



PUNJAB PUBLIC SERVICE COMMISSION
COMBINED COMPETITIVE EXAMINATION
FOR RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE, ETC -2022
CASE NO. 2C2023

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) How protozoans maintain homeostasis?
(b) Discuss symbiotic life style in protozoans. **(10+10=20 Marks)**
- Q.No.2** Describe various forms of canal systems and its significance in Porifera. **(20 Marks)**
- Q.No.3** Explain evolutionary relationship of three classes of Annelida in light of traditional and recent cladistics interpretation. **(20 Marks)**
- Q.No.4** (a) What are the different modifications of foot in Mollusca?
(b) What is torsion? What are its adaptive advantages in gastropods?
(10+10=20 Marks)

SECTION-II

- Q.No.5** (a) Discuss the structure and function of swim bladder in fishes.
(b) Describe the process of excretion and osmoregulation in fishes.
(10+10=20 Marks)
- Q.No.6** Give an account on reproduction in Amphibia and discuss importance of courtship behavior. **(20 Marks)**
- Q.No.7** (a) What are different types of feathers in birds?
(b) What adaptations of birds promote endothermy and flight?
(10+10=20 Marks)
- Q.No.8** Describe in detail the poisonous apparatus and biting mechanism of poisonous snakes. **(20 Marks)**