6. (a) What is progeny testing ? How can it be best used for the improvement of indigenous cattle in India ?

   (b) What are the practical difficulties in progeny testing in Indian cattle ?

   (c) Describe the breeding policy for the improvement of cattle and buffaloes in India. 15×3=45

7. (a) Describe the platform tests for milk quality and explain the significance of somatic cell count in milk.

   (b) Explain the causes of off-flavors in milk and milk products.

   (c) Describe the manufacturing procedure and packaging of Paneer and Cheddar Cheese. 15×3=45

8. (a) What are the causes for low level of technology diffusion and adoption in Indian livestock sector ?

   (b) Explain the concept and philosophy of different methods adopted to educate livestock farmers under rural India.

   (c) Explain in detail aim and objectives of TRYSEM. 15×3=45

1(CCE.M)3

Animal Husbandry & Veterinary Science–II

(02)
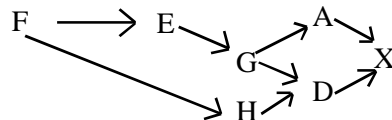
Time : Three Hours] [Maximum Marks : 300

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 nos. **1** and **4** which are compulsory and any **four** more out of the remaining questions selecting at least **two** 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 answer 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) Effective population size.

(b) Peste-Des-Petits of Ruminants (PPR).

(c) Occupational Zoonotic Diseases.

(d) Milk adulteration and its detection.

(e) Effect of heat stress on physiological parameters and reproduction in dairy animals.

(f) Importance of hygiene of water in livestock production.

$15 \times 4 = 60$

2. (a) Write brief note on inbreeding, its merits, demerits and application.

(b) Explain the basis for construction of variance and covariance chart and estimate the inbreeding coefficient of X and coefficient of relationship between A and D using Malecot's method.

(c) Explain diallele crossing, general combining ability, specific combining ability. $15 \times 3 = 45$

3. (a) Explain different methods of selection along with advantages and disadvantages of each method.

(b) Explain the utility of recurrent and reciprocal recurrent selection in pig and poultry breeding.

(c) Explain the appropriate strategies to improve the non-descript cattle of India. $15 \times 3 = 45$

PART–B

4. (a) Discuss etiology, transmission, pathogenesis, clinical findings and treatment of Foot and Mouth disease in cattle.

(b) Explain the reasons for failure of Foot and Mouth disease vaccination in cattle and buffaloes and futuristic approaches in control of Foot and Mouth disease in India.

(c) Describe epedemiology and pathogenesis of Brucellosis in livestock and its zoonotic importance. $20 \times 3 = 60$

5. (a) Describe the meat inspection procedures to produce meat under hygienic conditions.

(b) What are the precautions to be taken while collecting glands/ organs from slaughtered animals for pharmaceutical purpose ?

(c) Explain the role of endocrine glands in health and disease conditions in ruminants. $15 \times 3 = 45$