

Vivekananda Vidhyashram Matric Hr. Sec School

Tirunelveli

Class: 12 STD

Pre-Half Yearly Test -2024

ZOOLOGY

Total marks 100

A. Choose the best answer from following Questions:

20 X 1 = 20

1. Painful menstruation is termed as

- a. Dysmenorrhoea b. Menorrhagia c. Amenorrhoea d. Oligomenorrhoea

2. Mammalian egg is

- a. Mesolecithal and non cleidoic b. Microlecithal and non cleidoic
c. Alecithal and non cleidoic d. Alecithal and cleidoic

3. The total number of nitrogenous bases in human genome is estimated to be about

- a) 3.5 million b) 35000 c) 35 million d) 3.1 billion

4. Meselson and Stahl's experiment proved

- (a) Transduction (b) Transformation (c) DNA is the genetic material
(d) Semi-conservative nature of DNA replication

5. Which of the following is an r-species

- a) Human b) Insects c) Rhinoceros d) Whale

6. Some organisms are able to maintain homeostasis by physical means...

- a) Conform b) Regulate c) Migrate d) Suspend

7. Identify the gland which is homologous to the Cowper's glands of male.

- (a) Bartholin's gland (b) Bulbourethral gland (c) Prostate gland (d) Skene's gland

8. Identify the proper sequence in increasing order of population

- (a) Species → Population → Community → biome
(b) Population → Community → Species → biome
(c) Biome → Species → Community → Population
(d) Community → Population → Biome → Species

9. Given below are the extra embryonic membranes of which identify the outermost membrane.

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

10. In embryo development of human beings, how long does it takes for a zygote to convert into morula?
- (a) 24hrs (b) 36hrs (c) 48hrs (d) 72hrs
11. Capping of mRNA occurs using
- (a) Poly A residues (b) Methyl guanosine triphosphate
(c) Deoxy ribonucleotide triphosphate (d) Ribonucleotide triphosphate
12. The cluster of genes with related function is called
- (a) Cistron (b) Operon (c) Muton (d) Recon
13. Which of the following antibiotic inhibits the interaction between tRNA and mRNA?
- (a) Neomycin (b) Streptomycin (c) Tetracycline (d) Chloramphenicol
14. SNP stands for
- (a) Single nucleotide Polymorphism (b) Single Nucleoside Polypeptide
(c) Single nucleotide Polymorphism (d) Single nucleotide polymer
15. The first transgenic clone of sheep was called as
- (a) Rosie (b) Dolly (c) Sameera (d) Joel
16. Which is the first synthetic vaccine produced?
- (a) Polio Vaccine (b) Hepatitis B Vaccine
(c) BCG Vaccine (d) MMR Vaccine
17. Identify those proper sequence of ELISA testing.
- (a) Coating → Blocking → Detection → Read out
(b) Detection → Read out → Coating → Blocking
(c) Read out → Coating → Detection → Blocking
(d) Blocking → Detection → Read out → Coating
18. Which is not a feature of Tundra?
- (a) Large population oscillation (b) Short season of growth and reproduction
(c) Low biotic diversity (d) Extremely hot climate
19. Locomotary speed of an organism changes due to light. This phenomenon is referred as
- (a) Photonasty (b) Photokinesis (c) Phototropism (d) Phototaxis
20. The study dealing with animal behaviour is called as

- (a) Euthenics (b) Ethology (c) Ecology (d) Pedogenesis

B. Answer any TEN the following questions:

Q.No 29 Compulsory

10 X 2 = 20

21. Draw a labelled sketch of spermatozoa?
22. "Let-Down" reflex-Define
23. Draw the Schematic structure of a transcription unit.
24. Define "Pharmacogenomics"
25. What is nucleosome?
26. Write short notes on Bio piracy?
27. What are DNA vaccines?
28. What are transgenic animals? Give examples
29. What is Multipotency?
30. What is Ethology?
31. Define "Photo taxis"
32. Write short notes on Allen's rule
33. What are the Aquatic biomes of earth?

C. Answer any TEN the following questions:

Q.No 41 Compulsory

10 X 3 = 30

34. What is colostrum? Write its significance
35. One gene-one enzyme hypothesis
36. Write short notes on POLY CYSTIC OVARY SYNDROME (PCOS)
37. List out Application of DNA finger printing
38. State any three goals of the human genome project
39. What are possible risks of GMOs?
40. What are stem cells? Explain its role in the field of medicine
41. Write short notes on Geographical indication (GI)?
42. What are the criteria's must be satisfied for patenting?
43. List out any three Essential properties of water
44. What are the major functions of soil?

45. What is hibernation and aestivation with examples?

46. State Rules on Van't Hoff.

D. Answer the following questions:

6 X 5 =30

47. Explain the various phases of the menstrual cycle. (or)

Explain the various types of menstrual disorders

48. Give in detail about Chemistry of Nucleic Acids (or)

Describe Properties of genetic material (DNA & RNA)

49. Explain about Enzymes and mechanism of replication (or)

Describe Meselson and Stahl experiment to support semiconservative mode of DNA replication

50. Detailed account on Process of transcription in eukaryotes (or)

Enumerate salient features of genetic code

51. Explain how recombinant Insulin can be produced (or)

What is PCR (Polymerase Chain Reaction) and what are steps are involved in PCR with detailed explanation

52. List out Adaptations of aquatic animals (or)

Give an account of population regulations