

[Total No. of Pages : 4

Roll No \_\_\_\_\_

1(CCE-M)4

**ANIMAL HUSBANDRY & VETERINARY SCIENCES-I**

[02]

**Time : 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 any five questions.**
- 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.

- c) Discuss the strategies adopted in India to mitigate seasonal imbalances in milk production and maintain its price stability.
7. a) Describe basic principles of feeding and management practices for a model buffalo farm. (60)
- b) Discuss the importance of protein quality, quantity and energy protein ratio in ration formulation.
- c) Explain the utility of urea feeding and mineral mixture blocks to ruminant animals in improving productivity and reducing cost.
8. a) How does the digestion in stomach of ruminants differ from that of monogastric animals? And how it influences the meat composition? (60)
- b) Describe the role of liver and pancreas in digestion of fat in intestines.
- c) Discuss strategies to feed animals under natural calamities like drought, flood and earth quake.

ॐ

02-I

(4)

02-I /2017

(1)

[Turn Over

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.

1. a) What is balanced feed? List the advantages of feeding balanced nutrition to animals. Discuss the factors to be considered in making a balanced ration. (60)
- b) Discuss the commonly encountered deficiency diseases in very high yielding milch animals and high yielding layer hens and strategies for their prevention.
- c) Describe different feeding systems and their limitations.
2. a) List separately the legal and illegal feed additives that could be potentially used in a compounded ration. Explain their functional role and significance to productivity and trade. (60)
- b) Compare and contrast the differences in nutrient composition of broiler starter, broiler finisher and layer ration.
- c) Discuss various strategies to reduce protein cost in a ruminant ration under low input feeding conditions.
3. a) Describe growth curve and discuss factors affecting growth and meat composition. (60)
- b) Explain the physiological role of various hormones involved in stress and adaptation.

02-1

(2)

c) Discuss in detail the hormonal control of mammary gland development and milk secretion.

4. a) How the climate change and environmental stress could affect the health and productivity of animals? And discuss the strategies to mitigate them. (60)

b) Explain the factors affecting semen *in vivo* and *in vitro* and describe briefly the stepwise production of frozen semen.

c) Critically analyse the factors determining the successful outcome of artificial insemination.

5. a) Define pasteurization. Describe in detail the procedure for manufacture of pasteurized milk with flow chart. List important quality control tests conducted on pasteurized milk before being released for sale. (60)

b) Discuss the procedure for manufacture of *Dahi* with a flow chart and list the important quality control tests conducted on *Dahi*.

c) How quality of milk can be preserved during procurement, collection and transport of raw milk under rural conditions?

6. a) Critically examine the reasons for successful running of AMUL and failure of such cooperative societies in some parts of the country. (60)

b) What is cleaning - in- place system? Explain the cleaning-in-place system operated in milk plants.

02-1

(3)

[Turn Over