

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

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| 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

