

IAS Mains Animal Husbandry and Veterinary Science 1994

Paper-I

Section A

1. Write short notes on any three of the following in about 200 words each:
 - a. Inter-relationship of calcium, phosphorus and Vitamin D
 - b. Factorial method of estimating energy requirement
 - c. Tris buffer diluent
 - d. Milk 'let-down' and 'holding-up'
2. Answer the following questions
 - a. Describe in brief the digestive system of cattle and compare it with that of pig, bringing out the basic differences in the two species.
 - b. What do you understand by rumination? Describe its process. Write a note on the contribution of rumen to the nutrition of the ruminant.
3. What measures are in vogue for evaluating energy value of feeds? Briefly define each. Discuss the usefulness of Total Digestible Nutrients and Net Energy as measures of feed energy for cattle under Indian conditions.
4. 'An animal's productivity is affected both directly and indirectly, by environmental factors.' Discuss the statement with reference to either milk production in cattle or wool growth in sheep. Briefly describe the methods of controlling climatic stress in one of the above species.

Section B

5. Write short notes on any three of the following in about 200 words each:
 - a. Essential features of practical and economical feeding of dairy cows
 - b. Distinguish between 'safe' and 'clean' milk
 - c. Management of pregnant dry does
 - d. Preparation and nutritive value of cultured milks
6. In adult ruminants VFA (volatile fatty acids) contributes approximately 70% of the total energy input. Discuss in detail the mechanisms through which Acetic, Propionic and Butyric acids are metabolised in ruminant body and the number of net ATP gained from each acid during metabolism.
7. Write a brief note on the animal feed resources of the country. Parts of the country are prone to drought. What strategy would you adopt for feeding of livestock under severe drought conditions so as to maintain the health of livestock?
8. Briefly describe the common systems of housing poultry. Discuss the basic requirements, merits and demerits of Deep Litter system of housing in a tropical country like India.