VISVA-BHARATI
PALLI SIKSHA BHAVANA
(INSTITUTE OF AGRICULTURE)
DEPARTMENT OF ANIMAL SCIENCE

Final Examination – Theory 2016 (First Sem)
Course: PSC- 501
(Poultry Breeding & Genetics)

Time: 3 Hours **Max Marks: 50**

Explain the following (any five) (10×5= 50)

1. Write in brief regarding the Origin, distribution and production potential of different classes of breed of fowl reared in India. 10
2. What are the different selection methods used to develop poultry in India? 10
3. What are the different qualitative and quantitative traits commonly considered for poultry breeding? 10
4. Describe the different system of mating in poultry with illustration. 10
5. What is 'hybrid'? How is it developed? Mention the production of broiler chicks. 2+4+4=10
6. Describe in brief regarding the artificial insemination in poultry. What are the advantages of it? 7+3=10

7. Write short notes on (any five): 5×2 = 10
    a. Mendel's law of inheritance
    b. Lethal gene(s)
    c. Heritability
    d. Phenotype and Genotype
    e. Parent stock
    f. Pure lines
    g. Additive gene effect

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DEPARTMENT OF ANIMAL SCIENCE

Final Examination – Theory 2017 (First Sem)
Course: PSC- 501
(Poultry Breeding & Genetics)

Time: 3 Hours **Max Marks: 50**

Explain the following (any five) (10×5= 50)

1. What is 'Poultry'? Classify poultry birds with suitable examples. 2+8=10
2. What are the different breeding programme for developing egg-type and broiler-type of birds? 10
3. Enumerate the selection of methods for poultry. 10
4. Discuss about phenotype, genotype and environmental interactions with examples. 10
5. What are points to be consider for sexing of birds? 10
6. What is 'inbreeding depression'? What is the consequences of inbreeding in general? 2+8=10
7. Write short notes on (any four): 2.5 ×4 = 10
    a. Qualitative and Quantitative traits
    b. Broilers Vs layers
    c. Lethal genes
    d. Additive gene action
    e. Moulting
    f. Depigmentation
    g. Breeding record

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DEPARTMENT OF ANIMAL SCIENCE

Final Examination – Theory 2018 (First Sem)
Course: PSC- 501
(Poultry Breeding & Genetics)

Time: 3 Hours **Max Marks: 50**

Explain the following (any five) (10×5= 50)

1) Define 'broilers' and 'layers'. Which domestic birds come under 'poultry'? Mention one breed for each category. 4+2+4=10
2) How can you differentiate between bad and good layer externally? Mention the average egg production of a good layer. Which is the best method of selection for egg production in bird? 6+2+2=10
3) What do you mean by 'Hereditary'? How is it related to the production performance in birds? How is the hereditary transmission calculated? 2+4+4=10
4) Co-relate pigmentation, moulting and laying in lying birds with illustration. 10
5) Enumerate different methods of breeding in poultry. 10
6) Mention different breeding methods in poultry. 10
7) Write short notes on (any four): 2.5 ×4 = 10
   a) Incubation
   b) Heterozygosity and Homozygosity
   c) Recessive gene & dominant gene
   d) Mandel's law of inheritance
   e) Hardy-Winberg law

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DEPARTMENT OF ANIMAL SCIENCE

Final Examination – Theory 2019 (First Sem)
Course: PSC- 501
(Poultry Breeding & Genetics)

Time: 3 Hours **Max Marks: 50**

Explain the following (any five) (10×5= 50)

1. Describe different breeding methods with suitable illustrations. 10

2. What are different hereditary characters found in laying birds and how much of these characters transmitted? 10

3. What is moulting? Describe different moulters with advantages and disadvantages. 10

4. What are the different points to be considered for good layers? Explain. 10

5. What do you mean by 'poultry'? Mention different breeds of fowl, duck, quail with characters including average egg production per year. 10

6. Explain Mandel's Law of segregation. What do you mean by qualitative and quantitative traits? 10

7. Write short notes on (any four): 4×2.5=10
   a) Mutation
   b) Allele
   c) Dominant and recessive gene
   d) Pleiotrophy
   e) Linkage
   f) Variation
   g) Sex Chromosome

VISVA-BHARATI
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(INSTITUTE OF AGRICULTURE)
DEPARTMENT OF ANIMAL SCIENCE

Final Examination – Theory 2020 (First Sem)
Course: PSC- 501
(Poultry Breeding & Genetics)

Time: 3 Hours **Max Marks: 50**

Explain the following (any five) (10×5= 50)

1. What is moulting? Describe different moulters with advantages and disadvantages. 10
2. What do you mean by 'poultry'? Mention different breeds of fowl, duck, quail with characters including average egg production per year. 10
3. What are the different breeding programme for developing egg-type and broiler type of birds? 10
4. Enumerated the selection methods for poultry. 10
5. What are points to be considered for sexing birds? 10
6. What is 'inbreeding depression'? What are the consequences of inbreeding in general? 2+8=10
7. Write short notes on (any four): 4×2.5=10

   h) Broilers Vs layers

   i) Lethal genes

   j) Additive gene action

   k) Depigmentation

   l) Mutation

   m) Allele

VISVA-BHARATI
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DEPARTMENT OF ANIMAL SCIENCE

Final Examination – Theory 2023-24 (First Sem)
Course: PSC- 501
(Poultry Breeding & Genetics)

Time: 2 Hours **Max Marks: 30**

Explain the following (any three) (10×3= 30)

1. Describe auto sexing of chicks with appropriate example. What is random sample test? Explain marker-assisted selection. Enlist the applications of marker-assisted selection for improvement of poultry industry. What are quantitative trait loci? (2+2+2+2+2)

2. Describe different methods of mating in poultry. Explain artificial insemination along with advantages and disadvantages. Which methods of mating are followed in your institutional farm? (5+4+1)

3. Explain different methods of selection used in poultry breeding. Explain Recurrent (RS) and Reciprocal Recurrent Selection (RRS) in detail. Differentiate between them. (5+3+2)

4. Describe combined selection. Explain Osborne index and Abplanalp index with their applications. Define inbred with appropriate example. (3+3+3+1)

5. Describe the breeding programme followed in your state for developing egg-type and Broiler type of birds. (10)

M.Sc. Examination, 2016

Semester-I

Animal Science (Poultry)

Course: PSC-502

(Poultry Nutrition and Feeding)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions where question 1 is compulsory.

1. A. Fill in the blanks: 1×5=5
   a. Each time a molecule of uric acid is excreted one molecule of _____is lost.
   b. Zinc is an essential constituent of _____.
   c. Cage layer fatigue in laying hens may occur when _____ supply in diet is inadequate.
   d. The most limiting amino acid in maize soyabean meal based diet is _____.
   e. The star grazing condition in poultry is due to deficiency of _____.

   B. Tick (√) the correct answer from the followings: 1×5=5

   a) The vegetable protein source rich in lysine is
      i. Groundnut meal
      ii. Soyabean meal
      iii. Sesame oil cake
      iv. None of the above

   b) The fatty acid important for egg size is
      i. Stearic acid
      ii. Linoleic acid
      iii. Linolenic acid
      iv. Palmitoleic acid

   c) Gross energy (Kcal/g) value of pure fats and oils is about
      i. 4.15
      ii. 5.65
      iii. 9.40
      iv. 10.40

   d) The optimum daily requirement of calcium (g/bird) for commercial layers (90% egg production) is
      i. 1.2-2.5
      ii. 2.5-3.5
      iii. 3.5-4.5
      iv. 4.5-5.5

   e) Tryptophan may reduce the requirement of vitamin
      i. Menadione
      ii. Tocopherol
      iii. Riboflavin
      iv. Niacin

2. a) What is nutrient? 1+2+2+5=10
   b) Biological functions of vitamins in poultry.
   c) Essential amino acids in poultry nutrition.
   d) Write a short note on calcium nutrition in laying hens.

3. a) Metabolizable energy(ME). 2+3+5=10
   b) Factors influencing the feed consumption in birds.
   c) Mycotoxins and their impact in poultry production system.

4. a) Describe briefly the role of feed additives in poultry. 3+2+5=10
   b) What role does vitamin E play in poultry nutrition?
   c) Enumerate the protein digestion and absorption in poultry.

5. a) Anti-nutritional factors. 2+3+5=10
   b) Feeding regime layers bird during summer season.
   C) Different parts and their role of digestive system in poultry.

6. a) What is Respiratory quotient (RQ)? 1+4+2+3=10
   b) Role of linoleic acid in poultry nutrition
   c) Exudative diathesis-explain.
   d) Unconventional feeds and their importance in current situation.

7. a) What is Gross Energy (GE)? 2+2+3+3=10
   b) Regime of restricted feeding in commercial layer birds.
   c) Enumerate the significance of manganese in poultry nutrition
   d) Write a short note on biological value of protein.

8. Explain the followings: 2×5=10
   a) Net protein utilization (NPU)
   b) Anti-oxidant
   c) Curl-toe paralysis
   d) Perosis
   e) Non-starch polysaccharide (NSP)

M.Sc. Examination, 2017

Semester-I

Animal Science (Poultry)

Course: PSC-502

(Poultry Nutrition and Feeding)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions

1. What is nutrient? Write about the calcium nutrition in laying hens. What do you mean by Gross Energy (GE)? Glysine is essential for poultry nutrition-explain. 1+5+2+2=10

2. Enumerate the importance of phase feeding in poultry. What are the deficiency symptoms of dietary zinc? Briefly describe the energy portioning in poultry nutrition. 3+3+4=10

3. Calorie-protein ratio. What are the major energy source ingredients for poultry feed formulation? Write about the methods of feed mixing. Critical essential amino acids. 2+3+3+2=10

4. What do you mean by available phosphorus? Significance of feed restriction in poultry nutrition. Role of vitamin-E in poultry. 2+3+5=10

5. Write on different feeding system in poultry. Major functions of vitamin-A in poultry. Gizzard, the essential part of digestive system in poultry-explain. The role of digestive enzymes in poultry nutrition. 3+2+2+3=10

6. Synthesis of non-essential amino acids in poultry. What is net protein utilization (NPU). Different feed additives and their role in poultry nutrition. 3+2+5=10

7. What are the anti-nutritional factors? Cage layer fatigue-explain. The approach for nutritional adjustment during extreme weather. Role of non starch polysaccharides (NSPs) in poultry nutrition. 3+2+3+2=10

8. Write short notes: 2×5=10
   a. Perosis
   b. Crop milk
   c. Essential fatty acids
   d. Star grazing
   e. Aflatoxins

M.Sc. Examination, 2018

Semester-I

Animal Science (Poultry)

Course: PSC-502

(Poultry Nutrition and Feeding)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions

1. a) What is vitamin? 1+3+2+4=10
   b) Write about the biological functions of vitamins in poultry.
   c) Role of animal protein supplements in poultry feeds.
   d) Common mycotoxins and their impact on poultry production system.
2. a) Define Metabolizable energy (ME). 2+3+2+3=10
   b) Role of vitamin E is poultry nutrition.
   c) How does Zn play role for egg shell formation.
   d) Approach of nutritional adjustment during extreme weather.
3. a) Define amino acid imbalance. 1+3+4+2=10
   b) Describe briefly the role of feed additives in poultry nutrition.
   c) Draw and lebel different parts of digestive system in domestic fowl.
   d) Glycine is essential for poultry nutrition-explain.
4. a) Write down the role of linoleic acid in layers. 2+3+2+3=10
   b) ennymerate the factors affecting egg shell thickness.
   c) What do you mean by available phosphorus?
   d) Recent trends in poultry nutrition.
5. a) What is nutrition? 1+3+2+4=10
   b) What are the different feeding systems in poultry?
   c) Ca: P is essential for poultry nutrition-explain.
   d) Unconventional feeds and their importance in current scenario.
6. a) What is net protein utilization (NPU)? 2+2+4+2=10
   b) Write down the regime of restricted feeding in commercial layers.
   c) Enumerate the quantitative partitioning gross energy.
   d) Write the mechanism of action of probiotics as feed additives.
7. a) What is NSPs? 1+4+2+3=10
   b) Give the requirements of protein, energy, calcium and available phosphorus in the diets of broiler starter and finisher.
   c) Factors affecting protein digestibility.
   d) Give a critical appraisal of digestive enzymes in poultry nutrition.
8. Write short notes: 2×5=10
   a) Exudative diathesis b) Probiotics c) Net protein utilization (NPU)
   d) Calorie-protein ratio e) Curl- toe paralysis

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M.Sc. Examination, 2019

Semester-I

Animal Science (Poultry)

Course: PSC-502

(Poultry Nutrition and Feeding)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions

1. a) What is energy? Name four energy rich ingredients used in poultry feeding. 3+4+3=10
   b) Sketch down the energy portioning (feed to food) in poultry.
   c) Discuss about the feedings of ducks.
2. a) What is a 'balanced ration'? 2+5+3=10
   b) Draw and label the different parts of the digestive tract of a domestic fowl.
   c) Name three commonly available protein feed sources used for feeding of birds in India.
3. Differentiate between the following (**any four**): 2.5×4=10
   a) Broiler starter ration Vs broiler finisher ration.
   b) Nutrient requirement Vs Dietary Allowance.
   c) Mash feeding Vs Pellet feeding
   d) Diet Vs Ration
   e) Probiotics Vs Prebiotics
4. Justify the statements (**any two**): 5×2=10
   a) Birds has a special requirement for Arginine
   b) Birds has a limited capacity to use plant phosphorus
   c) Only Calcium (not Phosphorus) requirement need to be enhanced in layer feed
   d) In case of birds energy is expressed as ME (not DE or TDN)
5. Write in brief (**any two**): 5×2=10
   a) Different feeding system prevailing in poultry rearing practices.
   b) Role of feed additives in poultry production.
   c) Salient features of 'feeding of Turkeys'.
6. Write short notes (**any four**): 2.5×4=10
   a) Least Cost Feed Fourmulation
   b) Calorie- protein ratio
   c) Salt poisoning
   d) Skip-a-day feeding
   e) Forced moulting
   f) Phase Feeding
   g) Star grazing
7. a) Define macro and micro minerals with suitable examples. 4+2+4=10
   b) What is cage layer fatigue?
   c) What is Cannibalism? How can you prevent cannibalism?
8. a) Define the 'non-conventional feeds' with two examples. 3+3+4=10
   b) Name the anti-nutritional factor(s) present in the following feed ingredients:
   Soyabean, Ground nut cake, Cotton seed cake
   c) Write down the common mycotoxins associated with poultry feeding and its controlling measures.

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M.Sc. Examination, 2020

Semester-I

Animal Science (Poultry)

Course: PSC-502

(Poultry Nutrition and Feeding)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions

1. a. What is Carbon-nitrogen balance?
   b. Factors affecting feed intake in broilers
   c. Write the mechanism of action of antibiotics and probiotics as feed additives. 2+3+5=10

2. a. Role of vitamin E and selenium in poultry nutrition?
   b. Why is dietary energy expressed as ME in poultry?
   c. Write a brief note on protein digestion and absorption in poultry. 4+2+4=10

3. a. What is productive energy?
   b. How does it differ from metabolizable energy?
   c. What are the uses of metabolizable energy in poultry?
   d. What do you mean by TME? 2+4+4+2=10

4. Justify the statements (any four):
   a. Oligosaccharides used as prebiotics
   b. Proline is essential for poultry nutrition
   c. In case of birds energy is expressed as ME (not DE or TDN)
   d. Restricted feeding practice in grower birds
   e. Raw soyabean is not recommended for poultry
   f. Zinc is essential for shell strength 2.5×4=10

5. Write in brief (any two):
   a. Mixed enzymes as feed additives with special reference to alternate feed resources.
   b. Write a note on management of mycotoxicosis in poultry
   c. Factors affecting feed intake in broilers
   d. NRC requirement of Protein in different phases of egg type chickens 2×5=10

6. Write short notes (any four):
   a. Perosis
   b. Limiting amino acids
   c. Calorie – protein ratio
   d. Water management
   e. Curl toe paralysis 2.5×4=10

P.T.O.

7. a. Write down notes on B-complex deficiency diseases of poultry.
   b. What is ascites and how to control this metabolic condition in broiler?
   c. How is gross energy estimated? 4+4+2=10
8. a. Role of linoleic acid in poultry nutrition.
   b. Synthesis of non essential amino acids
   c. What are the essential minerals in poultry nutrition? Justify your statement. 3+3+4=10

M.Sc. Examination, 2021

Semester-I

Animal Science (Poultry)

Course: PSC-502

(Poultry Nutrition and Feeding)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions

1. What is PUFA? Write about the Role of Linoleic acid in poultry nutrition. Enumerate the factors affecting protein digestibility. What do you mean by amino acid imbalance? 2+3+3+2=10

2. What do you mean by feed additives? What is the difference between nutrient requirement and dietary allowance? Discuss about the restricted feeding of grower birds. Write about the NRC requirement of Protein in different phases of layers. 2+2+3+3=10

3. What is ascites and how to control this metabolic disease in poultry? How does Zn play role for the egg shell formation? Briefly discuss the carbohydrate digestion and absorption in poultry. 4+2+4=10

4. What is anti-nutritional factor? What are the essential minerals in poultry nutrition – Justify your statement. Write a note on the probiotics in poultry feeding. What is salt poisoning? 1+4+3+2=10

5. What is NPU? Unconventional feeds and their importance in current trend of poultry nutrition. Write down the different parts and their role of digestive system in poultry. 2+3+5=10

6. What is cage layer fatigue? Briefly describe the vitamin-minerals deficiency disease in poultry. Give a critical appraisal of digestive enzymes in poultry nutrition. 2+5+3=10

7. What is carbon-nitrogen balance? Write a comparative note on AME and TME. Enumerate the difference between nutrient requirement and dietary allowance? What are the factors affecting energy and protein requirements of chicken? 2+2+2+4=10

8. Write short notes: 2×5=10
   a) Factors affecting P absorption
   b) Limiting Amino acids
   c) Feed grade enzymes
   d) Heat Increment (HI)
   e) Encephalomalacia

M.Sc. Examination, 2022

Semester-I

Animal Science (Poultry)

Course: PSC-502

(Poultry Nutrition and Feeding)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions

1. Calorie protein ratio. What are the major energy source ingredients for poultry feed formulation? Write about the methods of feed mixing. Critical essential amino acids. 2+3+3+2=10

2. What is NSPs? Give the requirements of protein, energy, calcium and available phosphorus in the diets of broiler starter and finisher. Factors affecting protein digestibility. Give a critical appraisal of digestive enzymes in poultry nutrition. 1+4+2+3=10

3. Write short notes:
   a) Water management
   b) Crop milk
   c) Curl-toe paralysis
   d) Salt poisoning
   e) Choline 2+2+2+2+2=10

4. What are the anti-nutritional factors? How they differ from toxins? Write a note on management of mycotoxicosis in poultry. 3+2+5=10

5. What is AME and TME? Write about the energy portioning in poultry nutrition. How calcium is essential for laying hens – discuss? Define essential minerals and classify with example. 2+3+2+3=10

6. What is nutrient? What is the different feeding system in poultry? Role of zinc (Zn) in poultry nutrition. Unconventional feeds and their importance in current scenario. 1+3+2+4=10

7. What is perosis? Enumerate the synthesis of non-essential amino acids in poultry. Briefly discuss the role of vitamin E in poultry nutrition. Write about the nutritional adjustment during extreme weather. 1+3+2+4=10

8. Energetic efficiency of diet is improved on addition of fat in diet – justify. Factors affecting carbohydrate absorption. Describe the recent trends of poultry nutrition in relation to C:B ratio. 2+3+5=10

M.Sc Examination, 2023-24

Semester-I

Animal Science (Poultry)

Course: PSC-502

(Poultry Nutrition and Feeding)

Time: 2:00 Hours **Full Marks: 30**

Answer the following (any three):

1. Enumerate the importance of phase feeding in poultry. What are the deficiency symptoms of dietary zinc? Briefly describe the energy partitioning in poultry nutrition. 3+3+4=10

2. What is nutrition? Write about the calcium nutrition in laying hens. What do you mean by Gross Energy (GE)? Explain the importance of glysine feeding in poultry nutrition. 1+5+2+2=10

3. Write on different feeding system in poultry. Major functions of vitamin-A in poultry. Explain the importance of gizzard in digestive system of poultry and the role of digestive enzymes in poultry nutrition. 3+2+2+3=10

4. What are the anti-nutritional factors? Describe cage layer fatigue. Which nutritional changes should be done to manage the summer and winter stress in poultry? Enumerate the role of non starch polysaccharides (NSPs) in poultry nutrition. 3+2+3+2=10

5. Define the 'non-conventional feeds' with two examples. Name the anti-nutritional factors present in the following feed ingredients: Soyabean, Ground nut cake, cotton seed cake. Write down the common mycotoxins associated with poultry feeding and its controlling measures. 3+3+4=10

M.Sc. Examination, 2016

Semester-I

Animal Science (Poultry)

Course: PSC-511

(Avian anatomy and physiology of Different Systems Related to Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer **any five** questions.

1. Write short notes on: 5x2=10

   (a) Gizzard (b) Pineal body (c) Function of liver (d) Cloaca (e) Keel

2. Draw and level the following systems 5x2=10

   (a) Digestive system (b) skeletal system

3. (a) Write down the detail about the formation of egg. 5x2=10

   (b) Describe different parts associated with feeding and digestion in bird.

4. Write down the position & function of the following organ: 4x2.5=10

   (a) Crop (b) syrinx (c) Pancreas (d) Caecum

5. Describe the following structure with diagram. 4x2.5=10

   (a) Eye (b) Liver (c) Egg (d) Large intestine

6. Describe the microanatomy of 5x2=10

   (a) Bone (b) Lungs

7. (a) Illustrate meiotic cell division with diagram. 5x2=10

   (b) Describe the salient features of an animal cell with suitable diagram.

8. Define hormone. Write in brief the sources and function of important harmones in birds. 10

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M.Sc. Examination, 2018

Semester-I

Animal Science (Poultry)

Course: PSC-511

(Avian anatomy and physiology of Different Systems Related to Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer **any five** questions out of which Question No.5 is compulsory

1. Describe the different parts of respiratory systems of fowl and discuss its functions. 10
2. Describe the different parts of digestive system of duck and discuss its function. 10
3. Define skeleton and its function. Write in brief about the skull of fowl. 5+5=10
4. Describe the different parts of Female genital system of fowl and discuss its functions. 10
5. Write short notes on the anatomy and physiology as the following (**any five**): 2×5=10

   (a) Liver (b) proventriculus (c) sternal crest (d) Oviduct (e) Coracoid (f) Ossaopticus
6. Describe the different parts of brain of duck with diagram. 10
7. Describe the different parts of male genital system of fowl and discuss its function. 10
8. Describe the different parts of urinary system of fowl and discuss its functions. 10

M.Sc. Examination, 2019

Semester-I

Animal Science (Poultry)

Course: PSC-511

(Avian anatomy and physiology of Different Systems Related to Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

1. Fill in the gaps (**any ten**): 1×10=10

   a) Keel bone is absent in _____ fowls.

   b) Temperature of birds in near about _____ F.

   c) Opening of genital and digestive tract is _____ in birds.

   d) Sperm storage gland in bird is _____ .

   e) Average weight of standard fowl egg is _____ g.

   f) Incubation period of chicken is _____ days.

   g) Incubation period of duck is _____ days.

   h) Incubation period of Japanese quail is _____ days.

   i) Birds have _____ air sacs.

   j) The fused sacral and coccigial bones form _____ .

   k) Dew Claw present only in _____ birds.

   l) The cord like structure which keeps the yolk and albumen in proper position is called _____ .

2. Write short notes on (**any five**):
   a) Role of caeca in digestion
   b) Oil gland
   c) Glandular and Muscular stomach
   d) Flight muscles
   e) Keel bone
   f) Oviposition
   g) Laying behavior
   h) Broodiness
3. Answer any three questions from the following:

   a) Draw the lebelled diagram of female genital system of fowl and describe the spontaneous process of egg formation and laying.

   b) Draw the lebelled diagram of digestive tract of fowl. Discuss about the function of different organs in short.

P.T.O.

c) Describe about methods of summer management and winter management for stress reduction in poultry birds.

d) Discuss about moulting in poultry birds.

e) Discuss about respiration process in birds. Describe in details about air sacs and their role.

M.Sc. Examination, 2020

Semester-I

Animal Science (Poultry)

Course: PSC-511

(Avian anatomy and physiology of Different Systems Related to Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer **any five** questions out of which Question No.2 is compulsory

1. Define skeleton and its function. Write in brief about the bones of forelimb and hind limb of fowl. 5+5=10
2. Write short notes on the anatomy and physiology on the following (Any five): 5X2=10

   (a) Proventriculus (b) Cecum

   (c) Clavicle (d) Phallus

   (e) Bursa of fabricius (f) Sternal crest
3. Describe the different parts of brain of fowl with diagram. 10
4. Write the name and number of the vertebrae of fowl. Describe the mouth cavity of fowl. 5+5=10
5. Describe the different parts of digestive system of fowl and discuss its function. 10
6. Describe the different parts of respiratory system of fowl and discuss its function. 10
7. Name the components of the urinary system of fowl along with its function. 10
8. Name the different anatomical segments of oviduct of fowl. Describe the process of egg formation. 5+5=10

M.Sc. Examination, 2021

Semester-I

Animal Science (Poultry)

Course: PSC-511

(Avian anatomy and physiology of Different Systems Related to Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

1. Fill in the blanks (any ten): 1×10=10

   a) The hormone stimulates the preovulatory LH surge in birds is _____ .

   b) Tidal volume in birds is about 1.7 times _____ than that of a comparably sized mammal.

   c) Albumin of eggs is formed in _____ .

   d) Pepsinogen is converted to pepsin in the _____ environment.

   e) The part of avian digestive tract which provides the microbial digestion of cellulose is _____ .

   f) HCl and pepsinogen are secreted from _____ .

   g) The location for the greatest post-renal modification of ureteral urine in birds is the _____ .

   h) Ammonia is converted to uric acid in birds in the _____ .

   i) The principal nitrogenous component of avian urine is _____ .

   j) The function of salt glands (nasal glands)is _____ .

   k) The site for sperm produced in the avian testis is _____ .

   l) The primary site of the sperm storage in birds is _____ .

2. Write short notes on (any five): 2x5=10
   a) Proventriculus
   b) Ossa opticus
   c) Magnum
   d) Factors affecting the broodiness

e) Heterophil

f) Sternal crest

g) Chalazae

h) Clutch

3. Answer any three questions from the following: 10×3=30

a) Define skeleton and its function. Write in brief about the skull of fowl. 5+5=10

b) Describe the role of air sacs in birds. Describe the gaseous exchange process in birds. 5+5=10

c) Describe the different parts of urinary system of fowl and discuss its function. 10

d) Write the factors which delaying ovulation. How does light effect on laying? 5+5=10

e) Briefly describe the modification of avian digestive system to accommodate flight. Write the digestive process in birds. 5+5=10

M.Sc. Examination, 2016

Semester-I

Animal Science (Poultry)

Course: PSC-512

(Applied Pharmacology and therapeutics in Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions

1. Explain why: 5×2=10
   a) Sulfornamide is contraindicated in layer bird.
   b) Doxycycline and neomycin cannot be used simultaneously.
   c) Clavulanic acid potentiates pencillin.
   d) Tiamulin and ionophores should not be concurrently included as feed additives in poultry.
   e) Clopidol has very poor or negligible therapeutic value in avian cocciidiosis.

2. Write the source of the followings 5×2=10
   (i) Monensin (ii) Penicillin (iii) Streptomycin (iv) Cephalosporin (v) Neomycin

3. State the mechanism of action of the followings: 2.5×4=10
   (a) Cotrimoxazole (b) Fluoroquinolone dev. (c) Albendazole (d) Piperazine

4. Write notes on: 5×2=10
   (a) Tylosin (b) Linocmycin (c) Endectocide (d) Taenifuge (e) Taenicide

5. Classify sulfonamides with examples. State the clinical application of sulfonamides in poultry. 10

6. Discuss the principles of control and treatment of cocciidiosis in poultry. 10

7. Classify tetracyclines with examples. Write the mechanism of action of tetracycline against micro organisms. 10

8. State the mechanism of action of penicillin against bacteria. Why amoxicillin is broad spectrum antibiotic. 10

M.Sc. Examination, 2017

Semester-I

Animal Science (Poultry)

Course: PSC-512

(Applied Pharmacology and therapeutics in Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer any five questions out of which Q.no.5 is compulsory

1. Classify the tetracyclines and discuss the mechanism of action, antimicrobial spectrum and clinical application. 10
2. What are fluoroquinolones? Write the mechanism of action, pharmacokinetics and adverse Effects in poultry. 10
3. Classify sulphonamides. Discuss the mechanism of action, clinical application in poultry and side effects. 10
4. Write specific drug with dose and route of administration of the following in poultry 5×2=10
   a) Sulmonellosis
   b) Ascariasis
   c) Chronic respiratory disease
   d) Coccidiosis
   e) Aspergellosis
5. Write notes on: 5×2=10
   a) Potentiated sulphonamide
   b) Potentiated amoxicillin
   c) Benzimidazole derivatives
   d) Polyether antibiotics (lonophores)
   e) Potentiated cephalosporin
6. Name the anticestodal drugs used in poultry with their merits and demerits. 10
7. Write down the names of aminoglycoside antibiotics and macrolide antibiotics. State the toxicity of aminoglycoside antibiotics. 10
8. Enumerate nitrofuran derivatives, mechanism of action and clinical use in poultry. 10

M.Sc. Examination, 2018

Semester-I

Animal Science (Poultry)

Course: PSC-512

(Applied Pharmacology and therapeutics in Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer **any five** questions out of which Q.No.**2** is compulsory

1. Define 2×5=10
   (a) Chemotherapy
   (b) Antibiotic
   (c) MIC
   (d) Potentiated sulfonamide
   (e) Antimicrobial resistance

2. Differentiate between 2×5=10
   (a) Gram positive and Gram negative bacteria
   (b) Bacteriostatic and bactericidal
   (c) Aminoglycoside and macrolide antibiotics
   (d) Taeniacidal and taeniafuge
   (e) Probenzimidazole and benzimidazole

3. Classify sulphonamides with examples. State the toxicity of sulphonamides. 5+5=10

4. Write the merits and demerits of drugs used in poultry coccidiosis. 10

5. Classify quinolone derivatives with example. Write the mechanism of action and adverse effects of enrofloxacin. 4+6=10

6. State the drugs used in round worm infection in poultry. Discuss the mechanism of action of albendazole. 6+4=10

7. State the clinical uses of the followings with dose and route of administration in poultry. 2×5=10
   (a) Sulphadimidine (b) Amoxicillin (c) Tylosin (d) Doxycycline (e) Gentamicin

8. Classify the cephalosporins with suitable examples. Write the mechanism of antibacterial action with adverse effects. 4+6=10

9. State the toxicity of 2.5×4=10
   a) Chloramphenicol
   b) Oxytetracycline
   c) Streptomycin
   d) Ciprofloxacin

M.Sc. Examination, 2019

Semester-I

Animal Science (Poultry)

Course: PSC-512

(Applied Pharmacology and therapeutics in Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer **any five** questions out of which Q.No.**2** is compulsory

1. Write notes on: 2×5=10
   a) Principles of Sulfonamide therapy
   b) Adverse reaction and toxicity of Sulfonamide
   c) Potentiated Sulfonamide
   d) Enteric Sulfonamide
   e) Ideal Sulfonamide

2. Differentiate between 2.5×4=10
   a) Coccidiostat and Coccidiocidal
   b) Bacteriostatic and Bactericidal
   c) Probiotic and Prebiotic
   d) Penicillinase resistant and Penicillinase inhibitor

3. Classify tetracyclines. Describe their mechanism of action, antimicrobial spectrum and clinical uses in poultry. 10

4. What are fluoroquinolones? Discuss their mechanism of action, pharmacokinetics and uses in poultry. 10

5. Write the source of 2.5×4=10
   a) Tylosin
   b) Colistin
   c) Bacitracin
   d) Tiamulin

6. Explain why 2.5×4=10
   a) Tiamulin and ionophores should not be concurrently included as feed additive in poultry.
   b) Anticoccidials are almost universally used in broiler.
   c) Use of anticoccidials in layer or breeder birds is not as universal as that of broilers.
   d) Closidol acts as coccidiostat

7. Define with examples 2×5=10
   a) Vermifuge
   b) Vermicide
   c) Endectocide
   d) Taenicide
   e) Taenifuge

P.T.O.

8. Write drug of choice, dose and route of the following 2.5×4=10
    a) Coccidiosis in egg laying hens as curative
    b) Prophylactic anticoccidial in broilers
    c) Histomoniasis in poultry
    d) Typhoid in poultry

9. Discuss the mechanism of action 2.5×4=10
    a) Polyether antibiotics as anticoccidial
    b) Amoxicillin as antibiotic
    c) Piperazine as antinematodal
    d) Praziquantel as anti tapeworm

M.Sc. Examination, 2020

Semester-I

Animal Science (Poultry)

Course: PSC-512

(Applied Pharmacology and therapeutics in Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer **any five** questions out of which Q.No.**4** is compulsory

1. Classify sulfonamide. Describe their mechanism of action, antimicrobial spectra and clinical uses in poultry. 10

2. Classify tetracyclines. Discuss their mechanism of action, adverse reaction, clinical uses in poultry. 10

3. What are macrolides? Discuss their mechanism of action, antimicrobial spectra and clinical uses in poultry. 10

4. Differentiate between 2.5×4=10
   a) Vermicide and Vermifuge
   b) Bacteriostatic and Bactericidal
   c) Agonist and Antagonist
   d) Penicillinase resistant and Penicillinase inhabitor

5. Write notes on 2.5×4=10
   a) Potentiated sulfonamide
   b) Coccidiostat
   c) MIC
   d) Potentiated B-lactam antibiotic

6. Explain why 2.5×4=10
   a) Sulfonamide are not effective in pus and necrotic tissue.
   b) Tetracycline should not be given with milk and dairy products.
   c) Levamisole act as antinematodal drug.
   d) Amprolium act as coccidiostat.

7. Write source of 2×5=10
   a) Monensin
   b) Bacitracin
   c) Neomycin
   d) Gentamcycin
   e) Nystatin

8. Define with example 2.5×4=10
   a) Coccidiostat b) Coccidiocidal c) B-lactam antibiotic d) Ionophores

_____

M.Sc. Examination, 2021

Semester-I

Animal Science (Poultry)

Course: PSC-512

(Applied Pharmacology and therapeutics in Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer **any five** questions out of which Q.No.**2** is compulsory

1. Classify tetracyclines. Describe their mechanism of action, antimicrobial spectrum and clinical uses in poultry. 10

2. Differentiate between (any four): 2.5×4=10
   a) Taeniacide and Teaniafuge
   b) Preventive therapy and therapeutic treatment
   c) Bacteriostatic and Baclericidal
   d) Penicillinase resistant and penicillinase inhabitor
   e) Coccidiostat and coccidiocidal

3. Classify sulphonamides with example. State the toxicity of sulphonanides. 10

4. What are fluoroquinolones? Discuss their mechanism of action, pharmacokinetics and uses in poultry. 10

5. Write short notes on (any four): 2.5×4=10
   a) Potentiated sulphonamide
   b) Potentiated penicillin
   c) Ideal antihelmintic
   d) Polyether antibiotics
   e) Enteric Sulfonamide

6. State the side effect of (any four): 2.5×4=10
   a) Chlomphenicol, b) Oxytetracycline, c) Streptomycin, d) Emofloxacin, e) Neomycin

7. Classify cephalosporins with suitable examples. Write the mechanism of action with adverse effect. 10

8. Write the source of:
   a) Bacitracin, b) Tiamulin, c) Colistin, d) Tylosin

M.Sc. Examination, 2022

Semester-I

Animal Science (Poultry)

Course: PSC-512

(Applied Pharmacology and therapeutics in Poultry Production)

Time: Three Hours **Full Marks: 50**

Questions are of value as indicated in the margin.

Answer **any five** questions out of which Q.No.**8** is compulsory

1. a) Write the principles of chemotherapy. 5
   b) Discuss antimicrobial resistance. Discuss plasmid mediated antimicrobial resistance. 5

2. a) Classify antibiotics with example. 5
   b) Write the side effects of aminoglycoside antibiotics. 5

3. a) Classify antifungal agents with examples. 5
   b) Write a note on Azole derivatives as antifungal agent. 5

4. a) Write the drugs used against round worm infection in poultry. 5
   b) State the mechanism of action of piperazene as antinematodal drug. 5

5. Write notes on potentiated sulfonamide and amoxicillin. 10

6. Enumerate the antiprotas used in poultry. Write the merits and demerits of lonophores. 6+(2+2)=10

7. Classify cephalosporins with examples. Write mechanisms of action of cephalosporin as antibacterial agent. 10

8. Write notes on (any four): 2.5×4=10
   a) Tylosin
   b) Chlortetracycline
   c) Amikacin
   d) Albendazole
   e) Ivermectin

M.Sc. Examination, 2023

Semester-I

Animal Science (Poultry)

Course: PSC-512

(Applied Pharmacology and therapeutics in Poultry Production)

Time: Two Hours **Full Marks: 30**

Questions are of value as indicated in the margin.

Answer **any three** questions

1. Write short notes on (answer any four): 2.5×4=10
   I. Vermicide
   II. Ivermectin
   III. Praziquantel
   IV. Bacitracin
   V. Azithromycin
   VI. β-lactammase
   VII. Cephalexin

2. Classify fluoroquinolones with example. Describe the mechanism of action and clinical uses of fluoroquinolone in poultry. 10

3. Describe general mode of action of anthelmintic and properties of ideal anthelminitic. 10

4. Write the drugs used against protozoal infection in poultry. Write the merits and demerits of azole derivative as antifungal agent. 10

5. Classify antibiotic. Write the merits and demerits of tetracycline. 10
