FAQs

1. **Name different types of poultry breeds.**

   Ans. The different types of poultry breeds include:

   - Chickens
   - Ducks
   - Turkeys
   - Quail
   - Guinea fowl
   - Pigeons

2. **Elaborate on the domestication of Poultry husbandry.**

   Ans. The domestication of poultry took place several thousand years ago. Selective breeding for fast growth, egg-laying ability, conformation, plumage and yield took place over the centuries, and modern breeds often look very different from their wild ancestors. Poultry is the second most widely eaten type of meat globally and, along with eggs, provides nutritionally beneficial food containing high-quality protein accompanied by a low proportion of fat. All poultry meat should be properly handled and sufficiently cooked in order to reduce the risk of food poisoning.

3. **Describe the Ducks and its role in poultry.**

   Ans. Ducks are medium-sized aquatic birds with broad bills, eyes on the side of the head; fairly long necks, short legs set far back on the body, and webbed feet. Males, known as drakes, are often larger than females (simply known as ducks) and are differently coloured in some breeds.

   The greylag goose (*Anser anser*) was domesticated by the Egyptians at least 3000 years ago, and a different wild species, the swan goose(*Anser cygnoides*), domesticated in Siberia about a thousand years later, is known as a Chinese goose. The two hybridise with each other and the large knob at the base of the beak, a noticeable feature of the Chinese goose, is present to a varying extent in these hybrids. The hybrids are fertile and have resulted in several of the modern breeds. Despite their early domestication, geese have never gained the commercial importance of chickens and ducks.

   Domestic geese are much larger than their wild counterparts and tend to have thick necks, an upright posture, and large bodies with broad rear ends. The greylag-derived

birds are large and fleshy and used for meat, while the Chinese geese have smaller frames and are mainly used for egg production. The fine down of both is valued for use in pillows and padded garments. They feed on grass and weeds, supplementing this with small invertebrates and one of the attractions of rearing geese are their ability to grow and thrive on a grass-based system. They are very fearless and have good memories and can be allowed to roam widely in the knowledge that they will return home by dusk. The Chinese goose is more aggressive and noisy than other geese and can be used as a guard animal to warn of intruders. The meat of geese is dark-coloured and high in protein, but they deposit fat subcutaneously, although this fat contains mostly mono unsaturated fatty acids. The birds are killed either around 10 or about 24 weeks.

In some countries, geese and ducks are force-fed to produce livers with an exceptionally high fat content for the production of *foie gras*. Over 75% of world production of this product occurs in France, with lesser industries in Hungary and Bulgaria and a growing production in China, but the process of feeding the birds in this way is banned in many countries on animal welfare grounds.

4. Describe chickens as poultry breed.

Ans. Chickens are medium-sized, chunky birds with an upright stance and characterised by fleshy red combs and wattles on their heads. Males, known as cocks, are usually larger, more boldly coloured, and have more exaggerated plumage than females (hens). Chickens are sociable, omnivorous, ground-dwelling birds that in their natural surroundings search among the leaf litter for seeds, invertebrates, and other small animals. Today's domestic chicken (*Gallus gallus domesticus*) is mainly descended from the wild red jungle fowl of Asia, with some additional input from the grey jungle fowl.

Poultry breeding has produced breeds and strains to fulfil different needs; light-framed, egg-laying birds that can produce 300 eggs a year; fast-growing, fleshy birds destined for consumption at a young age, and utility birds which produce both an acceptable number of eggs and a well-fleshed corpse. Male birds are unwanted in the egg-laying industry and can often be identified as soon as they are hatch for subsequent choosing. In meat breeds, sometimes testicles of male bird are removed (often chemically) to prevent aggression. The resulting bird, called a capon, has more tender and flavourful meat, as well.

5. **Describe Turkeys as Poultry breed.**

Ans. Male domesticated turkey sexually displaying by showing the snood hanging over the beak, the caruncles hanging from the throat, and the 'beard' of small, black, stiff feathers on the chest. Turkeys are large birds, their nearest relatives being the pheasant and the guinea fowl. Males are larger than females and have spreading, fan-shaped tails and distinctive, fleshy wattles, called a snood that hang from the top of the beak and are used in courtship display. Wild turkeys can fly, but rarely do so, preferring to run with a long, startling gait. They roost in trees and feed on the ground, feeding on seeds, nuts, berries, grass, foliage, invertebrates, lizards, and small snakes.

Commercial turkeys are usually reared indoors under controlled conditions. These are often large buildings, purpose-built to provide ventilation and low light intensities (this reduces the birds' activity and thereby increases the rate of weight gain). The lights can be switched on for 24-hrs/day, or a range of step-wise light regimens to encourage the birds to feed often and therefore grow rapidly. Females achieve slaughter weight at about 15 weeks of age and males at about 19 weeks. Mature commercial birds may be twice as heavy as their wild counterparts. Many different breeds have been developed, but the majority of commercial birds are white, as this improves the appearance of the dressed carcass, the pin feathers being less visible.

6. **Explain Poultry as Food.**

Ans. Poultry is the second most widely eaten type of meat in the world, accounting for about 30% of total meat production worldwide compared to pork at 38%. Sixteen billion birds are raised annually for consumption, more than half of these in industrialised, factory-like production units. Global broiler meat production rose to 84.6 million tonnes in 2013. The largest producers were the United States (20%), China (16.6%), Brazil (15.1%) and the European Union (11.3%). There are two distinct models of production; the European Union supply chain model seeks to supply products which can be traced back to the farm of origin. This model faces the increasing costs of implementing additional food safety requirements, welfare issues and environmental regulations. In contrast, the United States model turns the product into a commodity.

World production of duck meat was about 4.2 million tonnes in 2011 with China producing two thirds of the total, some 1.7 billion birds. Other notable duck-

producing countries in the Far East include Vietnam, Thailand, Malaysia, Myanmar, Indonesia and South Korea (12% in total). France (3.5%) is the largest producer in the West, followed by other EU nations (3%) and North America (1.7%).[19] China was also by far the largest producer of goose and guinea fowl meat, with a 94% share of the 2.6 million tonne global market.

Global egg production was expected to reach 65.5 million tonnes in 2013, surpassing all previous years. Between 2000 and 2010, egg production was growing globally at around 2% per year, but since then growth has slowed down to nearer 1%.

7. **Explain the role of poultry in human related health and diseases**.

Ans. Poultry meat and eggs provide nutritionally beneficial food containing protein of high quality. This is accompanied by low levels of fat which have a favourable mix of fatty acids. Chicken meat contains about two to three times as much polyunsaturated fat as most types of red meat when measured by weight. However, for boneless, skinless chicken breast, the amount is much lower. A 100-g serving of baked chicken breast contains 4 g of fat and 31 g of protein, compared to 10 g of fat and 27 g of protein for the same portion of broiled, lean skirt steak.

A 2011 study by the Translational Genomics Research Institute showed that 47% of the meat and poultry sold in United States grocery stores was contaminated with *Staphylococcus aureus*, and 52% of the bacteria concerned showed resistance to at least three groups of antibiotics. Thorough cooking of the product would kill these bacteria, but a risk of cross-contamination from improper handling of the raw product is still present. Also, some risk is present for consumers of poultry meat and eggs to bacterial infections such as *Salmonella* and *Campylobacter*. Poultry products may become contaminated by these bacteria during handling, processing, marketing, or storage, resulting in food-borne illness if the product is improperly cooked or handled.

In general, avian influenza is a disease of birds caused by bird-specific influenza A virus that is not normally transferred to people; however, people in contact with live poultry are at the greatest risk of becoming infected with the virus and this is of particular concern in areas such as Southeast Asia, where the disease is endemic in the wild bird population and domestic poultry can become infected. The virus possibly could mutate to become highly virulent and infectious in humans and cause an influenza pandemic.

8. **Write a note on Poultry Farming.**

Ans. In poultry farming all over world, chickens are kept than any other type of poultry, with over 50 billion birds being raised each year as a source of meat and eggs. Traditionally, such birds would have been kept extensively in small flocks, feeding during the day and housed at night. However, rising world populations and urbanization have led to the bulk of production being in larger, more intensive specialist units. These are often situated close to where the feed is grown or near to where the meat is needed, and result in cheap, safe food being made available for urban communities. Profitability of production depends very much on the price of feed, which has been rising. High feed costs could limit further development of poultry production.

In free-range husbandry, the birds can roam freely outdoors for at least part of the day. Often, this is in large enclosures, but the birds have access to natural conditions and can exhibit their normal behaviours. A more intensive system is yarding, in which the birds have access to a fenced yard and poultry house at a higher stocking rate. Poultry can also be kept in a barn system, with no access to the open air, but with the ability to move around freely inside the building. The most intensive system for egg-laying chickens is battery cages, often set in multiple tiers. In these, several birds share a small cage which restricts their ability to move around and behave in a normal manner. The eggs are laid on the floor of the cage and roll into troughs outside for ease of collection. Battery cages for hens have been illegal in the EU since January 1, 2012.

9. **Explain importance of chickens in poultry farming.**

Ans. Chickens raised intensively for their meat are known as "broilers". Breeds have been developed that can grow to an acceptable carcass size (2 kg (4.4 lb)) in six weeks or less. Broilers grow so fast, their legs cannot always support their weight and their hearts and respiratory systems may not be able to supply enough oxygen to their developing muscles. Mortality rates at 1% are much higher than for less-intensively reared laying birds which take 18 weeks to reach similar weights. Processing the birds is done automatically with conveyor-belt efficiency. They are hung by their feet, stunned, killed, bled, scalded, plucked, have their heads and feet removed, remove the innards, washed, chilled, drained, weighed, and packed, all within the course of little over two hours.

10. Explain Guinea fowl as Poultry breed.

Ans. Guinea fowl originated in southern Africa, and the species most often kept as poultry is the helmeted guinea fowl (*Numida meleagris*). It is a medium-sized grey or speckled bird with a small naked head with colourful wattles and a knob on top, and was domesticated by the time of the ancient Greeks and Romans. Guinea fowl are hardy, sociable birds that subsist mainly on insects, but also consume grasses and seeds. They will keep a vegetable garden clear of pests and will eat the ticks that carry Lyme disease. They happily roost in trees and give a loud vocal warning of the approach of predators. Their flesh and eggs can be eaten in the same way as chickens, young birds being ready for the table at the age of about four months.

11. Write a note on Squabs.

Ans. A squab is the name given to the young of domestic pigeons that are destined for the table. Like other domesticated pigeons, birds used for this purpose are descended from the rock pigeon (*Columba livia*). Special utility breeds with desirable characteristics are used. Two eggs are laid and incubated for about 17 days. When they hatch, the squabs are fed by both parents on "pigeon's milk", a thick secretion high in protein produced by the crop. Squabs grow rapidly, but are slow to fledge and are ready to leave the nest at 26 to 30 days weighing about 500 g (18 oz). By this time, the adult pigeons will have laid and be incubating another pair of eggs and a prolific pair should produce two squabs every four weeks during a breeding season lasting several months.

12. Write a note on Quails.

Ans. The quail is a small to medium-sized, cryptically coloured bird. In its natural environment, it is found in bushy places, in rough grassland, among agricultural crops, and in other places with dense cover. It feeds on seeds, insects, and other small invertebrates. Being a largely ground-dwelling, fearless bird, domestication of the quail was not difficult, although many of its wild instincts are retained in captivity. Modern birds can lay about 300 eggs a year and countries such as Japan, India, China, Italy, Russia, and the United States have established commercial Japanese quail farming industries.

Japanese quail are also used in biomedical research in fields such as, genetics, embryology, nutrition, physiology, pathology, and toxicity studies. These quail are closely related to the common quail, and many young hybrid birds are released into the wild each year to replenish decreasing wild populations.

13. Give details about historical aspects of quails.

Ans. Being a largely ground-dwelling, fearless bird, domestication of the quail was not difficult, although many of its wild instincts are retained in captivity. It was known to the Egyptians long before the arrival of chickens and was depicted in hieroglyphs from 2575 BC. It migrated across Egypt in vast flocks and the birds could sometimes be picked up off the ground by hand. These were the common quail (*Coturnix coturnix*), but modern domesticated flocks are mostly of Japanese quail (*Coturnix japonica*) which was probably domesticated as early as the 11th century AD in Japan. They were originally kept as song birds, and they are thought to have been regularly used in song contests.

In the early 20th century, Japanese breeders began to selectively breed for increased egg production. By 1940, the quail egg industry was flourishing, but the events of World War II led to the complete loss of quail lines bred for their song type, as well as almost all of those bred for egg production. After the war, the few surviving domesticated quail were used to rebuild the industry and all current commercial and laboratory lines are considered to have originated from this population. Modern birds can lay upward of 300 eggs a year and countries such as Japan, India, China, Italy, Russia, and the United States have established commercial Japanese quail farming industries. Japanese quail are also used in biomedical research in fields such as genetics, embryology, nutrition, physiology, pathology, and toxicity studies. These quail are closely related to the common quail, and many young hybrid birds are released into the wild each year to replenish decreasing wild populations.

14. Write a note on rearing commercially important Turkeys.

Ans. Commercial turkeys are usually reared indoors under controlled conditions. These are often large buildings, purpose-built to provide ventilation and low light intensities (this reduces the birds' activity and thereby increases the rate of weight gain). The lights can be switched on for 24-hrs/day, or a range of step-wise light regimens to encourage the birds to feed often and therefore grow rapidly. Females

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15. Write a note on historical aspects of domestication of ducks.

Ans. Domestication of the duck took place in the Far East at least 1500 years earlier than in the West. Despite this, ducks did not appear in agricultural texts in Western Europe until about 810 AD, when they began to be mentioned alongside geese, chickens, and peafowl as being used for rental payments made by tenants to landowners.

It is widely agreed that the mallard (*Anas platyrhynchos*) is the ancestor of all breeds of domestic duck (with the exception of the Muscovy duck (*Cairina moschata*), which is not closely related to other ducks). Ducks are farmed mainly for their meat, eggs, and down. As is the case with chickens, various breeds have been developed, selected for egg-laying ability, fast growth, and a well-covered carcase. The most common commercial breed in the United Kingdom and the United States is the Pekin duck, which can lay 200 eggs a year and can reach a weight of 3.5 kg (7.7 lb) in 44 days.

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