

ANIMAL HUSBANDRY AND VETERINARY SCIENCE
(Paper I)

Time Allowed : Three Hours

Maximum Marks : 300

QUESTION PAPER SPECIFIC INSTRUCTIONS

(Please read each of the following instructions carefully before attempting questions)

There are EIGHT questions divided in two Sections.

Candidate has to attempt FIVE questions in all.

Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.

The number of marks carried by a question/part is indicated against it.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

SECTION 'A'

1. Write short notes on any three of the following in about 200 words each: **20×3=60**
- (a) Repeat breeding
 - (b) Progeny testing
 - (c) Management of lactating does
 - (d) Difference between Feed supplement and Feed additive
2. (a) Write names of volatile fatty acids produced by microbial fermentation in different compartments of gastrointestinal tract of animals. **8**
- (b) Write the site of microbial fermentation in pig, ruminants, castrated buffalo and adult hen. **8**
- (c) Name the ketogenic and glucogenic volatile fatty acids. Describe the metabolism of glucogenic volatile fatty acid to CO₂ and water. **44**
3. (a) Describe the therapeutic strategies adopted to overcome the problem of anoestrus. **20**
- (b) What are the management approaches to check lamb/kid mortality? **20**
- (c) Describe the procedure for deep freezing of bovine semen using polyvinyl chloride straws. **20**
4. Enlist the measures of protein quality for simple stomach (monogastric) animals and describe the nitrogen balance method. **60**

SECTION 'B'

5. Write short notes on any three of the following in about 200 words each: **20×3=60**
- (a) Selection of bull for breeding purpose
 - (b) Brooding and rearing of poultry layers
 - (c) Sanitation and disinfection on pig farm
 - (d) Heat increment of food
6. Define Hardy – Weinberg Law. List processes responsible for changes in gene frequency. Describe the changes in gene frequency under migration, mutation and selection against the recessive gene in single locus two allele cases with complete dominance. **60**
7. Discuss importance of shelter for buffaloes and cross-bred cows. Draw a layout plan of a shelter for ten lactating Jersey cows. **60**

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| 8. | (a) | Describe the importance of colostrum, calf starter and milk replacers for neonates. | 45 |
| | (b) | What is wool and how does it differ from hair? | 15 |