

7. (a) Explain the problems encountered in stall feeding of Sheep and Goat and strategies to overcome them.
- (b) What do you understand by climatic stress in dairy animals and explain the methods of controlling climatic stress ?
- (c) Explain the steps involved in silage making and enrichment of nutritive value of silage. 15×3=45
8. (a) Draw the diagram of reproductive organs of a bull and explain the functions of each one of them.
- (b) Explain in brief the steps involved in deep freezing of bull semen.
- (c) What are the parameters considered to evaluate semen quality ? Explain any three parameters in detail. 15×3=45

Roll No. ....

Total No. of Pages : 4

**1(CCE.M)3**

**Animal Husbandry and Veterinary Science-I**

**(02)**

Time : Three Hours]

[Maximum Marks : 300

**INSTRUCTIONS**

- (i) Answers must be written in English.
- (ii) The number of marks carried by each question is indicated at the end of the question.
- (iii) The answer to each question or part thereof should begin on a fresh page.
- (iv) Your answer should be precise and coherent.
- (v) The part/parts of the same question must be answered together and should not be interposed between answers to other questions.
- (vi) Candidates should attempt question numbers **1** and **3** which are compulsory and any **four** more out of the remaining questions selecting at least **one** from each Part.
- (vii) If you encounter any typographical error, please read it as it appears in the text-book.
- (viii) Candidates are in their own interest advised to go through the General Instructions on the back side of the title page of the Answer Script for strict adherence.
- (ix) No continuation sheets shall be provided to any candidate under any circumstances.

- (x) Candidates shall put a cross (x) on blank pages of Answer Script.
- (xi) No blank page be left in between answers to various questions.
- (xii) No programmable Calculator is allowed.
- (xiii) No stencil (with different markings) is allowed.

### PART-A

1. Write short notes on any **four** of the following in about 200 words each :

- (a) Antimicrobial proteins in cow milk.
- (b) Dairy farming in India vis-a-vis advanced countries.
- (c) Feeding strategies for small ruminants under drought conditions.
- (d) Processing, packaging and nutritive properties of toned, sterilized and flavoured milks.
- (e) Food Safety and Standards Act, 2006 and its key regulations.
- (f) Hormonal control of mammary gland development in cattle.

15×4=60

2. (a) Explain classification of Macro and Micro minerals and their importance in health and reproduction of dairy animals.
- (b) Functions of fat soluble vitamins and their metabolic importance in ruminants.
- (c) Protein and energy requirements of buffalo calves and 8 month pregnant dry Murrah buffalo.

15×3=45

3. Discuss in detail :
- (a) Narrate the status of livestock feed and fodder availability in the country.
  - (b) Categories of feeds with suitable examples and give the details of mineral and vitamin supplements available for livestock feeding.
  - (c) Prepare balanced ration for milking cow weighing 400 kgs and yielding 20 kgs of milk per day with 4.5% fat using locally available green grass, dry fodder and concentrate. 20×3=60

4. Write in detail :

- (a) What are feeding standards ? Give details about the importance of feeding standards.
- (b) Nutrient requirement and feed formulation for layers.
- (c) Nutrient requirement and feed formulation for fattening pigs.

15×3=45

5. Describe the following in detail :

- (a) Sources of Energy, Protein and Minerals in Poultry.
- (b) Role and scope of utilizing unconventional feedstuffs in optimizing dairy farm expenditure.
- (c) Explain the effect of anti-nutritional factors present in the livestock feeds.

15×3=45

### PART-B

6. (a) What are the steps to be taken for sustainable dairy farming under mixed farming system ?
- (b) Explain the factors determining the efficiency of dairy animals.
- (c) Describe the feeding regimes for the breeding bulls and young stock.

15×3=45