

ANIMAL HUSBANDRY AND VETERINARY SCIENCE
(Paper I)

Time Allowed : Three Hours

Maximum Marks : 300

QUESTION PAPER SPECIFIC INSTRUCTIONS

(Please read each of the following instructions carefully before attempting questions)

There are EIGHT questions divided in two Sections.

Candidate has to attempt FIVE questions in all.

Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.

The number of marks carried by a question/part is indicated against it.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

SECTION 'A'

1. Write short notes on any three of the following in about 200 words each: **20×3=60**
- (a) Maintenance of Lactation in cows
 - (b) Sources, functions and requirement of Vitamin 'A' in cattle
 - (c) Factors affecting growth in buffaloes
 - (d) Production of Deep Frozen Semen in cattle
2. Discuss hormonal control of mammary gland development in heifer with suitable sketch/diagram. Describe the importance of early growth rate on mammary gland development. What are the factors responsible for milk ejection in cows? **60**
3. What do you understand by balanced ration? How do we calculate nutrient requirements for a cow at three years of age, pregnant for six months and yielding 10 kg of milk with 4.0% fat? Suggest different types of green fodder crops to be grown in hot-humid climate of the country. **60**
4. How do we estimate nutrient requirement for meat and egg production in 'chicken'? What is the difference between digestion of nutrients in chicken and pigs? **60**

SECTION 'B'

5. Write short notes on any three of the following in about 200 words each: **20×3=60**
- (a) Differentiating points between mitosis and meiosis
 - (b) Breeding for heterosis in chicken
 - (c) Feeding regimes for bullocks during work and resting periods
 - (d) Management of newly born calf
6. What do you understand by Hardy-Weinberg Law? Discuss different conditions to maintain Hardy-Weinberg equilibrium. Give a theoretical proof for Hardy-Weinberg Law. **60**
7. Discuss the methods of estimation of heritability. How does heritability differ from repeatability? Describe the method of testing preciseness of heritability. Uses of heritability may also be indicated. **60**
8. Discuss different methods of out breeding. What is the breeding policy for cattle being used in India? Write positive and negative points in relation to maintaining genetic diversity in **60**

cattle.