

**ANIMAL HUSBANDRY AND VETERINARY SCIENCE (CODE – 02)**

**Time: 3 Hours**

**Max Marks: 150**

**Note: Attempt five questions in all. All questions carry equal marks. Q No. 1 is compulsory. Answer any two questions from Part-I and two questions from Part-II. The parts of the same questions must be answered together and must not be interposed between answers to other questions.**

**1. Write notes on any five of the following**

- a) Role of volatile fatty acids in ruminant nutrition.
- b) Chemotherapeutics in management of neoplasm in animals.
- c) Endocrine control of initiation of lactation in cow.
- d) Methods of controlling climatic stress.
- e) Energy and protein requirements for egg production.
- f) Role of kidneys in acid base balance in body.
- g) Methods of estimating inbreeding coefficient.

(5×6=30)

**PART -I**

- 2. a) What are out breeding, out crossing, cross breeding and grading? Why have we gone for cross breeding in dairy cattle in India?**

**b) Define mutation and discuss various methods for detecting mutations and mutation rate.**

- c) Define Hardy-Weinberg Law and list the processes responsible for changes in gene frequency.**

(3×10=30)

- 3. a) Define balance ration. What is prerequisite for balance ration formulation?**

**b) Describe the principle of deep freezing of semen. What are the advantages and disadvantages of various packaging systems used for deep freezing of semen?**

- c) Discuss the factors determining the efficiency of dairy animals.**

(3×10=30)

- 4. a) Define heritability. Discuss merits and demerits of different methods of estimating heritability.**

b) Define direct and indirect calorimetry? Describe the carbon-nitrogen balance method for estimation of heat production in animal body.

(2x15=30)

## PART –II

5. a) What is the scientific basis of cheese making? Give flow diagram of cheese manufacture.
- b) What do you mean by value added meat products? Give classification of different types of sausages.
- c) Name different methods adopted to educate farmers under rural conditions. Which one is the best and why?
- (3x10=30)
6. a) Enlist different systems of housing poultry birds? Which system of poultry housing will you recommend to poultry farmers in India and why?
- b) Discuss the food born and water born diseases of zoonotic origin.
- c) Write an account on the methods of collection of samples for veterolegal investigation
- (3x10=30)
7. a) Discuss diagnosis, symptoms and control of swine fever and its economic impact in India
- b) Discuss the role of cytokines in protection of animals from diseases as well as in immune response in allergic and autoimmune diseases.
- (2x15=30)