

1.F.S-2009

Sl. No.

1005

B-JGT-J-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.*

*The number of marks carried by each question is indicated at the end of the question.*

*Answers must be written in ENGLISH.*

*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 :  $10 \times 4 = 40$
- (a) Inter-relationship of calcium, phosphorus and vitamin-D.
  - (b) Energy : protein ratios in Ration.
  - (c) BMR and its estimation.

(Contd.)

- (d) Feeding of cattle under range conditions.
- (e) Spermatogenesis in bulls.
2. (a) Briefly discuss the physical and physiological mechanisms of adaptation of sheep to hot-arid environment.
- (b) Write a short note on the management of animals under drought conditions.
- (c) Describe Artificial insemination in poultry.  
20+10+10=40
3. (a) What are the conventional and non-conventional feed? Give the characteristics of different unconventional feed under natural calamities like flood and tsunami.
- (b) Describe in brief the digestive system of cattle and compare it with that of pig, bringing out the basic differences in the two species. Illustrate with diagrams, wherever necessary.  
20+20=40
4. (a) Suggest measures to improve the food availability for dairy animals in India, in terms of quantity and quality, keeping in view the economy and human demand factor.
- (b) Milk production in buffaloes is greatly reduced in summer due to heat stress. Briefly describe the methods of ameliorating this heat stress.  
20+20=40

## Section - B

5. Write short notes on any *four* of the following in not more than 150 words each :  $10 \times 4 = 40$
- (a) Holding up of milk.
  - (b) Mutations, their types and methods of detecting.
  - (c) Role of protozoa in rumen.
  - (d) Progeny testing.
  - (e) Inbreeding, upgrading and cross-breeding.
6. (a) Describe the common systems of housing poultry. Discuss the basic requirements, merits and demerits of Deep Litter system of housing in a tropical country like India.
- (b) Describe new trends in enhancing mutton production.
- (c) Name the diseases of sheep affecting wool and meat production due to deficiency of copper, selenium and vitamin-E. Discuss their pathogenesis.  $20 + 10 + 10 = 40$
7. (a) Compare dairying under mixed farming and dairying under specialized farming. Which one of these is best suited to an average Indian farmer and why ?

(b) What are the factors determining the efficiency of dairy animal ?

(c) What is herd recording and budgeting the cost of milk production ?  $20+10+10=40$

8. (a) Discuss merits and demerits of different methods of estimating heritability.

(b) Write a short note on Recombinant DNA Technology.

(c) What is crossing of inbred lines for commercial production ?  $20+10+10=40$

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