

ANIMAL HUSBANDRY AND VETERINARY SCIENCE**Paper – I****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.*

*Questions no. **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.

Neat sketches may be drawn, wherever required.

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

SECTION A

Q1. Write short notes on the following :

- | | | |
|-----|---|---|
| (a) | Role of trace minerals in animal nutrition | 8 |
| (b) | Factors affecting pre- and post-natal growth of animals | 8 |
| (c) | Nutrient requirement for different stages of pigs | 8 |
| (d) | Semen preservation and its transportation | 8 |
| (e) | Mineral-Vitamin inter-relationship | 8 |

- Q2.** (a) Describe the role of vitamins in poultry feeding. 15
- (b) Discuss in detail the various factors and regulatory mechanisms affecting animal behaviour. 10
- (c) What are the different feeding standards for dairy cattle and buffaloes ? Explain the different measures of food energy. 15
- Q3.** (a) Describe the factors which affect the quality of meat. 10
- (b) Draw a well-labelled diagram of pituitary-hypothalamus relationship. Also discuss the origin and functions of hormones secreted from hypothalamus and pituitary. 15
- (c) Write down the advantages and disadvantages of artificial insemination. Briefly describe different techniques for artificial insemination in different species. 15
- Q4.** (a) Discuss the management practices to control the heat stress in dairy cattle during summer season. 10
- (b) Explain the mechanism of milk formation in the udder of cows. Describe milk ejection reflex with the help of a flow diagram. 10
- (c) Describe in detail the nutrient requirement of cattle and buffaloes in relation to their milk production. 10
- (d) Diagrammatically represent the reproductive system of a cow and discuss the functions of each part. 10

SECTION B

Q5. Write short notes on the following :

- (a) Gene frequency, genotype frequency and their relation with each other 8
- (b) Management of animals during flood 8
- (c) Factors affecting the efficiency of dairy animals 8
- (d) Rabbits as a source of meat and fur 8
- (e) Compare dominance and epistatic deviations with suitable examples. 8

- Q6. (a) Define and describe different types of mutations. 15
- (b) Describe the different stages of mitosis and meiosis. 15
- (c) What are the different types of deviation from Dihybrid Mendelian Ratio ? 10

- Q7. (a) What are the different factors involved in budgeting, cost of milk production and pricing policy of a commercial dairy farm ? 15
- (b) What are the similarities and differences between upgrading and cross-breeding in relation to genetic improvement in cattle ? 10
- (c) What is the method of construction of selection index ? What are the advantages of selection indices over other methods of selection ? 15

- Q8. (a) Discuss different systems of brooding in poultry. Explain the points to be considered during management of chicks in the brooder. 15
- (b) Describe the different techniques used by the dairy farmers for preservation of fodder. 10
- (c) What is the need of maintaining records in a dairy farm ? Briefly explain the records which might be used in the management of dairy animals. 15

