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02/1

2005

ANIMAL HUSBANDRY, VETERINARY SCIENCE AND  
FISHERIES

Paper 1

Time : 3 Hours ]

[ Maximum Marks : 300

INSTRUCTIONS

*This paper consists of Set A and Set B.*

*Set A is for Animal Husbandry and Veterinary Science candidates.*

*Set B is for Animal Husbandry and Fisheries candidates.*

*Answers must be written in English. Care should be taken not to exceed, as far as possible, the suggested limit of words.*

*Each set has four parts :*

- A**            20 marks
- B**            100 marks
- C**            90 marks
- D**            90 marks

*Marks allotted to each question are indicated in each part.*

**SET A****Animal Husbandry and Veterinary Science****PART A**

4×5=20

*Answer each question in about 50 words. Each question carries 5 marks.*

**I. Write short notes :**

- |   |   |
|---|---|
| (a) Colostrum feeding to newborn calves                         | 5 |
| (b) Advantages of artificial insemination in bovines            | 5 |
| (c) Proximate composition of feed-stuffs and their significance | 5 |
| (d) 'Integrated farming systems'                                | 5 |

**PART B**

10×10=100

*Answer each question in about 100 words. Each question carries 10 marks.*

1. Briefly discuss the present status of dairying in India and its future prospects. 10
2. How will you minimize the summer stress for layer birds ? 10
3. Justify 'Milking is an art and a science'. 10
4. Enlist ten important trace minerals of poultry birds. Write deficiency symptoms of copper, cobalt, and zinc. 10
5. Justify the scope of inland and marine fisheries in India. 10
6. Define "Anand pattern". Mention key task of OFP-I, II and III. 10
7. Give energy (ME) and crude protein (%) level (as per BIS norms) in the feeds for layers and broilers. Suggest one suitable least cost feed formulations for them. 10
8. Define "MOET". Briefly describe the non-surgical methods of embryo recoveries. 10
9. Draw a neat diagram of female reproductive system of a cow and label the parts. 10
10. Explain conditioning of ewes prior to breeding season. 10

**PART C**

6×15=90

*Answer each question in about 150 words. Each question carries 15 marks.*

1. Give the percentage share of different components of income and expenditure on specialized dairy farm. Give suggestions for optimizing the cost of milk production. 15
2. Describe different methods of semen collection in cattle. 15
3. Enlist the components of a climate. Discuss the effects of temperature and light on reproduction in buffaloes. 15
4. Write hormonal control of mammary gland development with special reference to initiation of lactation and maintenance of lactation. 15
5. State advantages and disadvantages of early weaning in Swine. 15
6. Briefly explain biotechnology in livestock production. 15

**PART D**

3×30=90

Answer any **three** of the following questions, each in about 300 words.  
Each question carries 30 marks.

1. What is loose housing system ? Give a sketch diagram and layout of dairy farm of 100 cows and their followers. 30
2. Differentiate the brackish water and fresh water bodies. 30
3. Define "Milk Grid". Enlist the indigenous milk products and their packaging. 30
4. Give thumb rules for the drymatter, concentrate and roughage requirements of milking Crossbred cow weighing 450 kg and producing 15 kg milk/day. 30
5. Give economic feed formulations for weaners and gilts. 30

**SET B****Animal Husbandry and Fisheries****PART A**

4×5=20

*Answer each question in about 50 words. Each question carries 5 marks.*

1. Write short notes :

- |  |   |
|--|---|
| (a) Colostrum feeding to newborn calves              | 5 |
| (b) Advantages of artificial insemination in bovines | 5 |
| (c) Nutrient requirements of carps and prawns        | 5 |
| (d) Management of production ponds                   | 5 |

**PART B**

10×10=100

*Answer each question in about 100 words. Each question carries 10 marks.*

1. Briefly discuss the present status of dairying in India and its future prospects. 10
2. How will you minimize the summer stress for layer birds ? 10
3. Justify 'Milking is an art and a science'. 10
4. Enlist ten important trace minerals of Poultry birds. Write deficiency symptoms of copper, cobalt, and zinc. 10
5. Justify the scope of inland and marine fisheries in India. 10
6. Enlist ten major marine as well as inland fishes having market potential. 10
7. Explain the fisheries of brackish water lakes and their management. 10
8. Describe fish population and food cycle. 10
9. Sketch the anatomy of Rohu Fish. 10
10. Briefly discuss physical, chemical and biological properties of ocean. 10

**PART C**

6×15=90

*Answer each question in about 150 words. Each question carries 15 marks.*

1. Give the percentage share of different components of income and expenditure on specialized dairy farm. Give suggestions for optimizing the cost of milk production. 15
2. Describe different methods of semen collection in cattle. 15
3. Enlist the components of a climate. Discuss the effects of temperature and light on reproduction in buffaloes. 15
4. Explain potential of pearl oyster. 15
5. Enlist five important diseases of inland fishes and their treatment. 15
6. Give economics of carps farming in one-hectare pond. 15

**PART D**

3×30=90

Answer any **three** of the following questions, each in about 300 words.  
Each question carries 30 marks.

1. What is loose housing system ? Give a sketch diagram and layout of dairy farm of 100 cows and their followers. 30
2. Differentiate the brackish water and fresh water bodies. 30
3. Define "Milk Grid". Enlist the indigenous milk products and their packaging. 30
4. Describe the seed production and management of nurseries. 30
5. Discuss lobsters production and its market potential. 30

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2005

ANIMAL HUSBANDRY, VETERINARY SCIENCE AND  
FISHERIES

Paper 2

*Time : 3 Hours ]*

*[ Maximum Marks : 300*

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**INSTRUCTIONS**

*This paper consists of Set A and Set B.*

***Set A** is for Animal Husbandry and Veterinary Science candidates.*

***Set B** is for Animal Husbandry and Fisheries candidates.*

*Answers must be written in English. Care should be taken not to exceed, as far as possible, the suggested limit of words.*

*Each set has four parts :*

- |          |           |
|----------|-----------|
| <b>A</b> | 20 marks  |
| <b>B</b> | 100 marks |
| <b>C</b> | 90 marks  |
| <b>D</b> | 90 marks  |

*Marks allotted to each question are indicated in each part.*

**SET A**  
**Animal Husbandry and Veterinary Science**

**PART A**

4×5=20

*Answer each question in about 50 words. Each question carries 5 marks.*

1. Write short notes :
- |   |   |
|---|---|
| (a) Qualities of ideal Maize silage                 | 5 |
| (b) Fish as a source of animal protein and minerals | 5 |
| (c) Hormonal complex for egg production             | 5 |
| (d) Genetic X Environmental interactions            | 5 |

**PART B**

10×10=100

*Answer each question in about 100 words. Each question carries 10 marks.*

1. Enlist two crossbred cattle and sheep breeds developed in India and give their economical characters. 10
2. Describe physical characters and preservation policy of Amritmahal and Hallikar breed. 10
3. Give 'Year round green fodder production calendar'. 10
4. Explain 'Creep feeding in piglets'. 10
5. Rank three leguminous (Lucerne, Sunflower and Cowpea) and three non-leguminous (Maize, Jowar and Oats) fodders mentioning their nutritive value. 10
6. Define 'In-breeding and Hybrid vigour'. Explain the measurement of in-breeding. 10
7. Differentiate 'General combining ability' and 'Specific combining ability'. 10
8. Discuss pasteurization of milk and packaging of Milk powder, Butter, Gulabjamun and Icecream. 10
9. Enlist three important zoonotic diseases and suggest the measures to prevent their transmission. 10
10. Define "HACCP" and "ISI (BIS) standards" for cheese. 10

**PART C**

*Answer each question in about 150 words. Each question carries 15 marks.*

1. Give optimum feeding ration for Gir heifers and Hampshire gilts. 15
2. Enlist Water pollutants and discuss the measures to overcome them. 15
3. Give significance of E. Coli in sea foods. 15
4. Define 'Selection intensity' and explain the effectiveness and limitations of any one method of selection. 15
5. Enlist Metabolic disorders in bovine. Write preventive and therapeutic measures of Milk fever. 15
6. Mention the functions of Village Milk Co-operative Society, Dairy Unions and Milk Marketing Federation. 15

**PART D**

3×30=90

Answer any **three** of the following questions, each in about 300 words.  
Each question carries 30 marks.

1. Write on 'Impact of dairy co-operative movement' in India. 30
2. Explain the projects for self-employment of educated rural youth. 30
3. Describe the methods of communication to rural farmers. 30
4. Discuss crossbreeding policy for cattle and sheep in India. 30
5. Write preventive and therapeutic measures for Foot and Mouth Disease, Marek's Disease, Hog fever and Enterotoxaemia 30

**SET B**  
**Animal Husbandry and Fisheries**

**PART A**

4×5=20

*Answer each question in about 50 words. Each question carries 5 marks.*

1. Write short notes :
- |   |   |
|---|---|
| (a) Qualities of ideal maize silage                 | 5 |
| (b) Fish as a source of animal protein and minerals | 5 |
| (c) Advantages of canning                           | 5 |
| (d) Fish Silage                                     | 5 |

**PART B**

10×10=100

*Answer each question in about 100 words. Each question carries 10 marks.*

1. Enlist two crossbred cattle and sheep breeds developed in India and give their economical characters. 10
2. Describe physical characters and preservation policy of Amritmahal and Hallikar breed. 10
3. Give 'Year round green fodder production calendar'. 10
4. Explain 'Creep feeding in piglets'. 10
5. Rank three leguminous (Lucerne, Sunflower and Cowpea) and three non-leguminous (Maize, Jowar and Oats) fodders mentioning their nutritive value. 10
6. Describe sealing and packaging methods for fresh fish. 10
7. Discuss the net handling devices. 10
8. Give bio-chemical and microbial evaluation of fish for human consumption. 10
9. Write on significance of sea weeds in human and animal nutrition. 10
10. Describe fishing crafts in India. 10

**PART C**

6×15=90

*Answer each question in about 150 words. Each question carries 15 marks.*

1. Give optimum feeding ration for Gir heifers and Hampshire gilts. 15
2. Enlist water pollutants and discuss the measures to overcome them. 15
3. Give significance of E.Coli in sea foods. 15
4. Discuss cell damage, crystal formation and freezing. 15
5. Give guideline for preparation of fish sausage and its quality evaluation. 15
6. Enlist additives and preservatives used in fish products. 15

**PART D**

Answer any **three** of the following questions, each in about 300 words.  
Each question carries 30 marks.

1. Write 'Impact of dairy co-operative movement' in India. 30
2. Explain the projects for self-employment of educated rural youth. 30
3. Describe the methods of communication to rural farmers. 30
4. Define 'Fish pickles'. Describe its preparation and preservation methods. 30
5. Discuss principles of net webbing. 30