

NWFP, PUBLIC SERVICE COMMISSION, PESHAWAR.

COMPETITIVE EXAMINATION FOR PROVINCIAL MANAGEMENT SERVICE, 2008.

ZOOLOGY, PAPER-I

Time Allowed: 03 Hours

Max: Marks:100

**Note:** Attempt only FIVE questions selecting THREE questions from PART I and TWO questions from PART II. All questions carry equal marks.

SECTION-I

- Q.1. Give an account of polymorphism in coelenterates and describe the economic importance of corals and coral reefs. 20
- Q.2. Compare the contrasting characteristics of general organization in Annelids with those of other higher invertebrates. Highlight the medical importance of leeches. 20
- Q.3. Describe the various feeding mechanisms in Arthropods and discuss the importance of the insects whose feeding behaviour cause diseases and are of medical importance. 20
- Q.4. Discuss the importance of Nematodes in medicine and agriculture. How the parasitic adaptation of Nematode is different from those of platyhelminthes? 20
- Q.5. Describe the specific characteristics of skeleton in phyla of Porifera, Mollusca and Echinodermata, pointing out the nature, locations and the functions in each group. 20

SECTION-II

- Q.6. Give an account of the specific characteristics of lower chordates. Discuss how each of the character gradually developed in the vertebrates. 20
- Q.7. Reptiles and the birds in vertebrates have adapted to true terrestrial mode of life and have several adaptations to live in this environment. Give a detailed description of all these adaptations specifically referring to different systems e.g. integumentary, respiratory, excretory systems. 20
- Q.8. Give an illustrative description of the mammalian brain. Mention the function of each part of the brain. Also point out which part shows the advancement of its function compare to lower vertebrates. 20
- Q.9. Describe the embryonic membranes in avian egg and mammalian embryo. What are the roles of these membranes in the development process of birds and mammals? Why is the placenta specific to mammals? 20