

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 :

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| (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 :

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|-----|--|---|
| (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

