C–HENT–N–ZGURA

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.*

*Question 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 chronological 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 Answer Book 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

Q. 1. **Write short notes on the following in about 150 words each :** **8×5=40**

Q. 1(a) Oestrus cycle 8

Q. 1(b) Starch equivalent 8

Q. 1(c) Species hybridization 8

Q. 1(d) Colostrum feeding 8

Q. 1(e) Traits of economic importance in cattle 8

Q. 2(a) What is cold stress ? Discuss in brief the factors affecting an animal's ability to withstand. 15

Q. 2(b) Enumerate the key managemental factors to limit the effects of cold stress. 10

Q. 2(c) What is parturition ? Write in detail the hormonal control of parturition. 15

Q. 3(a) What are feed additives ? Give the classification of feed additives and discuss their usefulness in livestock and poultry feeding. 15

Q. 3(b) How do you classify minerals ? What general vital roles do they play in animal system ? 15

Q. 3(c) What is gross energy ? Give the schematic representation of partitioning of gross energy of feed in animal body. 10

Q. 4(a) Define selection. Discuss different methods of selection. Which method do you consider as best and why ? 20

Q. 4(b) What is genetic response ? Discuss the factors affecting genetic response. 10

Q. 4(c) Define intensity of selection. Enlist various factors determining the intensity of selection. 10

SECTION—B

Q. 5. **Compare and contrast between the following in about 150 words each :** **8×5=40**

Q. 5(a) Digestible energy and metabolizable energy. 8

Q. 5(b) Gross staggers and blind staggers. 8

Q. 5(c) Genetic environment interaction and genetic environment correlation. 8

Q. 5(d) Translocation and Inversion. 8

Q. 5(e) Genetic combining ability and specific combining ability. 8

Q. 6(a) How will you prepare to prevent mortality and morbidity in livestock during natural calamities and rehabilitation thereafter ? 20

Q. 6(b) Prepare a layout for model dairy farm with 10 lactating cows. How would it be different for 20 lactating goats ? 10

Q. 6(c) How can you improve reproductive efficiency of buffaloes at a commercial farm during summer season ? 10

Q. 7(a) What do you mean by 'feeding standards' ? Classify the feeding standards. Discuss in brief the present day feeding standards. 20

Q. 7(b) Write in brief the feeding of newborn calf from birth to 3 months age. 10

Q. 7(c) A feed contains 80% digestible organic matter and 2% digestible ether extract. Calculate the Total Digestible Nutrients (TDN) content of that feed. 10

Q. 8(a) Define 'Hardy-Weinberg Law'. Discuss the forces responsible for changing gene frequency. 15

Q. 8(b) Explain the 'Law of Independent assortment' in dihybrid crosses. How it has deviated from Mendelian Genetics ? 15

Q. 8(c) What are chromosomal aberrations ? Give the most common aberrations observed in animals. 10