

Sl. No. 791

D-VSF-L-NUA

**ANIMAL HUSBANDRY AND  
VETERINARY SCIENCE**

**Paper—I**

Time Allowed : Three Hours

Maximum Marks : 200

**INSTRUCTIONS**

Candidates should attempt Question Nos. 1 and 5 which are compulsory, and any THREE of the remaining questions, selecting at least ONE question from each Section.

All questions carry equal marks. Marks allotted to parts of a question are indicated against each.

Answers must be written in ENGLISH only.

Neat sketches may be drawn, wherever required.

**Section--A**

1. Write short notes on any *four* of the following in not more than 150 words each : 10×4=40
- (a) Role of cervix in reproductive processes
  - (b) Chemical composition of spermatozoa
  - (c) Genetic consequences of chromosomal aberrations
  - (d) Milk substitute and milk replacer
  - (e) Significance of selection in a closed population

2. (a) What are the methods of preserving semen? Discuss. 15
- (b) Discuss the detection of oestrus and time of insemination for better conception. 15
- (c) Enlist the factors affecting semen quality. 10
3. (a) Discuss why heterosis is better than inbreeding in keeping good animal health and production. 20
- (b) What factors would you consider in selecting dairy animal for starting a farm? 20
4. (a) Discuss the importance of calf starter in dairy animals. 10
- (b) Write the feeding schedule for calves at three to six months age group. 15
- (c) What are the forces changing the gene frequency in population? 15

### Section--B

5. Compare and contrast between the following (any four). Answer should be precise to 150 words each : 10×4=40
- (a) Sex-influenced traits and Sex-limited traits
- (b) Mendelian genetics and Population genetics

- (c) Somatic cell division and Reproductive cell division
- (d) Ad-lib ration and Balanced ration
- (e) Fat-soluble and Water-soluble vitamins
6. (a) What are hormones which control the mammary development in animals? 20
- (b) What is the role of calcium in the formation of egg-shell and constitution of bones? 10
- (c) What are the important characteristics of mineral mixture? 10
7. (a) Define inbreeding coefficient and coefficient of relationship. 4
- (b) What are the properties of genetic code? Explain. 6
- (c) What are the methods of selection and aids to selection? 10
- (d) What is the importance of breeding records at the farm? 10
- (e) What are the basic tools for genetic improvement in animals? 10

8. (a) How many types of poultry ration are formulated according to the age of the birds? Discuss the requirements of feed of different categories in poultry. 20
- (b) What are threshold characters and what is their role in animal life? 10
- (c) What is the role of protein in growth and production processes? Explain. 10

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