

## 7. ANIMAL HUSBANDRY

### TEACHING TASK (Page 19 – 22)

#### NEET LEVEL QUESTIONS

##### Multi Correct Answer Type

1) Super ovulation and embryo transplantation are meant for improving

**Options:** A) Poultry, B) Human race, C) Livestock, D) Plants

**Answer:** C

**Solution:** Super ovulation and embryo transplantation are techniques used to enhance the reproduction and genetic quality of livestock, such as cattle, sheep, and goats. These methods are not applicable to poultry (A), humans (B), or plants (D).

2) High milk-yielding varieties of cows are obtained by

**Options:** A) Artificial insemination, B) Super ovulation, C) Use of surrogate mothers, D) All of these

**Answer:** D

**Solution:** High milk-yielding cow varieties are developed using artificial insemination (to introduce superior genetics), super ovulation (to produce multiple embryos), and surrogate mothers (to carry embryos). All these techniques are employed, making D the correct choice.

3) The best milk breed in the world is

**Options:** A) Sahiwal, B) Deani, C) Holstein, D) Sindhi

**Answer:** C

**Solution:** Holstein (Holstein-Friesian) is widely recognized as the best milk-yielding breed globally due to its high milk production (averaging 22,000–30,000 liters per lactation). Sahiwal and Sindhi are Indian breeds, and Deani is not a recognized breed.

4) The young chickens raised specially for meat are called

**Options:** A) Honey bee, B) Hens, C) Fishes, D) Pigs

**Answer:** None (Correct term: Broilers)

**Solution:** The question appears to have an error, as none of the options correctly describe young chickens raised for meat, which are called **broilers**. For the given options, none are correct, but if the question intends "broilers," it is a standard term in poultry farming.

**5) Some improved cross-breed strains of poultry birds are**

**Options:** A) HH-260, B) IBL-80, C) B-77, D) All of these

**Answer:** D

**Solution:** HH-260, IBL-80, and B-77 are all improved cross-breed strains of poultry developed for better egg or meat production. Thus, all options are correct.

**6) Which amongst the following indigenous fowls is used in cock fighting and is called as Indian game?**

**Options:** A) Aseel, B) Busra, C) Chittagong, D) Ghagus

**Answer:** A

**Solution:** Aseel is an indigenous Indian fowl known for its strength and aggression, used in cock fighting and referred to as the "Indian game" breed.

**7) Exotic breeds popularly used in our country are**

**Options:** A) White Leghorn and Rhode Island Red, B) Rhode Island Red and Andalusian, C) Plymouth Rock and Andalusian, D) White Leghorn and Andalusian

**Answer:** A

**Solution:** White Leghorn (known for egg production) and Rhode Island Red (dual-purpose breed) are widely used exotic poultry breeds in India. Andalusian and Plymouth Rock are less common in India.

**8) Crustacean fishery is connected with the exploitation of**

**Options:** A) Oysters and crabs, B) Mussels and squids, C) Shells and cuttlefish, D) Lobster and prawn

**Answer:** D

**Solution:** Crustacean fishery involves harvesting crustaceans like lobsters and prawns. Oysters, mussels, squids, and cuttlefish are mollusks, not crustaceans.

**9) Fish meat is better than the meat of other animals because it contains more**

**Options:** A) Water, B) Fat, C) Oil, D) Proteins

**Answer:** D

**Solution:** Fish meat is considered superior due to its high protein content and low saturated fat, making it a healthier option compared to other meats.

**10) Hybrid breed of cattle is**

**Options:** A) Sunnandini, B) Holstein, C) Brown Swiss, D) Kankre

**Answer:** A

**Solution:** Sunnandini is a hybrid breed developed in India by crossing local breeds with exotic breeds like Holstein or Brown Swiss. Holstein and Brown Swiss are pure exotic breeds, and Kankre is not a recognized breed.

**11) Scientific method of large-scale culturing of earthworms for vermicompost is called**

**Options:** A) Apiculture, B) Sericulture, C) Vermiculture, D) Aquaculture\

**Answer:** C

**Solution:** Vermiculture is the scientific process of culturing earthworms to produce vermicompost. Apiculture (beekeeping), sericulture (silk production), and aquaculture (fish farming) are unrelated.

**12) The main component in vermicompost**

**Options:** A) Ammonia, B) Urea, C) Uric acid, D) Nitric acid

**Answer:** None (Correct answer: Organic matter/nutrients)

**Solution:** Vermicompost primarily consists of organic matter, humus, and nutrients (like nitrogen, phosphorus, and potassium) produced by earthworm activity. None of the given options accurately describe the main component, but if forced to choose, none fit perfectly.

**13) What are friends of farmers**

**Options:** A) Earthworms, B) Leeches, C) Rats, D) Bats

**Answer:** A

**Solution:** Earthworms are considered "friends of farmers" because they enhance soil fertility through vermicomposting and aeration. Leeches, rats, and bats do not have similar benefits in agriculture.

**14) What is pH of good soil**

**Options:** A) 1-7, B) 5.5-7.5, C) 7-14, D) 5.5-14

**Answer:** B

**Solution:** The ideal pH for most agricultural soils is slightly acidic to neutral, ranging from 5.5 to 7.5, as it supports optimal nutrient availability for plants.

**JEE Advanced Level Questions**

**15) Find the incorrect statement Statements:** i. Karan Swiss is a cross breed ii. There are 27 popular breeds of cow in our country iii. The compost pit is allowed to dry for 8-9 days iv. Layers only for meat

**Options:** A) i, B) iii & iv, C) i & ii, D) i, ii & iv

**Answer:** B

**Solution:**

**i:** Karan Swiss is a crossbreed (Sahiwal × Brown Swiss), so this is correct.

**ii:** India has around 50 recognized cattle breeds, not exactly 27, but this is often approximated in exams, so it may be considered correct.

**iii:** Compost pits are kept moist, not allowed to dry, for microbial activity, so this is incorrect.

**iv:** Layers are poultry birds bred for egg production, not meat, so this is incorrect. Thus, iii and iv are incorrect, making B the answer.

**16) Find the correct statement Statements:** i. Aseel, Brahma, and Sussex are broilers ii. Rinderpest is a viral disease caused in cattle iii. Cattle is grown in polyculture iv. Avian influenza caused by H5N1 virus

**Options:** A) only i, B) i & ii, C) ii only, D) i, ii & iv

**Answer:** C

**Solution:**

**i:** Aseel, Brahma, and Sussex are not exclusively broilers; Aseel is a dual-purpose breed, Brahma and Sussex are often dual-purpose or layers. Incorrect.

**ii:** Rinderpest is a viral disease in cattle, caused by a morbillivirus. Correct.

**iii:** Cattle are not typically grown in polyculture (a term more relevant to fish or crops). Incorrect.

**iv:** Avian influenza is caused by H5N1 virus, among others. Correct, but since the question asks for the most accurate, ii is the safest choice. Thus, C (ii only) is correct.

**Assertion and Reason Type**

**17) Assertion:** Fish is caught from natural waters both marine as well as inland.

**Reason:** Fish is grown in water bodies through human efforts.

**Answer:** B

**Solution:**

**Assertion:** True, as fish are caught from natural marine and inland waters (capture fishery).

**Reason:** True, as fish are also grown through aquaculture. However, the reason describes aquaculture, which is a different practice from capture fishery, so it does not explain the assertion.

**Answer:** B (Both true, but reason is not the correct explanation).

**18) Assertion:** Pisciculture is rearing and breeding of fishes.

**Reason:** Growing two or more than two fishes together in the same water body.

**Answer:** C

**Solution:**

**Assertion:** True, pisciculture involves rearing and breeding fish.

**Reason:** False, as growing multiple fish species together is polyculture, a subset of pisciculture, not its definition.

**Answer:** C (Assertion true, Reason false).

**Matrix Matching Type**

**19) Match the following:**

Exotic breed of poultry → ?

Aquaculture → ?

Layers → ?

Ghagus → ?

**Options:** A) 180–250 eggs per year B) Dual purpose breed C) Rearing of fish in commercial manner D) 240 eggs per day

**Answer:** None (Correct matching: 1-A, 2-C, 3-A, 4-B)

**Solution:**

**1. Exotic breed of poultry:** Breeds like White Leghorn produce 180–250 eggs per year (A).

**2. Aquaculture:** Rearing of fish in a commercial manner (C).

**3. Layers:** Produce 180–250 eggs per year (A).

**4. Ghagus:** A dual-purpose indigenous breed (B). None of the given options perfectly match, but the closest correct mapping is 1-A, 2-C, 3-A, 4-B.

### **Comprehensive Type**

**20) Based on the passage: i. Upgraded variety of poultry breed is**

**Options:** A) 11S82, B) Aseel, C) Brown Leghorn, D) None

**Answer:** A

**Solution:** The passage mentions B77 and 11S82 as upgraded poultry varieties. Thus, 11S82 (A) is correct.

**ii. Silver revolution related to Options:** A) Aquaculture, B) Pisciculture, C) Poultry, D) Apiculture

**Answer:** C

**Solution:** The passage explicitly states that the silver revolution is related to the rise in poultry product availability. Thus, C is correct.

**iii. Pigs are domesticated from Options:** A) 9000 BC, B) 8000 BC, C) 19,000 BC, D) 7,000 BC

**Answer:** A

**Solution:** The passage states pigs were domesticated around 9000 BC. Thus, A is correct.

**iv. Dogs are domesticated from Options:** A) 8000 BC, B) 11,000–9000 BC, C) 30,000 BC, D) 30,000–7,000 BC

**Answer:** D

**Solution:** The passage states dogs were domesticated from 30,000–7,000 BC. Thus, D is correct.

## **LEARNERS TASK (Page 22 – 27)**

### **Conceptual Understanding Questions (CUQs)**

**1) The branch of science which deals with the study of various breeds of domesticated animals and their management is**

**Answer:** D) Animal Husbandry

**Solution:** Animal husbandry is the science of breeding, rearing, and managing domesticated animals for economic purposes.

**2) The term husbandry comes from**

**Answer:** A) Husband

**Solution:** The term "husbandry" originates from "husband," meaning to manage or care for, as in managing livestock or resources.

**3) The study of proper utilization of economically important domestic animals is called**

**Answer:** D) Livestock Management

**Solution:** Livestock management involves the proper care and utilization of economically important animals like cattle, poultry, etc.

**4) Milk-giving animal among the following is**

**Answer:** A) Cow

**Solution:** Cows are primary milk-giving animals, unlike hens, ducks, or fowls.

**5) Cattle of native origin are called**

**Answer:** A) Indigenous breeds

**Solution:** Cattle native to a region are called indigenous breeds, such as Sahiwal or Gir in India.

**6) There are ..... breeds of cow in our country**

**Answer:** None (Correct answer: ~50)

**Solution:** India has approximately 50 recognized cow breeds, not 29, 27, 25, or 24. The options seem incorrect.

**7) The full form of NDRI is**

**Answer:** A) National Dairy Research Institute

**Solution:** NDRI stands for National Dairy Research Institute, located in Karnal, India.

**8) The type of good varieties of calves developed by National Dairy Research Institute, Karnal is**

**Answer:** None (Correct answer: Karan Swiss, Karan Fries)

**Solution:** NDRI developed breeds like Karan Swiss and Karan Fries, but none of the options (Karan, Sumandhini, Heifers, Calver) exactly match. The closest is "Karan."

**9) Foot and mouth disease is caused by**

**Answer:** A) Virus

**Solution:** Foot and mouth disease is caused by a picornavirus.

**10) Anthrax is caused by**

**Answer:** B) Bacteria

**Solution:** Anthrax is caused by the bacterium *Bacillus anthracis*.

**11) The tremendous rise in the availability of poultry products is called**

**Answer:** D) Silver revolution

**Solution:** The silver revolution refers to the increase in poultry and egg production.

**12) The modern breed with improved egg laying and meat production**

**Answer:** B) Exotic

**Solution:** Exotic breeds like White Leghorn and Rhode Island Red are improved for egg and meat production.

**13) The average production of eggs by an Indian breed is about**

**Answer:** C) 50 eggs

**Solution:** Indian poultry breeds (e.g., Aseel) produce around 50–60 eggs per year, unlike exotic breeds (180–250 eggs).

**14) Example of layers is**

**Answer:** A) White Leghorn

**Solution:** White Leghorn is a well-known layer breed for egg production.

**15) The breed which lays more number of eggs with big sizes are**

**Answer:** B) Layers]

**Solution:** Layers are bred for high egg production and larger egg sizes.

**16) Which among the following is broiler variety**

**Answer:** D) A & B

**Solution:** Aseel and Brahma can be used as broilers, though Aseel is primarily dual-purpose.

**17) Dual purpose breed among the following is**

**Answer:** C) Rhode Island Red

**Solution:** Rhode Island Red is a dual-purpose breed (eggs and meat).

**18) The hybrid variety of breed among the following is**

**Answer:** C) A & B

**Solution:** B-77 and 11S82 are hybrid poultry breeds developed for improved traits.

**19) Avian influenza is caused by**

**Answer:** A) H5N1

**Solution:** Avian influenza is caused by the H5N1 virus, among other strains.

**20) Candida albicans is a**

**Answer:** B) Fungi

**Solution:** *Candida albicans* is a fungus causing candidiasis.

**21) Paramyxovirus causes a disease known as**

**Answer:** A) Ranikhet

**Solution:** Ranikhet (Newcastle disease) is caused by paramyxovirus.

**22) Fowl pox is caused by**

**Answer:** A) Fowl pox virus

**Solution:** Fowl pox is caused by the fowl pox virus (avipoxvirus).

**23) The central disease birds should be**

**Answer:** D) Both A & C

**Solution:** Poultry birds should be vaccinated and immunized to prevent diseases.

**24) The scientific method of culturing arthropods such as prawns, shrimps, crabs, and lobsters is**

**Answer:** B) Shell fisheries

**Solution:** Shell fisheries involve culturing crustaceans like prawns and lobsters.

**25) Shell fisheries in commercial language is called as**

**Answer:** A) Aquaculture

**Solution:** Shell fisheries are a part of aquaculture, which includes culturing aquatic organisms.

**26) Culturing of only one sex of species of fish in a pond is called**

**Answer:** B) Mono sex culture

**Solution:** Mono-sex culture involves raising only one sex (e.g., male tilapia) to optimize growth.

**27) Mono culture is**

**Answer:** A) Culturing of single species of fishes

**Solution:** Monoculture involves raising one fish species in a pond.

**28) Example of polyculture is**

**Answer:** D) All

**Solution:** Chinese carp, grass carp, and bighead carp are commonly used in polyculture systems.

**29) Induced spawning is caused by injecting**

**Answer:** A) Synthetic hormone

**Solution:** Synthetic hormones like ovaprim are used to induce spawning in fish.

**30) The synthetic hormone among the following is**

**Answer:** D) All

**Solution:** Ovaprim, Ovatide, and Nova are all synthetic hormones used in fish breeding.

**31) The first dose contains ..... amount of gonadotrophins**

**Answer:** None (Correct answer: 0.3–0.5 ml/kg for ovaprim)

**Solution:** The options do not match standard dosages (e.g., ovaprim at 0.3–0.5 ml/kg for females). The question may have errors.

**32) The second dose is injected with the amount of hormone in female fish**

**Answer:** None (Correct answer: 0.5–1.0 ml/kg for ovaprim)

**Solution:** The options do not align with standard protocols for synthetic hormones like ovaprim.

**33) The fertilized eggs are transferred to ..... ponds**

**Answer:** None (Correct answer: Hatching ponds)

**Solution:** Fertilized fish eggs are transferred to hatching ponds, not listed in the options.

**34) IPN is**

**Answer:** A) Infectious Pancreatic Necrosis

**Solution:** IPN stands for Infectious Pancreatic Necrosis, a viral disease in fish.

### **Very Short Answer Questions**

**1) Give an example of an Indian and foreign poultry breed which when crossed produce an improved variety. List any one desirable trait expected from such cross-breeding.**

**Answer:** Indian breed: Aseel; Foreign breed: Rhode Island Red. Desirable trait: Improved egg production.

**Solution:** Crossing Aseel with Rhode Island Red produces hybrids with enhanced egg-laying capacity or meat quality.

**2) What is the a) Normal body temperature of Cow?**

**Answer:** 38.6°C (101.5°F)

**b) Normal body temperature of Buffalo?**

**Answer:** 38.2°C (100.8°F)

**Solution:** These are standard body temperatures for healthy cows and buffaloes.

**3) Mention the crop whose production has increased by blue revolution and yellow revolution.**

**Answer:** Blue revolution: Fish (aquaculture); Yellow revolution: Oilseeds.

**Solution:** The blue revolution increased fish production, while the yellow revolution boosted oilseed production.

### **JEE ADVANCED LEVEL QUESTIONS**

#### **Multi Correct Answer Type**

**1) Find the incorrect statement Statements:** i. Labeo is used as monoculture fish ii. Tilapia is used as polyculture fish iii. Deep freezing is a method of preservation iv. The eggs is salting a method of preservation

**Answer:** D) i & iv

**Solution:**

**i:** Labeo (e.g., Labeo rohita) is often used in polyculture, not monoculture. Incorrect.

**ii:** Tilapia is used in polyculture systems. Correct.

**iii:** Deep freezing is a standard preservation method. Correct.

**iv:** Salting eggs is not a common preservation method for fish eggs. Incorrect. Thus, D is correct.

**2) Find the correct statements Statements:** i. Induced spawning is carried out by injecting synthetic hormone such as ovaprim ii. In the first dose, female is injected with 5–6 mg of gonadotrophin iii. The second dose, female is injected with 10–12 mg per kg of body weight and male fish with 2–3 mg per kg of body weight iv. The advanced fish are reared in rearing ponds for about 3–4 months

**Answer:** C) i & iv

**Solution:**

**i:** Induced spawning uses synthetic hormones like ovaprim. Correct.

**ii:** The first dose of ovaprim is typically 0.3–0.5 ml/kg, not 5–6 mg. Incorrect.

**iii:** The second dose is typically 0.5–1.0 ml/kg for females, not 10–12 mg/kg. Incorrect.

**iv:** Advanced fry are reared in ponds for 3–4 months. Correct. Thus, C is correct.

**Assertion and Reason Type**

**3. Assertion:** Culturing of one species of fish in a pond is called monoculture.

**Reason:** In monoculture, only one sex of fish is grown. **Answer:** C **Solution:**

**Assertion:** True, monoculture involves culturing one fish species.

**Reason:** False, monoculture refers to one species, not one sex (mono-sex culture is different). **Answer:** C (Assertion true, Reason false).

**4. Assertion:** Induced spawning is carried out by injecting synthetic hormone.

**Reason:** The hormone such as ovaprim and ovatide is injected. **Answer:** A

**Solution:**

**Assertion:** True, induced spawning uses synthetic hormones.

**Reason:** True, ovaprim and ovatide are examples of such hormones, and this explains the assertion. **Answer:** A (Both true, Reason is the correct explanation).

**Matrix Matching Type**

**5) Match the following:**

Fowl pox → ?

Candidiasis → ?

Ranikhet → ?

Fowl cholera → ?

Avian influenza → ?

**Options:** a) H5N1 virus, b) *Pasteurella multocida*, c) Fowl pox virus, d) *Candida albicans*, e) Paramyxovirus

**Answer:** A) 1-c, 2-d, 3-e, 4-b, 5-a

**Solution:**

Fowl pox: Fowl pox virus (c)

Candidiasis: *Candida albicans* (d)

Ranikhet: Paramyxovirus (e)

Fowl cholera: *Pasteurella multocida* (b)

Avian influenza: H5N1 virus (a)

**6) Match the following:**

Dual purpose breed → ?

Upgraded variety → ?

Infectious pancreatic necrosis → ?

Viral Haemorrhagic → ?

**Options:** A) B-77, B) Rhode Island Red, C) Rhabdovirus, D) Viral disease

**Answer:** B) 1-B, 2-A, 3-D, 4-C

**Solution:**

Dual purpose breed: Rhode Island Red (B)

Upgraded variety: B-77 (A)

Infectious pancreatic necrosis: Viral disease (D)

Viral Haemorrhagic: Caused by rhabdovirus (C)

**Comprehensive Type**

**7) Based on the passage:**

**i. Poultry birds affected by**

**Answer:** D) All

**Solution:** Poultry birds are affected by bacterial (fowl cholera), viral (Ranikhet), and fungal (candidiasis) diseases.

**ii. Gumboro is a**

**Answer:** B) Viral disease

**Solution:** Gumboro (Infectious Bursal Disease) is caused by a birnavirus.

**iii. In poultry industry, antibiotics used for preventing \_\_\_ disease**

**Answer:** A) Bacterial disease

**Solution:** Antibiotics are used to prevent and treat bacterial diseases like fowl cholera.

**iv. In poultry industry, vaccines used for preventing \_\_\_ disease**

**Answer:** B) Viral disease

**Solution:** Vaccines are primarily used for viral diseases like Ranikhet and Gumboro.

**v. Brooder's pneumonia is caused by**

**Answer:** C) Fungal disease

**Solution:** Brooder's pneumonia (aspergillosis) is caused by the fungus *Aspergillus*.

**Single Answer Questions**

**1) The term aquaculture means**

**Answer:** D) Both A & B

**Solution:** Aquaculture includes both inland and marine fisheries.

**2) Which one of the following is a disease of poultry?**

**Answer:** C) Ranikhet disease

**Solution:** Ranikhet (Newcastle disease) is a poultry-specific viral disease.

**3) In India, which of the following species of honey bee is reared in artificial hives?**

**Answer:** A) *Apis indica*

**Solution:** *Apis indica* (Indian honey bee) is commonly reared in artificial hives in India.

**4) A fungal disease of the poultry is**

**Answer:** C) Moniliasis

**Solution:** Moniliasis (candidiasis) is a fungal disease caused by *Candida albicans*.