Council of Higher Secondary Education, Odisha

(Job Role: Small Poultry Farmer)

Class-XI

Paper –I

SCHEME OF UNITS

Part	Units	No of hours for Theory and Practical	No of marks for Theory and Practical=100
Part A	**Employability skills**		
1	Communication Skills – III	32	**10**
2	Self-management Skills – III	32	
3	Information and Communication Technology Skills – III (Part-A)	08	
	Total	**72**	
Part B	**Vocational Skills**		
4	Accommodation for Poultry Birds	60	**40**
5	Handling Poultry Birds in Shed	48	
	Total	**108**	
Part C	**Practical Work**		
	Practical Examination	6	15
	Written Test	1	10
	Viva Voce	3	10
	Total	**10**	**35**
Part D	**Project Work/Field Visit/ OJT**		
	Practical File/Student Portfolio	10	10
	Viva Voce	5	5
	Total	**15**	**15**
	Grand Total	**205**	**100**

Paper-II

Part	Units	No of hours for Theory and Practical	No of marks for Theory and Practical=100
Part A	**Employability skills**		
1	Information and Communication Technology Skills – III (Part-B)	18	**10**
2	Entrepreneurial Skills – III	34	
3	Green Skills – III	20	
	Total	**72**	
Part B	**Vocational Skills**		
4	Handling Poultry Birds in Shed	04	**40**
5	Feeding Poultry Birds	52	
6	Maintaining Health and Hygiene at Poultry Farm	52	
	Total	**108**	
Part C	**Practical Work**		
	Practical Examination	6	15
	Written Test	1	10
	Viva Voce	3	10
	Total	**10**	**35**
Part D	**Project Work/Field Visit/ OJT**		
	Practical File/Student Portfolio	10	10
	Viva Voce	5	5
	Total	**15**	**15**
	Grand Total	**205**	**100**

Part B- Vocational Skills

Unit-1. Accommodation for Poultry Birds

Learning Outcome	Theory (24 hrs)	Practical (33 hrs)	Duration (57 hrs)
1. Describe the opportunities in the poultry industry and the roles and functions of a Small Poultry Farmer	1.History of Poultry farming 2. Opportunity & scope in Poultry farming Roles and function of a poultry farmer 3. Breeds of Poultry reared in India for meat and egg purpose	1.Identification of opportunities in poultry industry 2. Enlist the roles and functions of a small poultry farmer 3. Photograph of different breeds of poultry	07
2. Describe the layout of a poultry farm and the characteristics of a good poultry housing system	1.Types of poultry housing systems – Free range or extensive system, Semi-intensive system, Intensive system (deep litter, cage, slatted floor) 2. Characteristics of a good poultry housing system – Types of floor, litter materials used, lighting management, Ventilation, orientation of shed, electrification of shed and premises, cleaning and disinfection, disposal of waste, construction of approach road 3.. Feeding, watering facilities, equipments used for feeding and watering for different age groups of birds, 4. Construction of Poultry house, location, space requirements, orientation floor, wall, wire mesh, roof and overhang, foot bath, anti rodent facility, 5. Design and layout of a small poultry farm 6. Supply of chicks, feed, medicines and equipments used for poultry farming 7. Light management for	Visit to poultry farm for studying the characteristics of a good poultry farm, including the following: Dimension of sheds, Number of birds and work out space per bird, Materials used for construction of poultry sheds. Facilities provided for rearing of birds, Tools and equipment used at poultry farm	14

	different age group of birds		
3. Describe the practices adopted for maintaining cleanliness and hygiene in poultry shed	1.Routine cleaning and sanitization 2. Fumigation of equipments and egg 3. Disinfection of the brooders and other poultry houses and equipment, 4. Importance of temperature and ventilation for health and hygiene 5.Use of the personal protective equipment/ items while handling poultry birds.	1. Enlist common disinfectants, water sanitizer and chemicals used for sanitation and fumigation. 2. Use of Personal Protective Equipment (PPE) 3. Study of procedure for cleaning and sanitizing poultry farm.	21
4. Explain the procedure for disposal of poultry waste	1.Safety and cleanliness of the birds and sheds 2. working methods to promote health of the birds. 3. Methods of poultry waste disposal in different housing systems (deep litter, cage) 4. Sanitation and hygiene of poultry house, equipment, vehicles and visitors for disease prevention and spread. 5. Monitoring of the poultry birds for optimum growth and livability.	1. Visit of Poultry farms to enlist important micro-environmental factors and methodology used to construct such houses to meet requirements· 2. Identify and enlist potential hazards and factors responsible for these hazards. 3. Describe the waste disposal methods used in the farm	15

Unit-2. Handling Poultry Birds in Shed (A)

Learning Outcome	**Theory (21 hrs)**	**Practical (30 hrs)**	**Duration (51 hrs)**
1.Describe the handling and monitoring of poultry birds in shed	1.Preparation of poultry shed before and after arrival of chicks 2. Handling and good management practices for birds to minimize stress and for improved	Handling of birds for different purposes viz., wing banding, de-breaking, debugging, vaccination, sexing, shifting, transportation,	26

	health and hygiene	etc.	
2. Describe the procedures of biosecurity for maintaining and health and hygiene of poultry birds	1.Meaning of biosafety and biosecurity 2. Types of biosecurity 3. Prevention and spread of diseases in poultry farm 4. Effect of diseases and pests on poultry production	1. Steps to prevent disease outbreak 2. Study of litter management practices	25
			51

Class-XI

Paper –II

Unit-2. Handling Poultry Birds in Shed (B)

Learning Outcome	**Theory (3 hrs)**	**Practical (6 hrs)**	**Duration (9 hrs)**
3 Management of birds in extreme climate	1.Special housing management and care of birds during extreme summer stress 2. Feeding time, water requirement and feeding electrolytes 3.Remedial measures to protect the birds from stress and diseases	1.Visit the farm while extreme temperature to differentiate behavior of birds during normal and stress conditions. 2.Physiological behavior of feeding, panting etc	09
			09

Unit-3. Feeding Poultry Birds

Learning Outcome	**Theory (30hrs)**	**Practical (22 hrs)**	**Duration (50hrs)**
1.Describe the forms of feed, supplements and additives used for feeding poultry birds	1.Role of nutrients, feed ingredients, feed supplements and feed additives in poultry ration 2.Forms of feed – mash,	1.Visit to a poultry feed mill to identify the feed ingredients, storage of feed ingredients and preparation of compounded feeds.	15

	pellet, crumbles 3Feed ingredients used for poultry – carbohydrates, fats, proteins, vitamins, minerals, etc. 4Basic nutritional requirements, feeding and drinking behaviour of birds	2. Enlist different energy and protein rich feed ingredients	
2.Describe the procedure for procurement and quality assurance for poultry feed	1.Ingredients used for poultry feed preparation 2. Procurement and storage of feed ingredient and feed. 3. Adulterants and anti nutritional factors in feed ingredients 4. Quality control of feed ingredients like physical and chemical 5.Quality control for process of feed preparation 5. Preparation of feed inventory and checking of stock level on a regular basis. 6. Consequences of improper storage of feed	1.Visit to feed mill to study the ingredients used for feed production, vitamins and mineral supplements, machinery, 2.Procedure of feed production and quality assurance at least some physical parameters	10
3. Describe the various types of ration and their formulation for feeding poultry birds	1.Types of poultry ration for different purposes 2. Broiler ration – Prestarter, Starter, finisher 3. Layer ration- Chick, grower, layer 4. Breeder- Starter, Grower, breeder 5. Computation of ration for different age and growth stage of poultry birds. 3. Methods for feed processing and compounding.	Study of ingredients, types of poultry ration and steps in computation of ration	15
4.Feed and water supply management	1.Minimum feeding space requirements 2. Minimum water space requirements 3. Placement of	Visit to poultry farm to study the feeding and watering equipment, spacing of equipment and procedure	10

	feeding troughs and feeders 4. Placement of waterers and their cleanliness 5. Feed consumption rates for layers and broilers 6. Water consumption rates for layers and broilers 7.Water requirement during hot climate	adopted for correct feeding	
			52

Unit-4. Maintaining Health and Hygiene at Poultry Farm

Learning Outcome	**Theory (19 hrs)**	**Practical (30 hrs)**	**Duration (49 hrs)**
1.Describe the common poultry diseases and their management	1.What is disease and difference between healthy and sick poultry birds 3.Factors influencing occurrence and spread of diseases 4. Principles of health management – prevention of disease, early recognition or detection of disease, and early treatment of disease. 5. Common poultry diseases – Ranikhet Disease(RD), Marek's Disease,(MD) Avian Influenza(Bird Flu)Infectious Bursal Disease (IBD), Fowl Pox, Infectious Bronchitis, Fowl cholera, Coccidiosis, Aflatoxicosis, Brooder pneumonia, Parasitic infestation etc. 6. Bio-security measures at poultry farms.	Visit to a poultry farm, note down the possible sources of contamination and enlist various bio-security measures adopted at the farm.	26
2.Describe the various types of vaccines and vaccination schedule for poultry birds	1.Types of vaccines - live, attenuated and killed 2. Handling and storage of vaccines on the poultry farm 3. Care during vaccination 4. Vaccination schedule for poultry broilers and layers 4. Vaccination procedures – Route of administration, (intramuscular/ subcutaneous/ocular/oral)Vaccination through drinking water, etc.	1.Visit to a poultry farm to study the vaccination schedule followed at the farm for different diseases. 2. Storage of vaccines, medicines and precautions during their handling and administration. 3. Check for presence of	13

		external parasites in the birds and remedial measures taken at the farm	
3.Describe the factors affecting nutrient requirements and nutrition deficiency in poultry birds	1.Factors affecting nutrient requirements in poultry birds – genetics, age, sex, production status, reproductive state, temperature, etc. 2. Nutrient requirements for broilers and layers 3. Nutritional deficiency and metabolic diseases and prevention	Prepare the chart of nutrition deficiency and metabolic diseases	10
			49

Reference Books:

1. Facilitator Guide- Small Poultry farmer by ASCI (Agriculture Skill Council of India)
2. Poultry production –By R.A Singh , Kalyani Publisher

Council of Higher Secondary Education, Odisha
Small Poultry Farmer
Class-XII

SCHEME OF UNITS
Paper-1

Part	Units	No of hours for Theory and Practical	No of marks for Theory and Practical=100
Part A	**Employability skills**		
1	Communication Skills – IV	32	**10**
2	Self-management Skills – IV	32	
3	Information and Communication Technology Skills – IV (Part-A)	08	
	Total	**72**	
Part B	**Vocational Skills**		
4	Egg production, Collection, Cleaning and Packaging of Eggs	60	**40**
5	Cleaning and Disinfecting Poultry Farm	48	
	Total	**108**	
Part C	**Practical Work**		
	Practical Examination	6	15
	Written Test	1	10
	Viva Voce	3	10
	Total	**10**	**35**
Part D	**Project Work/Field Visit/ OJT**		
	Practical File/Student Portfolio	10	10
	Viva Voce	5	5
	Total	**15**	**15**
	Grand Total	**205**	**100**

SCHEME OF UNITS
Class-XII
Paper-II

Part	Units	No of hours for Theory and Practical	No of marks for Theory and Practical=100
Part A	**Employability skills**		
1	Information and Communication Technology Skills – IV(Part-B)	18	**10**
2	Entrepreneurial Skills – IV	34	
3	Green Skills – IV	20	
	Total	**72**	
Part B	**Vocational Skills**		
4	Documentation and Recordkeeping	48	**40**
5	Setting up a Small Poultry Farm	60	
	Total	**108**	
Part C	**Practical Work**		
	Practical Examination	6	15
	Written Test	1	10
	Viva Voce	3	10
	Total	**10**	**35**
Part D	**Project Work/Field Visit/ OJT**		
	Practical File/Student Portfolio	10	10
	Viva Voce	5	5
	Total	**15**	**15**
	Grand Total	**205**	**100**

Small Poultry Farmer
Paper -I

Part B- Vocational Skills

Unit-1. Egg production, Collection, Cleaning and Packaging of Eggs (60)

Learning Outcome	**Theory (40 hrs)**	**Practical (20hrs)**	**Duration (60hrs)**
1. Describe factors affecting egg production, arrangements and activities for egg collection, storage, cleaning, packaging and transportation	1. Breeds suitable for egg production in back yard and commercial, Laying of eggs by Layers – factors affecting egg production, Different phases of egg production in a layer 2. Arrangements for safely and timely, collection (hand or automated system), cleaning and washing (manual or automated) and packaging of eggs (manual and automated) 3. Arrangements for transportation of eggs. 4. Use of Personal Protective Equipment - gloves, hairnets, masks, goggles, etc	1 Visit to a farm to study the egg productions, collection and storage of eggs at the farm and the precautions during collection, handling, transport and storage of eggs. 2. Discussion on precautions to be taken for inspection of birds prior to egg collection	**24**
2. Describe the parameters for judging the quality of eggs	1. Parts and composition of an egg 2. Quality of eggs – interior and exterior 3. Determining interior quality of eggs through candling - egg grades are AA, A, B, and Inedible 4. Exterior quality – egg grades are A (clean), B (slight stains) and dirty (moderate to excess stains) 5. Grading based on egg shape, shell texture and thickness, body checks, etc.	Visit to a poultry farm to study the process of candling Internal quality quality determination of eggs	**20**

	6. Egg grading equipment		
3. Describe the procedure for cleaning, packaging and transportation of eggs	1. Cleaning of eggs – wet and dry cleaning methods 2. Washing of eggs 3. Packaging materials used for packing eggs – plastic and cardboard fillers 4. Health risks associated with different types of egg fillers 5. Transportation of eggs	1 Visit to a poultry farm to study the process of cleaning, washing, packaging and transportation of eggs	**16**
			60

Unit-2. Cleaning and Disinfecting Poultry Farm (48)

Learning Outcome	**Theory (32hrs)**	**Practical (16 hrs)**	**Duration (48hrs)**
1. Maintain cleanliness in poultry sheds	1. Tools/equipment required for the cleaning processes. 2. Cleaning the poultry sheds and equipments like -Removal of bedding material/litter materials, dust and spider webs -If the birds are kept in cages, then proper cleaning of cages and removal of droppings -Brushing of floor - Scrubbing of feed pans/feeders, -Cleaning of water lines/ waterers and disposal water after cleaning Cleaning of wire nets, fan blades - Checking and blocking of rodent in the shed as well as feed	Visit to a poultry farm to study the tools, equipment and materials required for cleaning and disinfecting poultry sheds	**24**

	godown		
2. Describe the process of disinfection of poultry sheds and bio-security measures to minimize risk of pests and diseases	1. Equipment and materials used for disinfection 2. Disinfectants and method of disinfection to minimize the risk of diseases, Salmonella and Bird flu through human contact. 3. Minimization of risk of diseases through bio-security measures, such as: 4. Signage for bio-security 5. Use of Personal Protective Equipment (PPE) 6. Foot washing baths at the entrance of sheds 7. Minimizing and scheduling vehicle movements and disinfection of tyres and equipment 8. Sanitizing waterers to prevent contamination. 9. Pest and rodents control programs	1. Visit to the poultry farm to study the procedure of disinfection of poultry sheds and biosecurity measures used there.	**24**
			48

Class-XII
Small Poultry Farmer
Paper –II

Unit-3. Documentation and Recordkeeping (48)

Learning Outcome	**Theory (30hrs)**	**Practical (18 hrs)**	**Duration (48hrs)**
1. Describe various types of documents and records to be maintained in poultry farming	1.Importance and need of documentation and maintenance of records 2. Importance of various types of farm registers and records– attendance register, equipment register, feed ingredients register, Feed additives register, medicine register, petty items and miscellaneous purchase register, layer farm register, broiler farm register, health and medical records, financial records, production records, sales record, etc.	Discussion on the importance of the various types of registers and records maintained in a poultry farm	18
Describe the various aspects of maintaining health and medical record	Health and medical record, including bird mortalities, disease outbreaks, treatment dates, symptoms, vaccination records, medicines used, logbook of visitors to the farm, etc.	Discussion on the importance of health and medical records maintained in a poultry farm	10
Describe the various aspects of maintaining production record	Production records, including breed and strain of the birds, number of birds, type of feed (prestarter, starter, finisher, chick, grower, layer, breeder), body weight over a period of time, egg production, feed consumption,	Discussion on the importance of production record maintained in a poultry farm	10

	Feed conversion ratio (FCR),water use, average rate of egg production, dressed weight of all broiler		
Describe the various aspects of maintaining financial record	Financial records, including purchases or expenditure made on various items, such as birds, feed, feed supplements and additives, equipment, electricity, bedding, medications, tools, labour, disinfectants, etc. 2. Sales records, such as sale of eggs and birds, manure, gunny bags etc. 3. Expenditure and income record	Discussion on the importance of financial and sales record maintained in a poultry farm	10
			48

Unit-4. Setting up a Small Poultry Farm (60)

Learning Outcome	**Theory (40 hrs)**	**Practical (20 hrs)**	**Duration (60hrs)**
Describe the types and benefits of poultry farms	1.Types of poultry farms -chicken farms (layers and broilers), Duck farm, emu farm, guinea fowl farm, duck farm, turkey farm, etc. 2. Small scale broiler farm for meat production 3. Small scale layer farm for egg production 4. Dual purpose coloured bird in back yard 5. Benefits of poultry farm	Visit to various poultry farms to study the difference between the scale of production and size of the farm	10
Choose the poultry sector and type of bird	Choosing the poultry sector - meat production (broilers breeding) or egg production (layers breeding) 2. Selection of bird – breeds and market	Discussion on the selection of the poultry sector, market demand, breeds of poultry birds	8

	demand		
Describe the various aspects of a well constructed poultry house and arrangement of poultry birds, equipment and materials	1.Design and layout of a small scale poultry farm 2. Materials required for construction of poultry sheds for small scale poultry production 3. Materials required for setting up small scale poultry farm, including the following Feeders,Waterers Nests,Cages,Coops Crates, Incubator Egg tray, Lighting instruments Perches Brooders or heaters Ventilation system, Waste disposal system	Visit to a poultry farm to study the design, construction and materials of a poultry farm	12
Describe the procedure for resource generation and management of poultry for profit	1.Determination of flock size and space requirements 2. Preparing a business plan 3. Financial and human resources and management – Bank loan for setting up small poultry farms 4. Economics of poultry farming 5. Marketing of poultry farm produce – 3 Ps 6. Profit and Loss	1.Discussion on the determination of flock size and the various aspects of a business plan 2. Preparation of a business plan for setting up a small scale poultry farm	**20**
Describe the various acts and regulations and organisations related to poultry	1.The Prevention & Control of Infectious and Contagious Disease in Animals Act, 2009 2. Food Safety & Standards Act, 2006 3. Bureau of Indian Standards (BIS) & ISO 22000:2005 4. The Prevention of Cruelty to Animals Act, 1960 Organisations involved in poultry development –National Poultry Development Board, Poultry federation of	1.Discussion on the acts and regulations governing poultry production and marketing of eggs and meat. 2. Visit to organisations dealing with poultry promotion and development	**10**

	India, National Egg Coordination Committee, Agriculture Council of India, Central Poultry Development Organisations, National Smallholder Poultry Development Trust		
			60

Reference books :-

1- Poultry production by Dr S C Mohapatra and Dr B Panda, ICAR publication
2-Poultry production by DrR A. Singh
3- Chicken production mannual, by Mac ନର୍ଥ
4- Live stock production ଏମଡ଼ management byN S R Sastry & C K Thomas kalyani publisher