

**2022 National FFA Poultry Evaluation CDE**  
**Written Examination**

1. The approximate number of weeks in which body pigment fades in an Egg-Type hen for production in the entire beak.
  - a. 3-4
  - b. 4-5
  - c. 5-8
  - d. 2.5-3
  
2. Although fading of pigment is a reasonably good indicator of egg production, it is not entirely accurate. Factors that affect rate of pigment fading are: Body size, health of the bird, the amount of pigment at start of egg laying, environmental temperature and \_\_\_\_\_.
  - a. feed composition (especially for the concentration of pigment)
  - b. amount of melanin in the feed
  - c. too low of protein for the age of the hen
  - d. the rate of handling qualities found in the individual hen at the time of evaluation
  
3. When evaluating the internal contents of an egg using the candling method, development of the germ spot on the yolk of a fertile egg has progressed to the point where it is plainly visible as a definite circular area or spot but with no blood in evidence should receive a grade of USDA \_\_\_\_\_.
  - a. Loss
  - b. Bloody
  - c. A
  - d. B
  
4. Chopped and formed products can be made using white meat only (typically breast meat), dark meat only (leg meat) or a combination of white and dark, in addition a natural proportion of skin can be used, USDA defines natural proportion skin as up to \_\_\_\_ of the total weight (meat + skin).
  - a. 25%
  - b. 10%
  - c. 20%
  - d. 18%
  
5. Bone-in products are also evaluated for miscuts, which refers to several types of defects. Miscuts will most commonly occur during the \_\_\_\_\_ debone or portioning process.
  - a. pre-slaughter
  - b. post-slaughter
  - c. packaging
  - d. shipping

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**Written Examination**

6. Table eggs are processed at facilities that wash, grade, and sort eggs. Many eggs are sold as shell eggs, but the \_\_\_\_\_ of eggs into various products (hard-cooked eggs, frozen scrambled eggs, dried or liquid whole eggs, dried or liquid egg whites, etc.) also occurs.
  - a. pre-collection
  - b. further processing
  - c. past-production
  - d. post-production
7. The various species of poultry belong to the animal kingdom and to the class Aves. They are feathered, biped, warm-blooded vertebrates with a \_\_\_\_\_ heart.
  - a. four-chambered
  - b. two-chambered
  - c. enlarged
  - d. double atrial
8. Poultry have unique anatomical and physiological characteristics compared to other livestock. For example, poultry have higher body temperatures. The nominal temperature for poultry exists in a range of \_\_\_\_\_.
  - a. 98.6°F to 99.2°F
  - b. 105°C to 107°C
  - c. 40.6°F to 41.7°F
  - d. 105°F to 107°F
9. The chicken (*Gallus gallus*), guinea fowl (*Numida meleagris*), turkey (*Meleagris gallapavo*), and pheasant (*Phasianus colchicus*) belong to the order \_\_\_\_\_.
  - a. Anseriformes
  - b. Columbiformes
  - c. Galliformes
  - d. Aves
10. Functions of the \_\_\_\_\_ system (skin and its appendages) are protection, regulation of body temperature, flight, and development of secondary sex characteristics.
  - a. Skeletal
  - b. Muscular
  - c. Integumentary
  - d. Respiratory
11. Another term for the crop is the \_\_\_\_\_.
  - a. Proventriculus
  - b. Ventriculus
  - c. Ingulvies
  - d. Gizzard

**2022 National FFA Poultry Evaluation CDE**  
**Written Examination**

12. The \_\_\_\_ is an accessory organ to the digestive tract. It synthesizes lipids and proteins (for eggs), secretes bile (for absorption of fat), and stores excess carbohydrates (as glycogen).
- gizzard
  - gall bladder
  - liver
  - muscular stomach
13. A nonvascular stigma or \_\_\_\_\_ is on each mature follicle. During normal ovulation, the follicular membrane ruptures along the stigma to prevent hemorrhaging and blood spots in the egg.
- blood ring
  - suture ring
  - suture line
  - yolk release point
14. The \_\_\_\_ is a gland at the base of the brain, which when stimulated by neural stimuli, secretes releasing factors that regulate the release of hormones from the pituitary gland.
- hypothalamus
  - pituitary
  - thyroid
  - pancreas
15. \_\_\_\_\_ is responsible for growth and maturation of ovarian follicles (egg yolks) in the ovary. Secretion of this hormone is under the influence of a gradual increase or decrease in duration of the diurnal photoperiod.
- FSH (follicle stimulating hormone)
  - FAH (follicle activating hormone)
  - EDH (egg development hormone)
  - OSH (ovulation stimulating hormone)
16. Changes occur rapidly in an embryo. As soon as fertilization occurs, cell division begins. The \_\_\_\_ is the part of the blastoderm from which the embryo develops.
- area opaca
  - sclerotome
  - area pellucida
  - derma-myotome
17. All the parts of a chick are in place by day \_\_\_\_\_. From then until the chick hatches, most development involves enlarging the parts already in existence, resulting in the form that we recognize as a chick.
- 5
  - 20
  - 15
  - 10

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18. The embryo's head should be tucked under the right wing and located toward the round (large) end of the egg, which puts the embryo in position to \_\_\_\_\_ the egg at the normal place.
- pip
  - crack
  - check
  - leak
19. A carrier that transmits an infective agent from one host to another is called a/an \_\_\_\_\_.
- Vector
  - Pathogen
  - Host
  - Zoonotic
20. The most successful poultry vaccines are against \_\_\_\_\_ diseases.
- Direct stress agents
  - Injury
  - Viral
  - Bacteria
21. A disease affecting birds as well as many other animals, \_\_\_\_\_ is caused by the multiplication of single celled animals (protozoa) primarily in the digestive tract. The protozoa belong to the genus Eimeria.
- coccidiosis
  - fowl pox
  - infectious bronchitis
  - Newcastle
22. Which of the following dangerous gases is heavier than air and may be expected to occur in poultry waste pits even after the pit has been emptied?
- Oxyacetylene
  - Nitrogen
  - Hydrogen sulfide
  - Hydrogen fluoride
23. How should hatching eggs be placed in the setter or transport tray?
- Small end down
  - Larger end down
  - On side
  - None of the above

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24. For hatchery management for broiler chick production, which of the following statements is false relating to hatching egg setting?
- a. Remove and discard Dirty eggs
  - b. Remove and discard eggs with the lightest and darkest shell color
  - c. Remove and discard very large or double yolk eggs
  - d. Remove and discard cracked eggs
25. Aviagen's Turkey Guide recommends which feeding strategy when moving turkey poults from brooding facilities to growing/finishing barns.
- a. Switch from crumbles a few days prior to move so as to allow adjustment to the new feed prior to movement into the differing environment.
  - b. Feed crumbled feed a few days in the grower/finisher barn to allow birds to adjust to the new environment prior to feed form change.
  - c. Start poults on pelleted feed in the brooder barn at 3-week of age to allow for the poults to acclimate to pellet feeding and to reduce potential stress at housing change.
  - d. None of the above as crumble feed is also recommended for finishing poults.
26. At the Roost Bounty Hatchery in Indiana, they recently incubated 3 million fertile eggs and 2.5 million chicks hatched. What was the percentage hatched?
- a. 16.00%
  - b. 40.00%
  - c. 80.00%
  - d. 83.33%
27. Using the % Hatch determined from question #26, and a given 97% fertile rate, please determine % Hatch of Fertile Rate for this scenario?
- a. 82.47%
  - b. 85.91%
  - c. 88.66%
  - d. 97.00%

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Please use this scenario to complete the next three questions:

The Rule of Thumb is 1 square foot of floor space for every 7 pounds of body weight. This converts to a range of 3 square feet per hen and 5 square feet per toms.

28. Use the rule of thumb above. If a house averages 39,600 square feet and you have four houses – How many toms can be housed?
- a. 7,920
  - b. 10,000
  - c. 31,680
  - d. 39,600
29. Use the rule of thumb above. If you have 15,000 hens and 13,000 toms – How many square feet would be required to house the birds?
- a. 100,000
  - b. 103,000
  - c. 110,000
  - d. 112,000
30. When setting up multi-brooder rings, Aviagen Turkey Guide recommends a maximum of 350 tom poults or 400 hen poults per stove. If you have 15,000 hen poults and 13,000 tom poults – how many total stoves will you need for hens?
- a. 33
  - b. 38
  - c. 66
  - d. 70