



PUNJAB PUBLIC SERVICE COMMISSION

COMBINED COMPETITIVE EXAMINATION 2017 **FOR RECRUITMENT TO THE POSTS OF** **PROVINCIAL MANAGEMENT SERVICE, ETC.**

SUBJECT: VETERINARY SCIENCES (PAPER-II)

TIME ALLOWED: THREE HOURS

MAXIMUM MARKS: 100

NOTE: **Attempt Any FIVE Questions in All. Attempt in Urdu or English.**

Q No. 1: Milk adulteration has become a major issue in big cities of Pakistan. Give some details of such adulterants. How can we test them and what measures can be adopted to minimize this problems?

*Oil, Water, Formalin, Preservatives, Urea
Organic acids.*

(20 Marks)

Q No. 2: Modern technologies are assisting in animal breeding and genetics practices throughout the world. Give brief details of modern techniques to improve the productivity of animals by selecting high performing animals.

Sex semen, AI, CIDR, Embryo Transfer, Cloning

(20 Marks)

Q No. 3: There is a large number of non-descript cattle in Pakistan. How the production of these animals can be improved in successive generations? Come up with a comprehensive plan.

(20 Marks)

Q No. 4: Discuss quality control processes in animal feed processing. Describe animal feed stuff laws and regulations implemented in the Punjab province.

(20 Marks)

Q No. 5: What are the recent developments in dairy industry of Pakistan? Discuss major constraints and challenges to the developing dairy industry in the country? Suggest appropriate measures to overcome these constraints/challenges.

(20 Marks)

Q No. 6: What are the factors affecting nutritive value of feeds. Enlist possible minerals and vitamins deficiencies of cattle and buffaloes. Select two of the enlisted deficiencies, and discuss their causes, pathophysiology, clinical signs and remedial measures.

(20 Marks)

Q No. 7: What are different methods of feeding urea to ruminants? Mention symptoms of urea toxicity. Also state being a nutritionist how you will combat urea toxicity issues?

(20 Marks)

Q No. 8: What are probiotics? Describe clearly how probiotics act as replacement of antibiotics?

(20 Marks)