

8. (a) Discuss the concept and method of pasteurization of milk.
(b) Explain in detail the factors influencing the butter fat and protein content of milk.
(c) Discussing the problems associated with the production and marketing of milk and milk products, suggest your recommendation to improve. 15+15+15=45

Total No. of Printed Pages : 4

Roll No.

1(CCE.M)2

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 questions nos. **1** and **5** which are compulsory and any **four** more out of the remaining questions, selecting at least **one** question from each section.
- (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 (×) on blank pages of Answer Script.

- (xi) No blank page be left in between answer to various questions.
- (xii) No programmable Calculator is allowed.
- (xiii) No stencil (with different markings) is allowed.

SECTION-A

1. Write short notes on the following questions in about **200** words each :
 - (a) Difference between feed supplement and feed additive.
 - (b) Probiotics and Prebiotics.
 - (c) Explain the importance of quality of protein in cattle ration.
 - (d) Explain the nutrient requirement for optimum reproductive performance of dairy animals in the tropics.

15+15+15+15=60
2. (a) What are the conventional and unconventional feeds ? Give the characteristics of different unconventional feeds 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.

25+20=45

3. (a) Inter-relationship of calcium, phosphorus and vitamin-D.
- (b) Energy : Protein ratios in ration.
- (c) BMR and its estimation.

15+15+15=45

4. (a) Write names of volatile fatty acids produced by microbial fermentation in different compartments of gastro-intestinal tract of animals.

- (b) Write the site of microbial fermentation in pigs, ruminants, castrated buffalo and adult hen.
- (c) Name the Ketogenic and glucogenic volatile fatty acids. Describe the metabolism of glucogenic volatile fatty acid to CO₂ and water.

10+10+25=45

SECTION-B

5. Write short notes on the following questions in about **200** words each :
 - (a) Briefly discuss the physiological mechanisms of adaptation of sheep to hot-arid environment.
 - (b) Write a short note on the management of animals under draught conditions.
 - (c) Describe the common systems of housing poultry. Discuss the requirements, merits and demerits of deep litter system of housing in a tropical country like India.
 - (d) What are the managerial approaches to check lamb/kid mortality ?

15+15+15+15=60
6. (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.

22.50+22.50=45

7. (a) What is quality assurance ? Discuss the national agencies of quality assurance programme on milk and milk products in India, testing and grading techniques and standards. How effective are they in India considering the economic and public health aspects ?
- (b) Procedure for preparation of cultured milk products of Yoghurt and 'Srikhand'.

22.50+22.50=45