

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.

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

Neat sketches may be drawn, wherever required.

SECTION A

Q1. Write short notes on the following :

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|-----|--|---|
| (a) | Significance, composition and physical forms of creep feed for piglets | 8 |
| (b) | Physiological functions of digestive organs of ewe | 8 |
| (c) | Factors affecting semen production in bulls | 8 |
| (d) | Metabolizable energy | 8 |
| (e) | Factors affecting vitamin requirements in animals | 8 |

- Q2.** (a) Describe the mechanisms of adaptation by which ruminants adapt to changing climate. 15
- (b) Describe the physiological functions, sources and requirements of calcium and phosphorus in animals. 15
- (c) Describe the significance and limitations of equalized paired feeding and purified diet method. 10
- Q3.** (a) Describe the factors affecting body conformation of sheep. 15
- (b) Discuss the concept of calorie-protein ratio in livestock and poultry rations. Write the recommended calorie-protein ratios for various types of chicken rations. 10+5=15
- (c) Describe the nutrient requirements and feeding of cows in different phases of lactation. 10
- Q4.** (a) Enumerate the accessory sex glands of buck. Describe the shape, size, location and physiological functions of seminal vesicle in buck. 10
- (b) Describe the steps for formulation of poultry broiler finisher feed. 15
- (c) Discuss the indirect in-vivo methods for determination of digestibility of feed in bulls. 15

SECTION B

Q5. Write short notes on the following :

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|-----|--|---|
| (a) | General combining ability and Specific combining ability | 8 |
| (b) | Prophase in mitosis and meiosis | 8 |
| (c) | Partitioning of variance in a population | 8 |
| (d) | Management of animals under flood condition | 8 |
| (e) | Socio-economic concepts of mutton production | 8 |

- Q6.**
- | | | |
|-----|--|----|
| (a) | Compare and contrast heritability and repeatability. | 10 |
| (b) | Describe the methods for estimation of repeatability. | 15 |
| (c) | Describe the new trends in commercial egg production in India. | 15 |

- Q7.**
- | | | |
|-----|---|----|
| (a) | Discuss the systematic and dispersive processes involved in change of gene frequencies of a population. | 15 |
| (b) | Briefly discuss the different mechanisms of deviations to Mendelian genetics, with examples. | 15 |
| (c) | Discuss the capital and land requirements for commercial dairy farming. | 10 |

- Q8.**
- | | | |
|------|---|----|
| (a) | Describe the various types of chromosomal aberrations. | 15 |
| (b) | Define herd recording. Describe the methods and significance of herd recording. | 10 |
| (c) | Describe the following : | |
| (i) | Estimation of cost of milk production | 8 |
| (ii) | Pricing policies of milk in India | 7 |

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