



PUNJAB PUBLIC SERVICE COMMISSION
COMBINED COMPETITIVE EXAMINATION
FOR RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE -2020

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.

Attempt FIVE Questions at least TWO Questions from each Section. Attempt in Urdu or English.

SECTION-I

- Q. No. 1** a) Discuss various types of reproduction in protozoans.
b) Describe sponge morphology and functions of its various cell types.
(10+10=20 Marks)
- Q. No. 2** a) Write a note on feeding appendages in arthropods.
b) Give an account on parasitic nematodes of man.
(10+10=20 Marks)
- Q. No. 3** a) What is metamerism? Discuss its advantages in annelids.
b) Explain reproduction and larval development in echinoderms.
(10+10=20 Marks)
- Q. No. 4** Write short note on any **FOUR** of the following: (4×5=20 Marks)
- a. Torsion in gastropods
 - b. Social insects
 - c. Differentiate between a polyp and medusa
 - d. Pseudocoelomate body plan
 - e. Parasitic adaptations in Liver Fluke (*Fasciola hepatica*)

SECTION-II

- Q. No. 5** a) Explain diagnostic characters of chordates.
b) Describe excretion and osmoregulation in fishes.
(10+10=20 Marks)
- Q. No. 6** a) Discuss features of reptiles that distinguish them from amphibians.
b) Give a detailed account on feathers in birds.
(10+10=20 Marks)
- Q. No. 7** a) Describe reproduction and development in mammals.
b) Explain early evolution of amphibians as the first land vertebrates.
(10+10=20 Marks)
- Q. No. 8** Write short note on any **FOUR** of the following: (4×5=20 Marks)
- a. Swim bladder
 - b. Aerial adaptations in birds
 - c. Diversity among mammals
 - d. Evolution of vertebrate heart
 - e. Reproduction and development in amphibians