

**GOVT. PUBLIC QUESTION PAPER – MARCH 2025
HIGHER SECONDARY FIRST YEAR - ZOOLOGY**

Time allowed: 3.00 Hours**Maximum Marks: 70**

PART – I

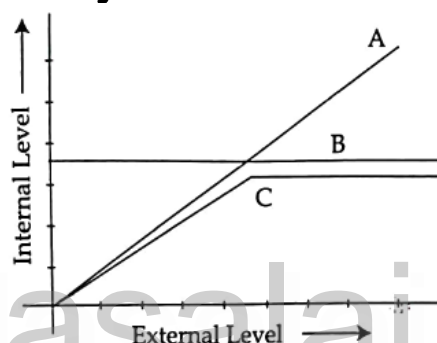
Note : (i) Answer all the questions. 15X1=15
(ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- 1. A person is injured and got swelling. The swelling, due to the infection of tissue is an example of:**
(a) Phagocytosis (b) Mechanical barrier
(c) Inflammation (d) Physiological barrier
- 2. The first codon to be deciphered was which codes for**
(a) UUU, Phenylalanine (b) AAA, Proline
(c) TTT, Arginine (d) GGG, Alanine
- 3. Find out the wrongly matched pair.**
(a) Klinefelter's Syndrome - XXY Female
(b) Down's Syndrome - Trisomy-21
(c) Turner's Syndrome - XO Female
(d) Patau's Syndrome - Trisomy-13
- 4. The Neanderthal man had the brain capacity of :**
(a) 900 cc (b) 650-800 cc
(c) 1400 cc (d) 1200 cc
- 5. Which one of the following groups includes sexually transmitted diseases caused by bacteria only?**
(a) Syphilis, gonorrhoea and trichomoniasis
(b) Syphilis, gonorrhoea and candidiasis
(c) Syphilis, trichomoniasis and pediculosis
(d) Syphilis, chlamydiasis and gonorrhea
- 6. ELISA is mainly used for:**
(a) Selecting animals having desired traits
(b) Detection of mutations
(c) Selecting plants having desired traits
(d) Detection of pathogens
- 7. The most important hormone in initiating and maintaining lactation after birth is:**
(a) Prolactin (b) Oestrogen
(c) Oxytocin (d) FSH
- 8. Assertion: The Environmental conditions of the Tropics are**

favourable for speciation and diversity of organisms.

Reason: The climate seasons, temperature, humidity and photo period are more or less stable and congenial,

- (a) Assertion is true, but Reason is false.
 (b) Both Assertion and Reason are true and Reason explains Assertion correctly
 (c) Both Assertion and Reason are false
 (d) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
9. The figure given below is a diagrammatic representation of response of organisms to abiotic factors. What do A, B and C represent respectively ?



	A	B	C
(a)	Partial Regulator	Regulator	Conformer
(b)	Conformer	Regulator	Partial Regulator
(c)	Regulator	Conformer	Partial Regulator
(d)	Regulator	Partial Regulator	Conformer

10. The mode of sexual reproduction in bacteria is by:
 (a) Conjugation (b) Formation of gametes
 (c) Zoospore formation (d) Endospore formation
11. The headquarters of the National Biodiversity Authority is situated in
 (a) Delhi (b) Mumbai
 (c) Kolkata (d) Chennai
12. The clusters of gene with related functions are called as
 (a) Recons (b) Mutons
 (c) Operons (d) Cistrons

13. Which of the following micro-organisms is used for production of citric acid in Industries?
(a) *Aspergillus niger* (b) *Lactobacillus bulgaris*
(c) *Rhizopus nigricans* (d) *Penicillium citrinum*
14. The 'thickness of Stratospheric Ozone layer is measured in:
(a) Melson units (b) Sieverts units
(c) Beaufort scale (d) Dobson units
15. Haemozoin is:
(a) A toxin from *Plasmodium* species
(b) A precursor of haemoglobin
(c) A toxin from *Haemophilus* species
(d) A toxin from *Streptococcus*

PART – II

Note: Answer any six questions. Question No. 24 is compulsory.

6X2=12

16. What is ectopic pregnancy ?
17. Draw and mention the parts of a spermatozoan.
18. Give any two applications of DNA finger printing.
19. List out the major gases seems to be found in the primitive earth.
20. Rearrange the descent in burran evolution.
Australopithecus ->Homo erectus ->Homo sapiens->
Ramapithecus-> Home habila
21. How does Saliva act in body defence?
22. Give any two bioactive molecules produced by microbes and state their uses
23. What is Acclimatisation?
24. Differentiate Natalty and Mortality.

PART – III

Note : Answer any six questions. Question No. 33 is compulsory. 6X3=18

25. Differentiate Fission and Fragmentation with suitable examples
26. Give the expansion for the following
(1) ZIFT (2) ICSI (3) IUT
27. What is criss-cross inheritance? Give example
28. If the coding sequence in a transcription unit is written as follows
5' TGCATGCATGCATGCATGCATGC 3'
Write down the nucleotide sequence of mRNA.
29. Complete the following table.

Diseases	Causative Agent	Site of Infections
Mumps		
Chicken Pox		
Dengue Fever		

30. What is bioremediation? Mention their types.
31. Gene Therapy is an attempt to correct a Genetic defect by providing a normal pose into the individual. By this the function can be restored.
An alternate method could be to provide gene product known as enzyme replacement therapy. which would also restore the function.
Which in your opinion is a better uption?
Give reasons for your answer.
32. How many HOTSPOTS are there in INDIA ? Name them.
33. What is meant by agrochemicals? Mention any 2 (Two) effects of over usage of agrochemicals.

PART –IV

Note: Answer all the questions.

5X5=25

34. (a) Explain the structure of the Human ovary.
OR
(b) Explain the genetic basis of ABO Blood grouping in man.
35. (a) Write about incompatibility of Rh factor and how it can be prevented ?
OR
(b) Explain the three level of impact of extinction of species.
36. (a) Mention any five salient features of Human Genome Project.
OR
(b) Suggest some ways to prevent drug and alcohol abuse.
37. (a) Explain the structure of immunoglobulin with suitable diagram.
OR
(b) List the adaptations seen in terrestrial animals.
38. (a) Differentiate between r-selected and k-selected species.
OR
(b) Write short notes on:
(i) Protected areas (ii) Wild life sanctuaries (iii) WWF