

IFoS 2010

Serial No.

1928

B-JGT-K-BIA

**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. Comment critically on each of the statements below in not more than 150 words each :— $4 \times 10 = 40$
- (a) 'Heritability is an upper limit of repeatability.'
- (b) 'Embryo transfer technology in livestock improvement has both plus and minus points.'

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(Contd.)

- (c) 'Total score method of selection is one of the best methods of selection.'
- (d) 'Both quantitative and qualitative traits are equally important.'
2. (a) What is genotype environmental interaction ?
Explain its role in cattle improvement programme. 30
- (b) Compare inbreeding and outbreeding. 10
3. (a) What is selection differential ? Briefly comment on the causes of discrepancy between expected and realised selection differentials. 20
- (b) Compare assertative and disassertative mating systems with examples. 20
4. (a) Illustrate the recurrent reciprocal selection and rotational crosses in the form of figures and explain the usefulness of each system in domestic animals. 30
- (b) How can the feeding of animals be managed during conditions of natural calamities ? 10

SECTION—B

5. Differentiate between the following. Answers not to exceed 150 words in each case :— 4×10=40
- (a) Specific combining ability and General combining ability.

- (b) Progeny testing and Pedigree selection.
 - (c) Silage and Hay.
 - (d) Weaning system of management and Suckling system in young calves.
6. (a) Why is the cage system considered superior to other systems of housing ? Analyse critically. 20
- (b) Suggest and explain different crop rotation practices for enabling dairy farmers to get more green fodder for animals. 20
7. (a) Define feed additives. Describe the important feed additives and their role in animal feeds. 30
- (b) What are the important genetic parameters and what role do they play in improvement of livestock ? 10
8. (a) What is the role of micro-organisms in silage making ? 10
- (b) Explain the methodology of hay making. 20
- (c) Comment on the nutrient requirements of pregnant animals. 10

