

ANIMAL HUSBANDRY AND VETERINARY SCIENCE

Paper I

0000044

Time Allowed : Three Hours

Maximum Marks : 200

QUESTION PAPER SPECIFIC INSTRUCTIONS

Please read each of the following instructions carefully before attempting questions.

There are **EIGHT** questions in all, out of which **FIVE** are to be attempted.

Question Nos. **1** and **5** are compulsory. Out of the remaining **SIX** questions, **THREE** are to be attempted selecting at least **ONE** question from each of the two **Sections A** and **B**.

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

Answers must be written in **ENGLISH** only.

Neat sketches may be drawn, wherever required.

SECTION 'A'

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| 1. | Write short notes on the following : | 8×5=40 |
| 1.(a) | Discuss the role of mammary glands in transferring food from mother to offsprings. | 8 |
| 1.(b) | Role of Embryo Transfer Technology techniques in cattle improvement in India. | 8 |
| 1.(c) | How does meiosis cell division occur? Illustrate its division diagrammatically. | 8 |
| 1.(d) | Write in brief calf feeding practices from first month of age to its maturity. | 8 |
| 1.(e) | What are the important traits influencing milk production in buffaloes? | 8 |
| 2.(a) | Explain the functioning of KAMDHENU PROJECT and how does it help in improving the milk production in the country? | 15 |
| 2.(b) | Elaborate the role of primary (village level) milk collection societies in the country and write about milk collection practices followed by them. | 15 |
| 2.(c) | Discuss the hormonal control of Oestrous Cycle in buffaloes. | 10 |

- 3.(a) Discuss the different types of milk recording systems at National level and explain the significance of milk recording at the dairy farm. 20
- 3.(b) What is the role of major hormones secreted by anterior pituitary and hypothalamus in relation to their function associated with mammary glands. 20
- 4.(a) Define balanced feed. What are the basic requirements for balancing feed for milk production in cattle? 15
- 4.(b) Discuss the major contributing factors for balancing the feed. 15
- 4.(c) Why silage is important for animals? 10

SECTION 'B'

5. Differentiate between the following : 8×5=40
- 5.(a) Systematic forces and Dispersive forces. 8
- 5.(b) Progeny testing and Pedigree selection. 8
- 5.(c) Species hybridization and Cross-breeding. 8
- 5.(d) Metabolizable energy and Digestible energy. 8
- 5.(e) Restricted feeding and Challenged feeding. 8
- 6.(a) Define semen. Enlist the freezing techniques used for freezing and storing bovine semen. Discuss briefly the widely used methods for freezing semen. 20
- 6.(b) Discuss the Artificial insemination practices followed in dairy cattles in India. 10
- 6.(c) Outline the importance of collection of semen in Artificial insemination program. 10
- 7.(a) Discuss genotype-environmental correlation and genotype-environment interaction in sheep production. 15
- 7.(b) What are the advantages of Mixed farming? 10
- 7.(c) What is specialized dairy farming? How does it differ from mixed and diversified farming? 15
- 8.(a) Enlist the reasons of balanced nutrition in poultry. Classify the poultry feed for different age-group of birds. 20
- 8.(b) Define the term heritability. Enlist the different methods of its estimation. Discuss any two methods in detail with their advantages. 20