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.

Question Nos. **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.

Answers must be written in ENGLISH only.

Neat sketches may be drawn, wherever required.

SECTION—A

1. Write short notes on the following : 8×5=40

(a) Socioeconomic impact of zoonotic diseases

(b) Management of bovine lactation tetany

(c) Difference between scanning and transmission electron microscopy, and their applications in histopathology

(d) Acute phase proteins and their role in disease

(e) Japanese encephalitis and its impact on human health

2. *(a)* Explain why many drugs exhibit volumes of distribution far in excess of total body water. 15

(b) How are autacoids different from traditional hormones? Write about the pharmacological role of lipid-derived autacoids. 15

(c) Explain the reasons why the fluoroquinolones are widely used as anti-microbials. 10

3. *(a)* What is the structure and function of respiratory membrane? Explain oxygen-haemoglobin dissociation curve in gaseous exchange of pulmonary system. 15

(b) "Kidney is the third line of defense for acid-base balance in the body." Justify. 15

(c) CNS ischemic response is called 'last ditch stand' pressure control mechanism of BP regulation. Explain. 10

4. *(a)* What are emerging and reemerging zoonoses? Explain the challenges and opportunities in their prevention and control. 15

(b) How are observational studies useful in epidemiological investigation? Explain their application in the study of chronic/neoplastic diseases. 15

(c) What is eutrophication of lakes and how does it affect the terrestrial/ aquatic animal health? 10

SECTION—B

5. Write short notes on the following : 8×5=40

(a) Wholesome meat production and the role of public health veterinarian

(b) Materials and methods for collection of samples for veterolegal investigation

(c) Zero disease concept and chemoprophylaxis

(d) Organ products for food and pharmaceuticals

(e) Role of information and communication technologies (ICTs) in livestock development

6. *(a)* Give a brief summary of necessary permissions and standards to be met while processing of market milk in a dairy processing plant with a capacity of 1000 litres/day. 15

(b) Furnish the operational control of HTST pasteurization system. 15

(c) What is homogenization? Explain it with the help of recent theory of homogenization. 10

7. *(a)* Detail the effects of pH on the quality and shelf life of meat and meat products. 15

(b) What is curing? How does it protect spoilage of meats, specially pork? 15

(c) What are the recent developments in the preparation of processed meat products? 10

8. *(a)* What are the approaches to strengthen Research-Extension-Farmer-Market (REFM) linkages? 15

(b) The Zooming In, Zooming Out (ZIZO) method of involving farmers is the need of the hour for successful transfer of technology in rural India. Critically evaluate the statement. 15

(c) What are the salient features of recently launched 'National Livestock Mission' by the Government of India? 10

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