

C-2749

Sub. Code

80311

DIPLOMA EXAMINATION, APRIL 2024

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.

Choose the correct answer.

1. The rank of India in world is broiler meat production
(a) First (b) Third
(c) Fourth (d) Fifth
2. Broilers are mostly reared in
(a) Deep litter system
(b) Cage
(c) Slatted floor
(d) Both (a) and (b)
3. The long axis of the broiler houses should be oriented in tropical climate.
(a) East-West direction
(b) North-South direction
(c) Both (a) and (b)
(d) None

4. The pH of drinking water should be for broilers
 - (a) >7
 - (b) <7
 - (c) 7
 - (d) None

5. The width of tunnel ventilated broiler houses can go upto
 - (a) 25 feet
 - (b) 30 feet
 - (c) 40 feet
 - (d) 35 feet

6. Asbestos roof will last for
 - (a) 2 years
 - (b) 10 years
 - (c) 15 years
 - (d) 20 years

7. One nipple drinker is sufficient for how many broiler chicks?
 - (a) 2–3
 - (b) 3–5
 - (c) 5–7
 - (d) 1–3

8. For how many broiler chicks, one electric broiler is sufficient.
 - (a) 250–300
 - (b) 200–250
 - (c) 150–200
 - (d) 300–350

9. One automatic bell drinker is sufficient for how many broilers?
 - (a) 30
 - (b) 50
 - (c) 70
 - (d) 80

10. The automatic feeding system in broilers is mainly focussed on
 - (a) High FCR
 - (b) Lowest feed wastage
 - (c) Both (a) and (b)
 - (d) None of the above

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) What are the advantages of rearing broilers in deep litters system?

Or

- (b) Write briefly about the slatted floor system of rearing broilers.

12. (a) Write briefly about broiler farm location and layout.

Or

- (b) Explain briefly about broiler brooding equipment.

13. (a) Write briefly about good qualities of litter materials used for rearing broilers.

Or

- (b) Explain briefly about the types of broiler houses.

14. (a) Write briefly about the feeding equipment for broilers.

Or

- (b) Explain briefly about the watering equipment for broilers.

15. (a) Write briefly about automation in feeding broilers.

Or

- (b) Explain briefly about automation in watering broilers.

Part C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Write in detail on the broiler industry in India.

Or

(b) Explain in detail on floor space, watering and feeding space requirements of broilers.

17. (a) Explain in detail on the principles of poultry house construction.

Or

(b) Write in detail on water sanitation in broiler farms.

18. (a) Write in detail on environmentally controlled houses for broilers.

Or

(b) Explain in detail on types of roof and roofing materials used in broiler houses.

19. (a) Write a detailed answer on weighing scales and foggers used for broiler rearing.

Or

(b) Explain in detail on vaccination schedule for broilers and the types of vaccinators.

20. (a) Explain in detail on the concept and application of automation in poultry industry.

Or

(b) Write in detail on automation in poultry feed production.

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80312

DIPLOMA EXAMINATION, APRIL 2024.

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. National Meat and Poultry Processing Board is located in
(a) New Delhi (b) Chennai
(c) Kolkatta (d) Mumbai
2. The broiler price is fixed by
(a) NECC (b) BCC
(c) Both (a) and (b) (d) None
3. Brooding temperature for broiler chicks during first week
(a) 80 degrees Fahrenheit
(b) 85 degrees Fahrenheit
(c) 90 degrees Fahrenheit
(d) 95 degrees Fahrenheit
4. Floor space requirement for broiler chicks during 5 to 7 days.
(a) 0.6 sq.ft/chick (b) 0.5 sq.ft/chick
(c) 0.8 sq.ft/chick (d) 1.2 sq.ft/chick

5. During growing, relative humidity inside the broiler house should be within.
- (a) 50-60% (b) 60-70%
- (c) 70-80% (d) 80-90%
6. For feed and water broilers should not move more than
- (a) 0.5 metre (b) 1 metre
- (c) 1.5 metres (d) 2 metres
7. Nitrate level in drinking water should be
- (a) 10 mg/litre (b) 14 mg/litre
- (c) 125 mg/litre (d) 32 mg/litre
8. One feeder is sufficient for
- (a) 30 growers (b) 40 growers
- (c) 50 growers (d) 60 growers
9. Ideal FCR in broiler farming
- (a) 2 (b) 1.9
- (c) 1.8 (d) 1.6
10. The permissible livability percentage in broiler farming
- (a) 90 (b) 96
- (c) 92 (d) 98

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write briefly about broiler coordination committee.

Or

- (b) Explain briefly about multiple batch system of rearing with its advantages and disadvantages.

12. (a) How will you the brooder house to receive the broiler chicks?

Or

- (b) Write briefly about crop score assessment.

13. (a) Explain briefly about good qualities of litter materials for broiler chicken.

Or

- (b) Write briefly about feeding management of broiler chicken.

14. (a) Write briefly about water quality standards for broilers.

Or

- (b) Explain briefly about winter management of broiler chicken.

15. (a) Write briefly about lining of broiler.

Or

- (b) Explain briefly about feed conversion ratio of broiler chicken.

Part C

(5 × 8 = 40)

Answer **all** the questions.

16. (a) Write in detail about SWOT analysis of broiler industry in India.

Or

- (b) Write in detail about biosecurity measures to be followed in broiler farms.

17. (a) Describe in detail about brooder management of broiler chicks.

Or

(b) Describe in detail about lighting management in broiler farm.

18. (a) Discuss in detail about litter management in broiler farming.

Or

(b) Discuss in detail on drinker management in broilers.

19. (a) Describe in detail about water sanitation in a broiler farm.

Or

(b) Describe in detail about management of broiler chicken during summer season.

20. (a) Write in detail on performance monitoring in broilers.

Or

(b) Discuss in detail on broiler finisher management.

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80313

DIPLOMA EXAMINATION, APRIL 2024.

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** the questions.

1. Which breed does not belong to English class of poultry?
(a) New Hampshire (b) Cornish
(c) Sussex (d) Australorp
2. Normal heart rate in turkey is
(a) 200 beats/minute
(b) 220 beats/minute
(c) 200-275 beats/minute
(d) 350-475 beats/minute
3. The part of the oviduct where inner and outer shell membranes are added
(a) Magnum (b) Infundibulum
(c) Uterus (d) Isthmus
4. Annual egg production in Guinea fowl is
(a) 105 (b) 40-60
(c) 150-200 (d) 330

5. Number of air sacs found in the most of the birds
- (a) Seven (b) Eight
(c) Nine (d) Ten
6. Which hormone triggers ovulation in the hens?
- (a) Luteinising Hormone
(b) Follicle Stimulating Hormone
(c) Prolactin
(d) Oxytocin
7. Incubation period for Ostrich eggs
- (a) 21 days (b) 28 days
(c) 35 days (d) 42 days
8. Beginning of formation of eye takes place at
- (a) 21 hours of incubation
(b) 24 hours of incubation
(c) 42 hours of incubation
(d) 54 hours of incubation
9. Candling of hatching eggs has to be carried out at
- (a) 10th day of incubation
(b) 7th day of incubation
(c) 4th day of incubation
(d) 15th day of incubation
10. The embryos will tolerate a carbon dioxide level of
- (a) 2% (b) 5%
(c) 1% (d) 0.5%

Part B

(5 × 5 = 25)

Answer **all** the questions.

11. (a) Explain briefly about feather patterns.

Or

- (b) Write briefly about the role of plumage and beak in poultry.

12. (a) Explain briefly about the egg structure and composition.

Or

- (b) Write briefly about digestive processes in poultry.

13. (a) Write briefly about inhalation and exhalation process in chicken.

Or

- (b) Explain briefly about the positive and negative feedback systems in poultry with suitable diagram.

14. (a) Give a brief account of storage of hatching eggs.

Or

- (b) Write briefly about methods of incubation in poultry.

15. (a) Explain briefly about pedigree hatching.

Or

- (b) Explain briefly about the grading of chicks.

Part C

(5 × 8 = 40)

Answer **all** the questions.

16. (a) Write in detail on integumentary parts of chicken.
Or
(b) Explain in detail on physiological standards of chicken.
17. (a) Write in detail on female reproductive system with a neat diagram.
Or
(b) Describe in detail on excretory system with a neat diagram.
18. (a) Describe in detail on hypothalamic control of appetite in poultry with a neat diagram
Or
(b) Describe in detail on adaptation to heat and cold stress in poultry.
19. (a) Write in detail about chicken embryonic development stages.
Or
(b) Write in detail about methods of fumigation of hatching eggs and effects of temperature and humidity on hatchability
20. (a) Describe in detail about automation in hatchery operations.
Or
(b) Describe in detail about types of incubators and in-ovo vaccination.

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80321

DIPLOMA EXAMINATION, APRIL 2024.

Second Semester

Commercial Broiler Production Management

**BROILER NUTRITION AND FEED MILLING
TECHNOLOGY**

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Section A

(10 × 1 = 10)

Answer **all** questions.

1. Grains are the major source of
 - (a) Energy
 - (b) Protein
 - (c) Fat
 - (d) None of these
2. Which of the following is not a vegetable protein source?
 - (a) Peanut meal
 - (b) Soyabean meal
 - (c) Fish meal
 - (d) Guar meal
3. Which of the following is used to prevent rancidity?
 - (a) Antitoxins
 - (b) Antioxidants
 - (c) Antibiotics
 - (d) Post biotics
4. Which of the following is the most critical amino acid in broiler?
 - (a) Arginine
 - (b) Lysine
 - (c) Valine
 - (d) Methionine

5. Which of the following is an anti-coccidial drug?
- (a) Virginiamycin (b) Salinomycin
(c) Maduramycin (d) All of the above
6. Which of the following is not an antibiotic?
- (a) Neomycin (b) Tetracycline
(c) Streptomycin (d) Amprolium
7. Antinutritional factor present in cotton seed meal is
- (a) Goitrogen (b) Trypsin inhibitors
(c) Gossypol (d) Mimosin
8. Which one is the property of pellet feed?
- (a) More dustiness in nature
(b) It is in powder form
(c) Not used for poultry feed
(d) It reduces dustiness
9. The most commonly used particle size reduction procedure in poultry feeds is
- (a) Roller mill (b) Burr mill
(c) Hammer mill (d) None of these
10. It is uneconomical to grind grains at moisture content of
- (a) 6% (b) 8%
(c) 10% (d) >12%

Section B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write briefly about proximate principals.

Or

- (b) Write about Fish meal, uses and constraints.

12. (a) Write in detail about pellet feeds and pellet feeding.

Or

- (b) Write in detail about phase feeding in broilers.

13. (a) Discuss about use of oil/fat in broiler diet.

Or

- (b) Prevention of mycotoxin in feed.

14. (a) Explain about the pelleting process.

Or

- (b) Explain briefly about feed storage.

15. (a) Explain briefly about the sensory evaluation of feed ingredients.

Or

- (b) Common adulterants in feed stuffs.

Section C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Explain in detail about vegetable protein source.

Or

- (b) BIS standard for broiler chicken.

17. (a) Discuss in detail on nutrient manipulation during summer for broilers.

Or

(b) Explain in detail about ascites in broilers.

18. (a) Common feed additives used in broiler feed formulation.

Or

(b) Nutrient manipulation for broiler during summer.

19. (a) Write a detailed answer on crumble feed production.

Or

(b) Explain in detail about process flow in feed production process.

20. (a) Discuss in detail on sampling techniques for feed ingredients.

Or

(b) Explain in detail about the Quality control operations in Feed milling process.

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80322

DIPLOMA EXAMINATION, APRIL 2024.

Second Semester

Commercial Broiler Production Management

**BROILER FLOCK HEALTH, DISEASE AND
BIOSECURITY**

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. Didecyl dimethyl ammonium chloride is recommended at the dose rate of
 - (a) 1 ml in 10 litres of drinking water
 - (b) 2 ml in 10 litres of drinking water
 - (c) 5 ml in 10 litres of drinking water
 - (d) 7 ml in 10 litres of drinking water
2. Biosecurity is classified into
 - (a) Two categories
 - (b) Three categories
 - (c) Four categories
 - (d) Five categories
3. Pathognomonic lesion for Ranikhet disease in chicken is
 - (a) Patchy haemorrhage in gizzard
 - (b) Petechial haemorrhage in proventriculus
 - (c) Petechial haemorrhage in pancreas
 - (d) Ecchymotic hemorrhage in comb

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. RDVF vaccine is administered to the broiler chicks through
(a) Subcutaneous route
(b) Intramuscular
(c) Intraocular
(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.

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) Use of antibiotic growth promoters commonly added in the broiler feed.
- Or
- (b) Briefly explain the various components of Biosecurity.
14. (a) Discuss different disinfectants used in poultry farm.
- Or
- (b) Discuss lice infestation in chicken and their control measures.
15. (a) Explain briefly about Aspergillosis.
- Or
- (b) Discuss properties of good anticoccidial drugs.

Part C

(5 × 8 = 40)

Answer **all** questions.

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

Or

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

17. (a) Discuss in detail about Pullorum disease in chicken.

Or

- (b) Discuss in detail about Fowl pox in chicken.

18. (a) Discuss managemental factors in disease prevention and measures to prevent the outbreak.

Or

- (b) Discuss about biosecurity.

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 ad control measures.

Or

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

C-2755

Sub. Code

80323

DIPLOMA EXAMINATION, APRIL 2024

Second Semester

Commercial Broiler Production Management

BROILER PROCESSING AND MARKETING

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. The major pigment responsible for meat colour is
 - (a) Haemoglobin
 - (b) Myoglobin
 - (c) Carotene
 - (d) Xanthophylls
2. Giblet includes
 - (a) Liver, crop and lung
 - (b) Liver, heart and gizzard
 - (c) Liver, heart and liver
 - (d) Liver, crop and gizzard
3. A discoloration and pock marking on the skin observed in frozen poultry carcass is called
 - (a) Freezer burn
 - (b) Weep
 - (c) Thaw rigor
 - (d) PSE
4. Number of principle involved in HACCP
 - (a) 3
 - (b) 5
 - (c) 7
 - (d) 9

5. Fresh meat has water activity of
- (a) 0.99 or more (b) 0.88
(c) 0.83 (d) 0.75
6. Which of the following is correct regarding export of broiler meat?
- (a) Free from chemicals
(b) Free from antibiotics
(c) Free from mycotoxins
(d) All the above
7. The optimum marketing age for broiler chicken is
- (a) 72 weeks (b) 52 weeks
(c) 35 weeks (d) 35 days
8. Indian poultry market is dominated by
- (a) Wet market (b) Processed chicken
(c) Imported meat (d) None of the above
9. Efficiency of broiler marketing can be increased by
- (a) Supply chain management
(b) Government policy
(c) Traceability
(d) All the above
10. According to BIS transport of poultry – code of practice 2001 minimum space required to transport one month old chickens is
- (a) 10 cm² (b) 75 cm²
(c) 100 cm² (d) 400 cm²

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Discuss the specification for grading of dressed chicken as per Indian standards.

Or

- (b) Discuss in detail about the ante-mortem inspection of poultry.

12. (a) Discuss the different materials used in packaging.

Or

- (b) Discuss the different methods of poultry meat packaging.

13. (a) Discuss various methods used for disposal of dead birds.

Or

- (b) Explain the importance of hatchery waste management.

14. (a) Discuss in brief about advantage of vertical integration.

Or

- (b) Scope of processed chicken meat marketing in India.

15. (a) List out various broiler marketing channels.

Or

- (b) Explain the role of BCC in broiler marketing.

Part C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Write in detail the steps involved in slaughter and dressing of broiler with flow chart.

Or

- (b) Explain in detail about chilling and freezing as a method of preservation and their types.

17. (a) HACCP and its application in poultry processing plant for quality control.

Or

- (b) List out regulations for export of poultry products.

18. (a) Explain in detail about the treating the waste water from meat processing plant.

Or

- (b) Design and layout for rendering plant.

19. (a) Explain types of integration along with its advantage and disadvantage.

Or

- (b) Discuss why does wet market is dominated in Indian poultry meat marketing.

20. (a) Discuss challenges and suggestions in broiler marketing in uncertain situations.

Or

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