INDIAN FOREST SERVICE (MAIN) EXAM-2022

ANIMAL HUSBANDRY AND VETERINARY SCIENCE

Paper – II

*Time Allowed : **Three** Hours* | *Maximum Marks : **200***

Question Paper Specific Instructions

Please read each of the following instructions carefully before attempting questions :

*There are **EIGHT** questions in all, out of which **FIVE** are to be attempted.*

*Questions no. **1** and **5** are compulsory. Out of the remaining **SIX** questions, **THREE** are to be attempted selecting at least **ONE** question from each of the two Sections A and B.*

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

Neat sketches may be drawn, wherever required.

*Answers must be written in **ENGLISH** only.*

SECTION A

Q1. Write short notes on the following :

(a) Histology of testis in cattle in relation to reproduction *8*

(b) Components of Hering-Breuer reflex *8*

(c) Theories of drug receptor interaction, different types of receptors and signalling pathways involved in different drug mediated action *8*

(d) Etiology, clinical symptoms, diagnosis and treatment of Wobbler syndrome in dogs *8*

(e) Etiology, clinical symptoms, vaccination and treatment of Lumpy Skin Disease (LSD) of cattle *8*

Q2. (a) Describe the healing of fracture immobilized with coaptation and complications. *15*

(b) Discuss the impact of livestock and livestock-based industries on environment. *15*

(c) Describe the etiology, diagnosis and treatment of Frothy Bloat in cows. *10*

Q3. (a) Discuss implantation and maternal recognition of placenta in cattle. *10*

(b) (i) Describe the pathway of thrombin formation. *10*

(ii) Describe the normal hierarchy of pacemaker activity in the heart. *5*

(c) (i) Describe the etiology, diagnosis and treatment of Downer cow syndrome. *10*

(ii) Describe nutritional muscular dystrophy disorder. *5*

Q4. (a) (i) Discuss the structure, nature and distribution of cranial nerves originating from medulla oblongata. *8*

(ii) Describe the functional anatomy of oviduct in relation to egg production in birds. *7*

(b) (i) How is extracellular fluid (Na^+) regulated ? *8*

(ii) Discuss the path of hypothalamo-hypophyseal portal system. *7*

(c) (i) Enlist different types of immunity and describe the factors that affect the level of innate immunity in animals. *5*

(ii) Describe the concept and objectives of Animal Disease-free zones. *5*

SECTION B

Q5. Write short notes on the following :

(a) Quarantine of animals in prevention of spread of diseases *8*

(b) Role of cooperative societies in milk procurement *8*

(c) Pre-slaughter care of food animals *8*

(d) Microbial spoilage of eggs and their prevention *8*

(e) Indigenous dairy products in India *8*

Q6. (a) Justify the veterinarian's role in public health activity that ultimately contributes to the welfare of society. *15*

(b) Enlist the fermented milk products. Describe the preparation, composition, specifications and importance of fermented milk products as immune boosters. *15*

(c) Define Homeostasis. Explain the various post-slaughter physico-chemical and biochemical changes that take place in meat. *10*

Q7. (a) Discuss the concept of meat emulsion and factors affecting the emulsion stability during preparation of emulsion-based meat products. *15*

(b) (i) Define grading and describe the grading of sheep carcasses. *8*

(ii) Explain clearly the decisions and action taken after conduct of postmortem examination of food animal carcasses. *7*

(c) Discuss Participatory Rural Appraisal (PRA) in extension education along with its benefits and limitations. *10*

Q8. (a) (i) Enlist the edible and inedible slaughterhouse by-products and discuss the utilization of edible by-products. *10*

(ii) Discuss the epidemiological features of air in disease transmission. *5*

(b) Define the concept of cream separation from milk and describe the different types of cream, legal standards, preservation and its uses. *15*

(c) Discuss the veterolegal aspects of death in animals. *10*