



PUNJAB PUBLIC SERVICE COMMISSION
COMBINED COMPETITIVE EXAMINATION
FOR RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE, ETC -2021
CASE NO. 3C2022

SUBJECT: ZOOLOGY (PAPER-I)

TIME ALLOWED: THREE HOURS

MAXIMUM MARKS: 100

NOTE:

- i. All the parts (if any) of each Question must be attempted at one place instead of at different places.
- ii. Write Q. No. in the Answer Book in accordance with Q. No. in the Q. Paper.
- iii. No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
- iv. Extra attempt of any question or any part of the question will not be considered.

NOTE: Attempt FIVE Questions in all. Select at least TWO Questions from each Section. Attempt in Urdu or English.

SECTION-I

- Q.No.1.** (a) What are the different modes of locomotion in Protozoa?
(b) Discuss in detail the shell in different groups of Molluscs.
(10+10=20 Marks)
- Q.No.2.** (a) Describe the general characteristics of phylum Aschelminthes.
(b) Discuss different types of reproduction found in Porifera.
(10+10=20 Marks)
- Q.No.3.** (a) Explain the water vascular system in Echinodermata.
(b) Write note on larva of various classes of Arthropoda.
(10+10=20 Marks)
- Q.No.4.** Write short note on any FOUR of the following: (4 x 5 = 20 Marks)
a. Tagmatization b. Metamorphosis c. Nematocysts
d. Polymorphism e. Body plan of triploblastic acoelomate

SECTION-II

- Q.No.5.** (a) Write a detailed note on earliest known vertebrate.
(b) Discuss the adaptations in external structure and locomotion in mammals.
(10+10=20 Marks)
- Q.No.6.** (a) What adaptations of birds promote endothermy and flight? Why is endothermy important for birds?
(b) Explain in detail the causes of evolution and extinction of dinosaurs.
(10+10=20 Marks)
- Q.No.7.** (a) Discuss the origin and evolution of mammals tracing their synapsid lineage.
(b) Describe the process of excretion and osmoregulation in amphibians.
(10+10=20 Marks)
- Q.No.8.** Write short note on any FOUR of the following: (4x5=20 Marks)
a. Feathers b. Migration of birds c. Endothermy
d. Specialized teeth in mammals e. Evolution of jaw in vertebrates