

ANIMAL HUSBANDRY AND VETERINARY SCIENCE (Optional)

Time : 3 hours

Maximum Marks : 200

Note :

- (i) Answer must be written in English.
- (ii) Question No. 1 is compulsory. Of the remaining questions, attempt any Four selecting one question from each section.
- (iii) Figure to the RIGHT indicates marks of the respective question.
- (iv) Number of optional questions upto the prescribed number in the order in which they have been solved will only be assessed. Excess answers will not be assessed.
- (v) Candidates should not write roll number, any name (including their own), signature, address or any indication of their identity anywhere inside the answer book otherwise they will be penalised.

1. Answer any four of the following :

- (a) Explain the environmental effects on growth in animals. 10
- (b) Explain the feeding of livestock during scarcity period with one example of complete feed and concentrate mixture. 10
- (c) Discuss the nutritive value of milk, meat and poultry egg in respect of : 10
 - (i) Proteins
 - (ii) Lipids (fat)
 - (iii) Carbohydrates and
 - (iv) Minerals and Vitamins
- (d) Discuss various mechanisms of action of antimicrobials used against bacterial diseases in animals. What is the impact of injudicious use of antibacterials in animals on human health ? 10
- (e) What are common offences committed against animals in India ? Explain each along with the provision in the law to safeguard animal interests. 10

SECTION - A

2. (a) What is the impact of natural calamities on water access and livestock ? 20
 - (b) (i) Write the habitat, coloring pattern, Breed characteristics and lactation milk yield of Murrah buffalo and Jaffarabadi buffalo. 10
 - (ii) Give the dental formula for adult cattle. Write the complete time table in relation to age for eruption of teeth in cattle. 10
- Discuss the concept of loose housing system for cattle for improved production.

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3. (a) Explain potential of fibrous crop residues, how can these be utilized in livestock feeding ? 2
- (b) (i) Classify in detail the different Methods of Extension Education with suitable examples. 10
- (ii) Describe in detail the principles of Extension. 10

SECTION - B

4. (a) (i) Write in brief about collection, preservation, dispatch and transportation of materials (both biopsy and necropsy) for diagnosis of Bovine brucellosis, Bovine tuberculosis and Haemorrhagic septicemia (HS). 12
- (ii) Write in brief about collection, preservation, dispatch and transportation of materials (both biopsy and necropsy) for diagnosis of Avian Influenza and Newcastle Disease (ND). 8
- (b) Discuss in detail the virus characteristics, epidemiology, antigenic properties, pathogenicity, economic impact, diagnosis, prevention and control of foot and mouth disease (FMD) virus. 20
5. (a) Which are different types of pesticides used in agriculture and in animals ? What are their harmful effects on the environment ? What are their mechanisms of action ? Discuss therapeutic measures taken in case of toxicity with pesticides. 20
- (b) Enlist the major infectious diseases of Zoonotic importance. Describe in detail the pathogenicity, diagnosis, prevention and control of brucellosis. 20

SECTION - C

6. (a) Discuss the phases of cardiac cycle. 10
- (b) Describe the mammary development of a cow during pregnancy and early lactation. 10
- (c) Give the detailed description of native, breed characters, color and utility of the following breeds of goat. 20
Jamnapari, Barbari, Kashmiri, Gaddi, Sirohi, Black Bengal, Sannen, Angora.
7. (a) Differentiate between Heritability and Repeatability. 10
- (b) Write short notes on :
- (i) Structural Chromosomal aberrations. 5
- (ii) 1/29 Robertsonian Translocation in Cattle. 5
- (c) Describe the importance of minerals in the body. Explain the metabolism of calcium and phosphorus in ruminants. 20

SECTION - D

8. (a) (i) Write on clinical signs, diagnosis and treatment of Hyperthermia. 10
(ii) What are the rules for veterolegal postmortem examination? 10
- (b) (i) What are the different classes of anaesthesia? Write in detail the signs and stages of slow acting general anaesthesia in animals. 10
(ii) Write the broad classification of preanaesthetic agents with two examples. How preanaesthetic agents are useful to patients? 10
9. (a) (i) Name the different types of open wounds. Write about First phase of wound healing at cellular level. 10
(ii) Define abscess. How to differentiate abscess from cyst, haematoma, tumour and hernial swelling? Write about treatment of acute abscess. 10
- (b) (i) Write in detail about symptoms of estrus in cows. Enlist and elaborate on methods of improving heat detection in cows. 10
(ii) Enlist different methods of semen collection in buffalo bulls. Write in detail about deep freezing of semen by straw method in buffalo bulls. 10

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