DFG-P-AHVS

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) Role of microbes in rumen fermentation *8*

(b) Factors affecting absorption of calcium *8*

(c) Environmental factors affecting animal behaviour *8*

(d) Hormonal control of milk ejection in buffalo *8*

(e) Inter-relationship between muscle composition and meat quality *8*

Q2. (a) What you mean by balanced ration and what are its characteristics ? How will you formulate the ration for lactating cattle and buffaloes ? *10+10=20*

(b) Give the feeding schedules for growing and finishing pigs. *10*

(c) Write about the protein and energy requirements for starters, growers and layers of white leghorn birds. *10*

Q3. (a) Describe the various systems of expressing energy values of feeds. Explain in detail about the importance of Total Digestible Nutrients (TDN) of a feedstuff. *10+10=20*

(b) Explain the roles of iron and zinc in animal nutrition. *10*

(c) What are the major constituents of semen extenders ? Discuss about commonly used semen extenders for dilution of semen. *10*

Q4. (a) Draw a labelled diagram of the digestive system of cow along with associative organs and their functions. *20*

(b) Describe the influence of external factors on growth and development of ruminants. *10*

(c) Explain various factors affecting survival and quality of spermatozoa during semen handling. *10*

SECTION B

Q5. Write short notes on the following : *8×5=40*

(a) Characteristics of genetic code *8*

(b) Problems encountered in the development of inbred lines *8*

(c) What are the necessities for developing synthetic breeds of animals and explain the stepwise procedure for formation of the same *8*

(d) Feeding habits of goats *8*

(e) Factors affecting egg size in poultry *8*

Q6. (a) Describe in brief the population and its various types. Give the contrasting differences between an individual and a population. *10+10=20*

(b) Explain the mechanism of sex determination in farm animals. *10*

(c) Explain the improved management practices for profitable pig production. *10*

Q7. (a) How is recombinant DNA technology different from conventional breeding ? Write in brief about the other two main technologies which form the primary basis of recombinant DNA technology. *8+12=20*

(b) What do you mean by selection differential and generation interval ? What determines their sizes ? *10*

(c) Write about the characteristics and practical application of path coefficients. *10*

Q8. (a) Discuss the essential factors to be considered while establishing a dairy farm. *15*

(b) Describe the management practices for maximum reproductive efficiency of buffaloes. *15*

(c) Explain the terms — Calf starter, Dry calf starter, Milk substitute and Milk replacer. Give a representative composition of Calf starter. *2×5=10*