

## ANIMAL HUSBANDRY AND VETERINARY SCIENCE (Paper I)

**Time Allowed : Three Hours**

**Maximum Marks : 300**

### QUESTION PAPER SPECIFIC INSTRUCTIONS

*(Please read each of the following instructions carefully before attempting questions)*

There are EIGHT questions divided in two Sections.

Candidate has to attempt FIVE questions in all.

Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.

All questions carry equal marks.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

### SECTION 'A'

1. Write short notes on any three of the following in about 200 words each:
  - (a) Internal environment of rumen
  - (b) Thermogenic effect of feed
  - (c) Factors influencing energy requirement of growing ruminants
  - (d) Holding up of milk
2. Inadequate nutrition has been the single most important factor responsible for poor milk yield of dairy animals in India. What is the status of feed availability, in terms of quantity and quality, for dairy animals in India? Suggest measures to improve the same, keeping in view the economy and human demand factor.
3. Discuss the requirements of energy, protein, minerals, vitamins and water of a dairy cow for milk production and during pregnancy.
4. Discuss the collection, dilution, cryopreservation and insemination of semen for artificial insemination in cattle, swine and poultry.

### SECTION 'B'

5. Write short notes on any three of the following in about 200 words each:
  - (a) Gene and its structure
  - (b) Recombinant DNA technology
  - (c) Population versus individual
  - (d) Feeding schedule for a 450 kg buffalo, producing 10 kg milk with 6.5% fat and 15.5% total solids in 6th month of pregnancy.
6. What is variance? Discuss the sources of variance. How do the different components of variance affect our choice of breeding and selection methods?
7. Discuss the capital, land, buildings, equipment and manpower required for starting a dairy farm with 100 adult cows. How will you ensure green fodder supply to the above farm throughout the year?
8.
  - (a) Compare dairying under mixed farming and dairying under specialized farming. Which one of these is best suited to an average Indian farmer and why?
  - (b) What is herd recording?