**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.**

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**SECTION—A**

<table>
<thead>
<tr>
<th>Q.1. Write short notes on the following :</th>
<th>8×5=40</th>
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<tr>
<td>Q. 1(a) Glands producing reproductive hormones in bovines.</td>
<td>8</td>
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<tr>
<td>Q. 1(b) Role of biochemical tests in the diagnosis of diseases in cattle.</td>
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<td>Q. 1(c) Effect of environmental pollution on animal health.</td>
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<td>Q. 1(d) Importance of having disease free zones.</td>
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<tr>
<td>Q. 1(e) Role of animal welfare in the present day context.</td>
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Q. 2(a) Explain the germ layer formation and organogenesis. 20

Q. 2(b) Discuss the application of stem cells in the treatment of different diseases. 20

Q. 3(a) Explain the practices of immunization of livestock and poultry against various diseases. 20

Q. 3(b) Discuss the effect of metabolic disorders on animal performance. Suggest the lines of treatment of different metabolic disorders. 20
Q. 4(a) Explain the zoonotic diseases which are occupational hazards.  
Q. 4(b) Discuss the ‘one health’ concept in detail.  

SECTION—B  

Q. 5. Write short notes on the following : $8 \times 5 = 40$  
Q. 5(a) Procurement of milk by dairy cooperatives. 8  
Q. 5(b) Indigenous milk products. 8  
Q. 5(c) Nutritive value of red meat Vs. white meat. 8  
Q. 5(d) Role of Food Safety and Standards Authority of India in quality assurance. 8  
Q. 5(e) Technology assessment and refinement. 8  

Q. 6(a) Raw milk quality has an important bearing on the quality of finished products. Discuss. 20  
Q. 6(b) Explain the various by-products of dairy industry and their utilization. 20  

Q. 7(a) Explain the meat-eating habits of Indian population. 20  
Q. 7(b) Discuss the reasons for alternate meats not gaining consumer acceptance. 20  

Q. 8(a) Research without extension is a hobby. Extension without research is a folly. Discuss. 20  
Q. 8(b) Explain the programmes for self-employment of rural youth and women in animal husbandry. 20