

**ANIMAL HUSBANDRY AND VETERINARY SCIENCES
(OPTIONAL)****Time : 3 hours****Maximum Marks : 200****Note :**

- (i) *In all attempt Five questions.*
- (ii) *Question No. 1 is compulsory.*
- (iii) *Of the remaining questions, Attempt Any four by selecting one Question from each section.*
- (iv) *Numbers of optional questions upto the prescribed number in the order in which questions have been solved, will only be assessed and excess answers of the question/s will not be assessed.*
- (v) *Candidate should not write roll number, any names (including his/her own), signature, address or any indication of his/her identity anywhere inside the answer book otherwise he/she will be penalised.*

1. Attempt any four of the following :

- (a) Draw a neat labelled diagram of digestive system of fowl and explain in brief the Anatomy of system and physiology of digestion of food in different parts with enzymes involved. **10**
- (b) Explain about feeding and management of livestock during draught conditions and other natural calamities. **10**
- (c) Discuss the composition of cow milk in detail. Explain its various physical properties. **10**
- (d) What is the role of biotechnology in improvement of animal health and production ? **10**
- (e) Write in brief common causes of cruelty in domestic animals, name the important animal welfare organizations, their aims and duties, and role of Veterinarian in prevention of cruelty to animals. **10**

SECTION - A

2. (a) Explain the anatomy of udder of cattle with diagrams and physiology of biosynthesis and secretion of milk. **20**
- (b) Give agronomic practices for cultivation of fodder maize, jowar and lucerne, explain the different methods of conservation of fodder. **20**

P.T.O.

3. (a) Define nutrition, nutrients, balanced feed, complete feed and feeding value, explain the importance of nutrients in animal health and production, how the nutritional deficiencies are managed. 20
- (b) Enumerate the agro-industrial byproducts and unconventional feeds and fodders with their nutritive value, ant-quality factors and methods to ameliorate them and explain their role in livestock feeding. 20

SECTION - B

4. (a) Discuss in brief the care and management of milking animals for maximizing the milk production. 10
- (b) What is a breed ? When would you recognize a particular group of animals as a breed ? Name home tract and one important characteristics of five important breeds of buffaloes. 10
- (c) What is concept of extension education ? Describe different principles of extension education. 10
- (d) Describe the objectives and role of Krishi Vigyan Kendra in rural development. 10
5. (a) Explain the care and management of a calf upto six months of age. 10
- (b) Describe rules and regulations regarding transportation of livestock by road. 10
- (c) Define heritability and write down its uses. List different methods of estimating heritability. 10
- (d) Describe the effects of chromosomal abbreviations on fertility and productivity of females. 10

SECTION - C

6. (a) How and what material will you collect to despatch for laboratory examination in cases of Anthrax, Rabies, Aflatoxicosis, Organophosphate poisoning and Abortion ? 20
- (b) Explain different reasons of Vaccination failure. 20
7. (a) How parasites evade the host defence system, explain with suitable example ? 20
- (b) Describe the role of different diuretics in congestive Heart failure. 20

9. (a) (i) Differentiate between the following : 5
- (a) Fracture and dislocation.
 - (b) Cyst and abscess.
 - (c) Sinus and fistula.
 - (d) First degree and second degree burn.
 - (e) Allografts and Xenografts.
- (ii) Define the following : 5
- (a) Clean wounds
 - (b) Septic shock
 - (c) Canker
 - (d) Degenerative joint disease
 - (e) Strangulation
- (iii) Give clinical signs of the following conditions : 5
- (a) Scrotal hernia.
 - (b) Spavin in horse.
 - (c) Naval ill.
 - (d) Urethral obstruction.
 - (e) Upward fixation of Patella.
- (iv) Suggest line of treatment of the following : 5
- (a) Maggoted wound.
 - (b) Sprain.
 - (c) String halt in horse.
 - (d) Frost bite.
 - (e) Umbilical hernia.

- (b) (i) Write *true* or *false*, as appropriate, against each of the following statements : 5
- (a) Ketamine causes severe cardiac and respiratory depression in dogs.
 - (b) Morphine is a good pre-anaesthetic agent for horses.
 - (c) All muscle relaxants produce their effects on neuromuscular junctions.
 - (d) Metabolites of volatile anaesthetics are non-toxic to body systems.
 - (e) Use of thiopental should be avoided for caesarean section in bitches.
- (ii) Define the following : 5
- (a) Hypnosis.
 - (b) Balanced anaesthesia.
 - (c) Epidural anaesthesia.
 - (d) Basal anaesthesia.
 - (e) Narcosis.
- (iii) Give the choice of anaesthetic drug(s) with doses for the anaesthesia in the following species : 5
- (a) Horse.
 - (b) Monkey.
 - (c) Snake.
 - (d) Elephant.
 - (e) Dog.
- (iv) Fill in the blanks with appropriate words : 5
- (a) Thiopental is a _____ acting barbiturate.
 - (b) Ketamine is a derivative of _____ .
 - (c) Procaine hydrochloride is lethal to _____ .
 - (d) General anaesthesia in large animals may be complicated by tympany, regurgitation and _____ .
 - (e) Xylazine is agonist at the _____ receptors.

SECTION - D

8. (a) (i) Define the following : 5
- (a) Toxaemia
 - (b) Septicaemia
 - (c) Dehydration
 - (d) Cardiac arrest
 - (e) Vagus indigestion
- (ii) Give the clinical signs of the following conditions : 5
- (a) Traumatic pericarditis
 - (b) Haemorrhagic shock
 - (c) Tetanus in horse
 - (d) Surra
 - (e) Strangles in horse
- (iii) Suggest the treatment for the following conditions : 5
- (a) Canine Babesiosis
 - (b) TRP in cattle
 - (c) Mastitis in cow
 - (d) Ruminal acidosis
 - (e) Laminitis
- (iv) Give the vaccination schedule for the following conditions : 5
- (a) Ranikhet disease in poultry
 - (b) Rabies in pups
 - (c) FMD in cattle
 - (d) HS in buffaloes
 - (e) Distemper in canine

- (b) (i) Mention the duration of gestation in following species : 5
- (a) Cow.
 - (b) Mare.
 - (c) Goat.
 - (d) Bitch.
 - (e) Sow.
- (ii) Mention the most important roles of the following hormones : 5
- (a) Estrogen.
 - (b) Progestrone.
 - (c) LH.
 - (d) FSH.
 - (e) Oxytocin.
- (iii) Write short notes (not more than five sentences) on the following : 5
- (a) Vibriosis in heifer.
 - (b) Brucellosis in bull.
 - (c) Monorchid.
 - (d) Breech presentation.
 - (e) Spiral deviation of penis.
- (iv) Write clinical signs of the following : 5
- (a) Phimosis.
 - (b) Balanoposthitis.
 - (c) Rig.
 - (d) CTVT.
 - (e) Trichomoniasis in cow.