

## 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 :**

**8×5=40**

- |     |   |   |
|-----|---|---|
| (a) | Resemblance between relatives                 | 8 |
| (b) | Hormonal control of mammary gland development | 8 |
| (c) | Starch equivalent                             | 8 |
| (d) | Biological value                              | 8 |
| (e) | Herd recording                                | 8 |

- Q2.** (a) What do you mean by feeding experiments ? How can digestibility of maize fodder be determined in bullocks ? 3+12=15
- (b) An adult sheep ate 2 kg berseem hay containing 90% dry matter and 12% crude protein and excreted 3 kg faeces containing 30% dry matter and 1.5% crude protein. Calculate the digestibility coefficient of dry matter and crude protein of berseem hay. 15
- (c) Write the deficiency symptoms of Vitamin E in poultry. 10
- Q3.** (a) What is grading-up ? Explain the advantages and limitations of grading-up in cattle. 20
- (b) Explain Mendel's law of independent assortment with the help of a checker board. 20
- Q4.** (a) Explain pre-natal and post-natal growth. How is the body weight gain estimated from body measurements ? Enumerate the factors affecting the growth of animals. 10+10+5=25
- (b) Discuss the functions of stomach and liver in ruminants. 15

## SECTION B

- Q5. Differentiate between the following :** **8×5=40**
- (a) Qualitative and Quantitative characters 8
  - (b) Crude protein and True protein 8
  - (c) Group feeding and Individual feeding 8
  - (d) Outcrossing and Top crossing 8
  - (e) Flushing and Fattening 8
- Q6.** (a) Enumerate the factors affecting the efficiency of a dairy cow. What is personnel management ? Write the functions of management. 10+5+5=20
- (b) Work out a cropping scheme and determine the land requirement for ensuring the supply of green fodder round the year for a herd of 50 cows and their followers. 20
- Q7.** (a) Discuss the feeding schedule for a buffalo calf from birth to 3 months age. 15
- (b) Write the interrelationships between minerals and vitamins. 15
- (c) What is calorie : protein ratio ? Write the energy and protein requirements of broilers as per BIS. 10
- Q8.** (a) What is heterosis ? Explain the genetic basis of heterosis. 15
- (b) Calculate the heterotic effect in  $F_1$  and  $F_2$  progenies considering the milk yield in 300 days of Sahiwal and Holstein-Friesian cows as 1600 kg and 5600 kg, respectively, and of their  $F_1$  crossbreeds as 3900 kg. 10
- (c) What do you mean by cross-breeding ? Discuss the various types of cross-breeding. Write the merits and demerits of cross-breeding. 3+6+6=15

