OR)
b) What is colour Blindness? How X-linked gene inherited in the marriage between hemizygous recessive male and normal visioned woman?
- 38) a) Discuss the role of an individual to reduce environmental pollution.
(OR)
b) Mention the advantages (3) and disadvantages of cloning (3).
