

**C-7277**

**Sub. Code**

**80311**

**DIPLOMA EXAMINATION, NOVEMBER 2025**

**First Semester**

**Commercial Broiler Production Management**

**BROILER HOUSING, EQUIPMENT AND AUTOMATION**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. The heat loss due to contact with cold air is called as
  - (a) Conduction
  - (b) Radiation
  - (c) Convection
  - (d) Evaporation
  
2. The height of brooder guard is
  - (a) 0.5 feet
  - (b) 1.5 feet
  - (c) 3 feet
  - (d) 3.5 feet
  
3. The ventilation caused by full and half monitors is called as
  - (a) Forced draft
  - (b) Negative pressure ventilation
  - (c) Cross ventilation
  - (d) Ridge ventilation

4. Which one of the following is intensive system?
- (a) Pen cum run system
  - (b) Folding unit system
  - (c) Backyard system
  - (d) Cage system
5. Under deep litter brooding ,one nipple drinker will be enough for \_\_\_\_\_ number(s) of chicks
- (a) 8
  - (b) 5
  - (c) 13
  - (d) 1
6. To reduce the poultry house temperature, the outer side of the roof have to be coated with
- (a) Black paint
  - (b) Blue paint
  - (c) White paint
  - (d) Red paint
7. The feeder used in the Californian cages is
- (a) Linear feeder
  - (b) Circular feeder
  - (c) Auger with pan feeder
  - (d) Basin with grill feeder
8. In infra-red brooding, watts per chick is
- (a) 4
  - (b) 10
  - (c) 1
  - (d) 5
9. In canopy brooding, the use of canopy is to
- (a) Hold the hot air
  - (b) Focus the heat
  - (c) Focus the light
  - (d) All the above
10. The comfortable temperature for rearing broiler is
- (a) 40-50°C
  - (b) 50-60°C
  - (c) 10-20°C
  - (d) 22-30°C

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Why housing is important for poultry?

Or

- (b) Relative merits and demerits of single and multiple batch system of rearing broilers.

12. (a) Write the advantages and disadvantages of slat and litter floor.

Or

- (b) Optimal climatic conditions for broilers.

13. (a) Qualities of good litter material.

Or

- (b) Tunnel ventilation system.

14. (a) Brooding equipment.

Or

- (b) What are the alleviating measures to be taken during summer in the broiler house?

15. (a) Explain fundamentals of heating in broiler sheds.

Or

- (b) Advantages of automation in poultry industry.

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Write in detail about systems of poultry rearing.

Or

- (b) Explain about different cage system in poultry farm with diagram.

17. (a) Discuss in detail about the factors to be considered in construction of broiler house.

Or

- (b) Effect of climatic factors on broiler performance.

18. (a) Discuss about environmentally controlled house.

Or

- (b) Explain in detail about winter and summer ventilation in broiler houses.

19. (a) What are the major requisites of poultry equipment?

Or

- (b) Explain in detail about different types of feeding and watering equipment used in broiler farm with diagram.

20. (a) Write in detail about concept and application of automation in poultry industry.

Or

- (b) Discuss about the automation in feeding and drinking system.

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**DIPLOMA EXAMINATION, NOVEMBER 2025**

**First Semester**

**Commercial Broiler Production Management**

**COMMERCIAL BROILER CHICKEN MANAGEMENT**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. Which type of system of rearing can able to withstand market sustainability in regards to broiler framing
  - (a) Multiple batch system
  - (b) All in all out system
  - (c) Seasonal rearing
  - (d) None of the above
2. Which among these are commercial broiler strains?
  - (a) Lohmann
  - (b) Sun – Bro
  - (c) Hyline
  - (d) BV-300
3. Optimum temperature for brooding management in first week
  - (a) 100 to 105°F
  - (b) 90 to 95°F
  - (c) 80 to 85 °F
  - (d) 110 to 115°F

4. 100 % of crop will be filled by
- (a) 8 hours of brooding
  - (b) 48 hours of brooding
  - (c) 24 hours of brooding
  - (d) 16 hours of brooding
5. Optimum body weight of female boilers during marketing age (35 to 38 days)
- (a) 1.7 kg
  - (b) 1.4 kg
  - (c) 2 kg
  - (d) 2.2 kg
6. Permissible ammonia level in broiler farm
- (a) 20 ppm
  - (b) 20 ppb
  - (c) 25 ppm
  - (d) 25ppb
7. Which form of feed is provide to broiler chicks
- (a) Concentrate
  - (b) Forages
  - (c) Crumble
  - (d) Pellet
8. Mycotoxin in feeds is produced by
- (a) Virus
  - (b) Parasitic
  - (c) Bacteria
  - (d) Fungus
9. Average Feed Conversion Ratio in broilers
- (a) 2.1 to 2.5
  - (b) 1
  - (c) 1.1 to 1.2
  - (d) 1.4 to 1.5
10. Average body weight of day old broiler chick
- (a) 30g
  - (b) 35g
  - (c) 40 g
  - (d) 45g

**Part B**

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Differentiate in brief between All in all out and multiple batch system of rearing.

Or

- (b) Explain how does vertical integration impacted broiler farming.

12. (a) What is crop score assessment and its importance in brooding management?

Or

- (b) Brief on behavioral assessment of chicks for efficient brooding management.

13. (a) Brief on finisher management in commercial broiler production

Or

- (b) Brief about litter management in broilers.

14. (a) Discuss on water sanitation and its importance in broiler farming.

Or

- (b) How does pellet feed is advantageous over mash feed in broiler feeding?

15. (a) Explain and differentiate between FCR and EEf.

Or

- (b) Economical importance of lifting efficiency at market age of broilers.

**Part C**

(5 × 8 = 40)

Answer **all** questions choosing either (a) or (b).

16. (a) Detail on various system of rearing followed in commercial broiler production.

Or

- (b) How does BCC, NMPPB make broiler marketing efficient and list out other players involved in broiler marketing in India?

17. (a) Explain the importance of temperature and relative humidity in brooding management.

Or

- (b) List out various measure to be taken for optimum brooding management with reference to broiler chicks.

18. (a) Explain the measures to be taken for efficient grower management.

Or

- (b) Detail the importance of feeder and drinker management to achieve uniform body weight.

19. (a) How does summer and winter affects the production performance in broilers and what are all the steps to be taken for achieve standard body weights in commercial broiler.

Or

- (b) Discuss on various forms of feed and its efficiency, relative advantage and disadvantage from other form of feeds.

20. (a) Explain in detail about any four production performance parameter to monitors broiler performance.

Or

- (b) Comment on importance on daily feed intake and its relative body weight gain.

**C-7279**

**Sub. Code**

**80313**

**DIPLOMA EXAMINATION, NOVEMBER 2025**

**First Semester**

**Commercial Broiler Production Management**

**CHICKEN ANATOMY, INCUBATION AND HATCHERY  
MANAGEMENT**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. Which breed does not belong to American class of poultry?  
(a) New Hampshire    (b) Rhode Island Red  
(c) Leg horn            (d) Plymouth Rock
  
2. Normal heart rate in chicken is  
(a) 200 beats/minute  
(b) 220 beats/minute  
(c) 500-600 beats/minute  
(d) 350-475 beats/minute
  
3. The second part of the oviduct  
(a) Magnum            (b) Infundibulum  
(c) Uterus              (d) Isthmus

4. Chicken egg shell is composed primarily of
  - (a) Calcium carbonate
  - (b) Magnesium carbonate
  - (c) Calcium phosphate
  - (d) None of the above
  
5. A single air sac is found in the
  - (a) Cervical region
  - (b) Interclavicular region
  - (c) Abdominal region
  - (d) None of the above
  
6. Which is the vocal organ of the fowl?
  - (a) Larynx
  - (b) Syrinx
  - (c) Bronchi
  - (d) Trachea
  
7. Incubation period for duck eggs
  - (a) 21 days
  - (b) 28 days
  - (c) 35 days
  - (d) 42 days
  
8. Beginning of hardening of beak
  - (a) 24 hours of incubation
  - (b) 40 hours of incubation
  - (c) Second day of incubation
  - (d) Third day of incubation
  
9. Hatching eggs have to be transferred from setter to hatcher
  - (a) 19<sup>th</sup> day of incubation
  - (b) 17<sup>th</sup> day of incubation
  - (c) 20<sup>th</sup> day of incubation
  - (d) 18<sup>th</sup> day of incubation



**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b)

16. (a) Write in detail on thermoregulation in chicken

Or

- (b) Explain in detail on classification and breeds of chicken.

17. (a) Write in detail on male reproductive system with a neat diagram.

Or

- (b) Describe in detail on skeletal system with a neat diagram.

18. (a) Describe in detail on avian respiratory system with a neat diagram.

Or

- (b) Describe in detail on avian immune system with neat diagram.

19. (a) Write in detail about hatchery lay out, design and construction.

Or

- (b) Write in detail about physical requirements for incubation of chicken eggs.

20. (a) Describe in detail about hatchery operations.

Or

- (b) Describe in detail about in-ovo and in-hatch vaccinations and medications.

**C-7280**

**Sub. Code**

**80321**

**DIPLOMA EXAMINATION, NOVEMBER 2025.**

**Second Semester**

**Commercial Broiler Production Management**

**BROILER NUTRITION AND FEED MILLING  
TECHNOLOGY**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. Which nutrient is primarily responsible for energy in poultry diets?  
(a) Protein                      (b) Carbohydrates  
(c) Minerals                      (d) Vitamins
2. Which of the following is a non-conventional feed ingredient?  
(a) Corn                              (b) Groundnut cake  
(c) Leaf meal                      (d) Wheat
3. What is the main nutritional concern for broilers during the summer season?  
(a) Protein deficiency  
(b) Energy deficiency  
(c) Heat stress leading to reduced feed intake  
(d) Vitamin deficiency

4. Which feeding method adjusts the nutrient content of the diet based on the specific growth phase of the broilers?
  - (a) Ad libitum feeding
  - (b) Precision feeding
  - (c) Phase feeding
  - (d) Supplementary feeding
  
5. Which of the following is a prebiotic commonly added to poultry feed?
  - (a) Mannan oligosaccharides (MOS)
  - (b) Bacillus subtilis
  - (c) calcium propionate
  - (d) Butylated hydroxyanisole (BHA)
  
6. What is the primary cause of mycotoxin contamination in poultry feed?
  - (a) Chemical fertilizers
  - (b) Improper feed storage
  - (c) Overuse of antibiotics
  - (d) Low feed moisture content
  
7. What is the main benefit of the pelletizing process in feed production?
  - (a) Increased feed palatability
  - (b) Reduced nutrient loss during storage
  - (c) Improved feed digestibility
  - (d) All of the above

8. What is the purpose of the conditioning process in feed production?
- (a) To remove dust from the feed
  - (b) To heat and moisten the feed before pelletizing
  - (c) To cool the feed after pelletizing
  - (d) To blend ingredients evenly
9. Which of the following is a common adulterant in soybean meal?
- (a) Urea
  - (b) Sand
  - (c) Aflatoxin
  - (d) Wheat bran
10. Why is it important to conduct quality control in feed milling?
- (a) To enhance the color of feed
  - (b) To ensure uniformity and safety of the final product
  - (c) To reduce the cost of production
  - (d) To increase the bulk of feed

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) What are the BIS standards for broiler feed, and why are they important?

Or

- (b) Discuss the difference between conventional and non-conventional poultry feeds with examples.

12. (a) Describe the methods of feeding commercial broilers and the importance of each method.

Or

- (b) What are some common nutritional deficiency diseases in poultry, and how can they be prevented?

13. (a) Explain the role of antioxidants in poultry feed and their importance in maintaining feed quality.

Or

- (b) What are toxin binders, and how do they help in managing mycotoxins in poultry feed?

14. (a) What are the key considerations for effective feed storage in a feed mill?

Or

- (b) Explain the significance of the grinding and mixing processes in feed production.

15. (a) What are some common adulterants found in feed ingredients, and how can they be detected?

Or

- (b) Discuss the key components of quality control in feed milling and their significance.

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Compare and contrast the use of vegetable and animal protein sources in poultry feed, including their benefits and potential issues.

Or

- (b) Explain the significance of BIS standards in the formulation of poultry feed and the impact of adhering to these standards on the quality and safety of poultry products.
17. (a) Compare and contrast the different forms of poultry feed (mash, pellet, crumble) in terms of their composition, benefits, and impact on broiler performance.

Or

- (b) Analyze the strategies used for seasonal feeding management in broilers, particularly focusing on the differences between summer and winter feeding practices. How do these strategies affect broiler health and production efficiency?
18. (a) Discuss the classification of feed additives in poultry nutrition, including antioxidants, enzymes, probiotics, prebiotics, antibiotics, toxin binders, and herbs. Highlight their specific roles and benefits.

Or

- (b) Examine the different types of feed toxins, including mycotoxins and pesticide toxins.

19. (a) Examine the design and equipment of a feed mill. Discuss how the layout and machinery choices affect feed production efficiency and quality.

Or

- (b) Discuss the challenges and best practices in feed storage to prevent contamination, nutrient loss, and spoilage. Include the impact of environmental factors and the importance of storage design.
20. (a) Discuss the methods used for the physical and sensory evaluation of feed ingredients. How do these evaluations impact the overall quality of compounded feed?

Or

- (b) Examine the different sampling techniques used in feed milling. Discuss how these techniques contribute to accurate quality assessment and the challenges associated with each method.
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**C-7281**

**Sub. Code**

**80322**

**DIPLOMA EXAMINATION, NOVEMBER 2025**

**Second Semester**

**Commercial Broiler Production Management**

**BROILER FLOCK HEALTH, DISEASES AND  
BIO-SECURITY**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. Bleaching powder is recommended at the dose rate of
  - (a) 8 g in 1000 litres of drinking water
  - (b) 10 gin 1000 litres of drinking water
  - (c) 12 g in 1000 litres of drinking water
  - (d) 6 g in 1000 litres of drinking water
  
2. There are \_\_\_\_\_ types of biosecurity
  - (a) Two
  - (b) Three
  - (c) Four
  - (d) Five

3. Which one of the following lesions is pathognomonic for Ranikhet disease?
- (a) Proventriculus may show haemorrhagic patch at its junction with gizzard
  - (b) Pinpoint haemorrhages in the proventriculus
  - (c) Both (a) and (b)
  - (d) None
4. Avian influenza was first seen in
- (a) Italy
  - (b) France
  - (c) India
  - (d) Pakistan
5. The most important lesion in CRD is
- (a) Swollen face
  - (b) Petechial haemorrhages on heart
  - (c) Cloudy appearance of one or more air sacs
  - (d) All the above
6. Fowl typhoid is caused by
- (a) *Salmonella gallinarum*
  - (b) *Pasteurella multocida*
  - (c) *Salmonella pullorum*
  - (d) *Mycoplasma gallisepticum*

7. Scaly leg mite is
- (a) *Knemidocoptes gallinae*
  - (b) *Knemidocoptes mutans*
  - (c) *Dermanyssus gallinae*
  - (d) *Cytodites nudus*
8. Intestinal coccidiosis is caused by
- (a) *Eimeria necatrix*
  - (b) *Eimeria tenella*
  - (c) *Eimeria bruneti*
  - (d) *Eimeria acervulina*
9. Lasota vaccine is administered to the broiler chicks through
- (a) Subcutaneous route
  - (b) Intramuscular
  - (c) Eye or nasal drops
  - (d) Drinking water
10. Mareks disease vaccine is given to the broiler chicks at
- (a) Day one in the hatchery
  - (b) Day seven
  - (c) Day twenty
  - (d) Day twenty eight

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Precautions to be followed while giving the vaccine through drinking water.

Or

- (b) Shuttle and rotation programme followed to control the coccidiosis

12. (a) Write briefly about Fowl Typhoid.

Or

- (b) Explain briefly about Fowl Cholera.

13. (a) Usage of antibiotic growth promoters that are commonly added in the broiler feed.

Or

- (b) Briefly explain the various components of Biosecurity.

14. (a) Factors to be considered while choosing a disinfectant to be used in the poultry farm.

Or

- (b) Various ectoparasitic infestation in broiler and measures to control the same.

15. (a) Explain briefly about Aspergillosis.

Or

- (b) Properties of good anticoccidial drugs.

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Describe in detail on the etiology, host and transmission, signs, morbidity and mortality, gross lesions, diagnosis, treatment and control of Infectious Laryngo tracheitis.

Or

- (b) Describe in detail on the etiology, host and transmission, signs, morbidity and mortality, gross lesions, diagnosis, treatment and control of Gumboro Disease
17. (a) Describe in detail on the etiology, host and transmission, signs, morbidity and mortality, gross lesions, diagnosis, treatment and control of Pullorum disease.

Or

- (b) Describe in detail on the etiology, host and transmission, signs, morbidity and mortality, gross lesions, diagnosis, treatment and control of Fowl Pox.
18. (a) Managemental factors in disease prevention and measures to prevent the outbreak.

Or

- (b) Describe in detail on the conceptual, structural and operational biosecurity principles to be followed in the commercial broiler farms.

19. (a) Write in detail about vaccination procedure and precautions in broiler chicken.

Or

(b) Write in detail about Gout and sudden death syndrome in broilers

20. (a) Describe in detail about coccidiosis causes and control measures.

Or

(b) Describe in detail about types of medication and importance of feed medication.

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