1(CCE-M)6
ANIMAL HUSBANDRY & VETERINARY SCIENCES-I
[02]

Time Allowed : 3 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 there of 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 **5** which are compulsory and any **Three** more out of the remaining questions selecting at least **One** from each part. In total candidates should attempt **Five** questions .*

vii) *If you encounter any typographical error, please read it as it appears in text book.*

viii) *Candidates are in their own interest are 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)   *Candidate shall put 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.*

(xiv) *In no circumstances help of scribe will be allowed .*

PART - A

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

      a)   Energy protein ratio

      b)   Feeding of animals under drought conditions

      c)   Preservation and Artificial insemination

      d)   Nutritive properties of milk

e) Non-ruminant Nutrition Poultry

f) Feeding records of animals   (4×15=60)

2. a) What is growth curve? Explain different factors affecting growth and meat · composition .

   b) Describe the hormonal changes that occur in pre-pubertal male cattle.

   c) Describe role of hormones in postpartum fertility and cyclicity . (20×3=60)

3. a) Discuss the environmental factors and the regulatory mechanisms involved in animal behaviour.

   b) Describe the components of semen and discuss the chemical and physical properties of the ejaculated semen.

   c) Suggest remedies that should be adopted to make artificial insemination a successful tool in India .   (20×3=60)

4. a) What is balanced feed? Discuss the feeding practices suggested for adult female pigs .

   b) Describe different feeding systems and their limitations .

   c) Discuss the commonly encountered deficiency diseases in high yielding layer hens and strategies for their prevention .   (20×3=60)

PART - B

5. Differentiate between any **FOUR** of the following in about 200 words each:

   a) Fasting metabolism Vs. Basal metabolism

   b) Blind staggers Vs. Grass staggers

   c) Concentrates Vs. Roughages

   d) Net protein value Vs. Net protein utilization

   e) Production energy Vs. Maintenance energy

   f) Steaming -Up Vs. Flushing .   (4×15=60)

6. a) Discuss various factors that determine the digestibility of fodder in ruminants.

   b) What role is played by the rumen micro-flora in this process ?

   c) What are the principal metabolites produced in the rumen and what is their significance .   (20×3=60)

7. a) What is Cyber Extension? Discuss its application in animal husbandry and its importance in Indian context.

b) What is Non-protein nitrogen (or NPN) compound? Discuss the mechanism of NPN utilization in ruminants .

c) Define the term 'Selection' Discuss the factors responsible for choosing traits for selection .   (20×3=60)

8. a) An entrepreneur wishes to invest on dairy . He wants to start a dairy -farm with 100 lactating crossbred cows. How would you help to develop project development document suggesting capital , land dairy equipment , feeding and breeding management practices for the entrepreneur.

b) What are the key practical and economic rations for commercial broiler production?

c) What are potential challenges related to natural calamities a dairy owner might face in the condition like India ?   (20×3=60)

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