



APSC SOIL CONSERVATION RANGER 2022 ZOOLOGY OPTIONAL PAPER
TREND ANALYSIS

- 1. Animal Kingdom & Invertebrate Zoology** Porifera, Coelenterata, Echinodermata, Mollusca, Annelida, Insects — Questions 4, 5, 47, 59, 80, 81, 82, 97, 98, 99 **Count: ~10 questions**
- 2. Parasitology & Infectious Diseases** Plasmodium, Fasciola, Wuchereria, Entamoeba, haemozoin — Questions 3, 6, 7, 78 **Count: ~4 questions**
- 3. Ecology & Environmental Biology** Population growth, biodiversity indices, ecotone, succession, biosphere reserves, forests — Questions 8, 9, 10, 79, 83, 84, 90, 95, 96 **Count: ~9 questions**
- 4. Biochemistry** Lipids, proteins, enzymes, carbohydrates, metabolic pathways — Questions 11, 12, 13, 14, 15, 16, 53, 54, 55, 56, 62 **Count: ~11 questions**
- 5. Cell Biology & Molecular Biology** Cell organelles, cell cycle, DNA replication, transcription, translation, gene expression — Questions 21, 22, 25, 26, 27, 28, 29, 30, 31, 60, 61, 63, 77 **Count: ~13 questions**
- 6. Genetics** Haemophilia, linkage, sex determination, crossing over, meiosis, chromosome aberrations, Hardy-Weinberg, extra-nuclear inheritance — Questions 1, 32, 33, 34, 35, 42, 64, 65, 88, 100 **Count: ~10 questions**
- 7. Physiology (Human & Animal)** Digestion, respiration, excretion, blood, hearing, vision, nerve control, muscle — Questions 17, 18, 19, 20, 48, 53, 57, 67, 72, 73, 74, 75, 76, 85, 87, 91, 92, 93, 94 **Count: ~19 questions**
- 8. Reproductive Biology & Embryology** Corpus luteum, spermatogenesis, cleavage,



APSC SOIL CONSERVATION RANGER 2022 ZOOLOGY OPTIONAL PAPER
TREND ANALYSIS

gastrulation, extra-embryonic membranes, acrosome — Questions 2, 36, 37, 38, 39, 49, 68, 69, 70, 75, 86 **Count: ~11 questions**

9. Evolution Miller-Urey, Hardy-Weinberg, human evolution, allopatric speciation, adaptive radiation, fossil record — Questions 40, 41, 42, 43, 44, 84, 89, 95 **Count: ~8 questions**

10. Vertebrate Zoology Aves, frog, vertebrate characteristics, true fish — Questions 50, 51, 52, 58, 66, 67, 80, 99 **Count: ~8 questions**

11. Microbiology Mycoplasma, prions, mad cow disease — Questions 23, 24 **Count: ~2 questions**

Summary Table

Topic	No. of Questions
Physiology (Human & Animal)	19
Cell Biology & Molecular Biology	13
Biochemistry	11
Reproductive Biology & Embryology	11
Animal Kingdom & Invertebrate Zoology	10
Genetics	10
Ecology & Environmental Biology	9
Evolution	8
Vertebrate Zoology	8
Parasitology & Infectious Diseases	4
Microbiology	2
Total	~100

Physiology dominates at ~19%, followed by Cell/Molecular Biology, Biochemistry, and Embryology. The paper has broad and fairly uniform coverage across classical zoology topics with a noticeable applied-biology orientation suited to a Soil Conservation Ranger role.