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I.F.S. EXAM-2015

वियोज्य DETACHABLE

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.

Question 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 answer book 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'

1. Write short notes on : 8×5=40
 - 1.(a) Impact of protein energy ratio in feed consumption and growth in poultry.
 - 1.(b) Digestive processes in stomach and small intestine of non ruminant animals.
 - 1.(c) Inter-relation between vitamin and mineral metabolism.
 - 1.(d) Role of trace minerals in animal metabolism.
 - 1.(e) Reproductive duct of female cow.
- 2.(a) List various feed components that can serve as source of energy in non-ruminant metabolism. How exactly energy is derived from these components? 15
- 2.(b) Why pigs have special nutritional requirement as compared to other livestock? Briefly describe the nutritional requirement of baby pigs. 10
- 2.(c) How the digestibility of nutritive value of dry roughages can be improved? What are the major constraints in digestibility of roughages? 15
- 3.(a) Why semen is considered as the most important component of animal breeding programme? How semen can best be utilized for cattle and buffalo improvement programmes in India. 20
- 3.(b) Why do animals become restless and aggressive sometimes? Discuss various physical and physiological factors responsible for these undesirable conditions. 20

- 4.(a) How are the starch and cellulose digested by ruminants ? What are the end-products of their digestion and how are these metabolized by the body ? 15
- 4.(b) The demand for lean meat is ever increasing worldwide. Using your knowledge of physiology and nutrition suggest ways for production of lean porcine meat. 15
- 4.(c) Draw a typical growth curve for a cow from the age of 0 to 5 years. Discuss the changes in growth pattern of different tissues during this period. 10

SECTION 'B'

5. Write short notes on the following : 8×5=40
- 5.(a) Inheritance of threshold characters.
- 5.(b) Uses and factors responsible for polymorphism.
- 5.(c) Feeding and management practices for calves.
- 5.(d) Advantages of restricted feeding of growing pullets.
- 5.(e) Factors affecting efficiency of dairy animals.
- 6.(a) Why the degree of resemblance is taken as the basis of heritability estimation ? Discuss the methods of estimation of heritability along with the merits and demerits and their precision. 25
- 6.(b) Which is more important, heredity or environment in the genetic improvement program of animals ? 15
- 7.(a) Why is phenotypic variation in animals important to a livestock breeder ? Discuss in detail the various components of variance along with their utility. 20
- 7.(b) How the mistakes occurring in mitosis or meiosis or in fertilization give rise to aberrant karyotypes ? 10
- 7.(c) How will you determine that a polygenic trait is influenced by additive genes or non-additive genes or by both ? 10
- 8.(a) Discuss the factors involved in differential cost of production of sheep, goat and pig. Explain an ideal farming system to be adopted for economical sheep and goat production. 15
- 8.(b) What are the major differences in the managerial practices of the crossbred and indigenous cows ? 10
- 8.(c) Discuss the emergencies for livestock encountered during the natural disasters. How the feed and water can be supplied regularly to animals in such situations ? 15