

**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) | Total digestible nutrients                             | 8 |
| (b) | Physiological functions of digestive organs of bullock | 8 |
| (c) | Behavioural adaptation of animals to climatic stress   | 8 |
| (d) | Role of para-probiotic in animal nutrition             | 8 |
| (e) | Energy ingredients in poultry rations                  | 8 |

- Q2.** (a) Describe the methods for assessment of protein quality for monogastric animals. 15
- (b) Describe the properties of an ideal semen dilutor. 15
- (c) Discuss the nutrients and their metabolism in relation to milk production in buffaloes. 10
- Q3.** (a) Describe the sources, physiological functions and deficiency symptoms of copper and zinc in sheep. 15
- (b) Describe the stages of prenatal and postnatal growth in animals. 15
- (c) Discuss the requirement of amino acids, proteins and fatty acids in swine ration. 10
- Q4.** (a) Describe the deep freezing techniques of caprine semen. 10
- (b) Describe the method for digestibility determination of maize fodder in cattle. 15
- (c) Describe the steps for formulation of broiler starter chick feed. 15

## SECTION B

**Q5.** Write short notes on the following :

- (a) Importance of genetic code in protein synthesis 8
- (b) Formulation of economic rations for goats 8
- (c) Coefficient of coincidence and Coefficient of interference 8
- (d) Present status of dairy farming in India 8
- (e) Significance of balance studies in animals 8

- Q6.**
- (a) Describe the strategic key points for starting a dairy farm and discuss the opportunities in dairy farming. 15
  - (b) Define the concept of path coefficient and explain its characteristics and applications. 15
  - (c) Describe in detail the merits and demerits of progeny testing. 10

- Q7.**
- (a) Discuss the feeding of sheep for wool production. 10
  - (b) Explain Genetic Polymorphism. Discuss in detail the importance of genetic diversity and its conservation. 20
  - (c) Discuss in detail the process of random genetic drift in small populations. 10

- Q8.**
- (a) Explain in detail the latest trends in feeding of young and adult dairy cattle and maintenance of feeding records. 15
  - (b) Define Genetic gain. Describe in detail the evaluation of genetic gains in various selection methods. 15
  - (c) Describe the strategies for efficient management of animals during natural calamities. 10

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