PNIIINARY SCIENCE

FSI-P-AHVS IS.S. EXAM.. ANIMAL HUSBANDRY AND
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

Ql. Write short notes on the following: 8x5=40
Effective Population Size 8
Composition of Bovine Semen 8
Importance of Protein Quality in the Diets of Poultry and Pigs 8
Total Digestible Nutrients 8
Role of Manager in a Dairy Farm 8

PSI-P-A HVS 1

(a) Enumerate the fat-soluble and water-soluble vitaminTh. Write the coenzymes or progtlietic groups of B vitamins and their enzymic or other functions. Write the inter-relationship between minerals and vitamins. 25

(b) What are the different measures of energy for ruminants ? Write the merits and demerits of starch equivalent and biological value in
evaluating the feeds. 15

(a) What do you mean by 'Breeding Value' ? Discuss the role of breeding
value in animal breeding programmes. 20

(b) What is 'Selection' ? Write the importance of selection in improving milk production in dairy animals. Discuss the various methods of selection
along with their advantages and disadvantages. 20

(a) Discuss the various phases of Estrous Cycle and average times of
reproductive parameters in cows. 15

(b) How does the development of mammary glands occur during post-natal
life in a heifer or cow ? Support your answer with the physiological role
of hormones involved in mammogenesis, lactogenesis and
galactopoiesis. 25

FSI-P-A1-1VS 2

SECTION B

Q5. Differentiate between the following: 8x5=40
Megaloblastic anaemia and Pernicious anaemia 8
Steaming-up and Flushing 8
Enzymic digestion and Microbial fermentation 8
Adaptation to cold stress and Adaptation to heat stress 8
Sex influenced and Sex limited characters 8

Q6. (a) What do you understand by Commercial Dairy Farming? Give a plan to
begin a commercial dairy farm comprising of 200 Sahiwal cows. 20

(b) Explain the term 'Natural Disasters'. How can the livestock be saved
during natural calamities ? Discuss the feeding and managemental
practices under such situations. 20

Q7. (a) What do you mean by Carbon-Nitrogen Balance? Give the significance of carbon-nitrogen balance studies in animals. Write the merits and
demerits of carbon-nitrogen balance in comparison to comparative
slaughter technique and respiratory quotient. 20

(b) Prepare a feeding schedule for a crossbred cow weighing 400 kg and yielding 10 kg milk daily with 4% fat from green berseem (DCP 2%,
TDN 12% and DM 20%), wheat straw (DCP 0%, TDN 40% and DM 90%)
and concentrate mixture (DCP 12%, TDN 70% and DM 90%). The
maintenance requirement is 250 g DCP and 3.25 kg TDN, whereas
requirement for 1 kg milk production is 45 g DCP and 300 g TDN. 20

(28. (a) What is Genotype-Environment Interaction ? Write the practical utility
of genotype-environment interaction in animal production. 20

(b) What points will you consider while formulating an economic ration for a lactating buffalo ? How will you prepare an economic ration for finishing
pigs? 20
PSI-P-AlVS 3