



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

**SUBJECT: VETERINARY SCIENCE (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. Attempt in Urdu or English.

- Q.No.1** Climate change is adversely affecting the livestock production. Describe in detail the physiological changes that occur in farm animals under heat stress for thermoregulation. (20 Marks)
- Q.No.2** The red blood cells are biophysically, biochemically, and cellularly different in different species as well as within species at different levels of development. Discuss the reasons for this phenomenon at biochemical, biophysical, and molecular levels within and between the species. (20 Marks)
- Q.No.3** Describe the concept of antimicrobial resistance and its importance. Explain how antimicrobial resistance develops. Discuss in detail the factors that accelerate the emergence and spread of antibiotic resistance. (20 Marks)
- Q.No.4** While practising in the veterinary hospital you are presented with a suspected case of poisoning in a cow. How will you investigate and what are the possible drugs to be used in such case to save the animal life? (20 Marks)
- Q.No.5** Blood sucking parasites are one of the major causes of loss in livestock sector in Pakistan. What are the major blood sucking parasites in sheep and goat and how a veterinarian can help in its diagnosis, treatment and prevention? (20 Marks)
- Q.No.6** What is biorisk management? Explain laboratory biosafety and biosecurity. Discuss in detail the current status of laboratory biosafety and biosecurity in veterinary research facilities in Pakistan. (20 Marks)
- Q.No.7** Many times government veterinarians are also assigned the task of meat inspection in slaughterhouses and butchers' shops. Explain the laws governing meat inspection in Pakistan. Moreover, discuss how to distinguish meat from different animal species. (20 Marks)
- Q.No.8** Brucellosis is one of the reproductive disorders affecting the livestock economy and also has public health implications. Taking into account the current status of brucellosis, develop a comprehensive program for its control and eradication in the country. (20 Marks)