

<p><b>Kafrelsheikh University</b>  <b>Faculty of Veterinary Medicine</b>  <b>Dept.: Animal Wealth Development</b>  <b>Subject: <u>Animal, Poultry and Fish</u></b>  <b>Breeding and Production (A)</b>  <b>Academic Year: 2<sup>nd</sup> year 1<sup>st</sup> term</b></p>	  <p><b>B</b></p>	<p><b>Date: 23 / 1 / 2019</b>  <b>Time allowed: 2 hours</b>  <b>Number of pages: 4</b>  <b>Full marks: 25</b>  <b>Final Theoretical Exam</b></p>
---	--	--

**Q1: Choose the correct answer (Only one answer per question): (30 x 1/4 = 7 1/2 marks)**

يتم تظليل الإجابة الصحيحة بالترتيب في الجدول المرفق

١. The feed cost as the percentage of total cost of commercial poultry production is  
a. ٣٠-٤٠      b. ٤٠-٥٠      c. ٦٠-٧٠      d. above ٩٠
٢. Layers reach sexual maturity at:  
a. ١٣ to ١٥ weeks      b. ١٦ to ١٨ weeks      c. ١٨ to ٢٢ weeks      d. ٢٢ to ٢٤ weeks.
٣. Layers reach peak egg production in:  
a. ٤ to ٦ weeks      b. ٦ to ٨ weeks      c. ١٠ to ١٢ weeks      d. ١٣ to ١٤ weeks
٤. In a breeder house, a minimum of one nest should be provided for every \_\_\_\_\_ birds.  
a. ١٥      b. ١٠-١٤      c. ٥      d. ٢      e. Nests are not necessary in broiler breeder houses
٥. The following term refers to precautions taken to minimize the risk of introducing infectious disease into an animal population:  
a. Biosecurity      b. Disease Agents      c. Vaccination protocols      d. Fowl Pox
٦. During brooding the temperature under the brooder for the first week should be:  
a. ٢٧-٣٥ °C      b. ٣٢-٣٥ °C      c. ٤١-٤٢ °C      d. ٣٥-٤٠ °C
٧. Poultry includes all of the following except  
a. Chicken      b. Turkey      c. Ham      d. Duck      e. Goose
٨. The optimum temperature and humidity for maintaining egg quality is:  
a. ١٥ to ١٨ °C and ٧٥ to ٨٠% humidity      b. ١٥ to ١٨ °C and ٨٥ to ٩٠% humidity  
c. ١٨ to ٢١ °C and ٦٥ to ٧٥% humidity      d. ٢١ to ٢٤ °C and ٧٠ to ٨٠% humidity
٩. Air surrounding incubating eggs should contain  
a. ٢١ % oxygen by volume      b. No more than ٠.٥% CO<sub>2</sub> by volume  
c. No more than ٢% CO<sub>2</sub> by volume      d. Both (a) and (b)      e. Both (a) and (c)
١٠. Which of the following is NOT a characteristics of a good ventilation system:  
a. Removes carbon dioxide and other harmful gases  
b. Only needs to be operated at night  
c. Maintains temperature and humidity necessary for optimum performance and efficiency  
d. Maintains good litter conditions
١١. Broiler downgrades during processing are often attributed to:  
a. blisters      b. bruises      c. poor Feathering      d. clinical or sub-clinical disease  
e. all of the Above
١٢. Beak trimming:  
a. Helps prevent feed wastage      b. Reduces cannibalism  
c. Is best if done between ٦ and ٨ days of age      d. All of the above
١٣. What does the term “dubbing” mean?  
a. Removal of the feathers      b. cutting the flight feathers so the bird cannot fly  
c. Surgical removal of the comb and wattles      d. pinioning the wing so the bird cannot fly
١٤. Genetic consequences of outbreeding include

- a) Increase of homozygosity  
 c) Increase of heterozygosity
- b) Hybrid vigor  
 d) Decrease uniformity

١٥. A trait affected by many genes

- a) SIT      b) Polygenic trait      c) Phenotypic trait      d) BV

١٦. A mating system depends on phenotypes

- a) Inbreeding      b) PAM      c) NAM      d) b and c

١٧. Hybrid vigor is a consequence of

- a) Favorable genes combination      b) Additive genes      c) heritability      d) inbreeding

١٨. When you decide which horse to keep as a parent for the next generation, the most useful information would be:

- a) BV      b) PA      c) MPPA      d) B and C

١٩. What is the measurement is used to determine success of a hatchery?

- a. Feed efficiency      b. Number of quality chicks produced  
 c. Miles per gallon      d. Percent of late flock mortality

٢٠. What percent of eggs weight should be lost by the ١٨<sup>th</sup> day of incubation?

- a. ١٨%      b. ١٢%      c. ٢٢%      d. ٤%

٢١. What is the percentage HDEP for today based on ١٠٠,٠٠٠ live hens producing ٩٠,٠٠٠ eggs?

- a. ١٠      b. ١٠٠      c. ٩٠      d. ٧٥

٢٢. A flock of ٥,٠٠٠ breeder females is ready to go into production. How many males should be added to the flock?

- a) ١٥ males      b) ٦٥ males      c) ١٢٠ males      d) ٥٠٠ males

٢٣- Ammonia levels above \_\_\_\_\_ ppm are detrimental to poultry

- a) ٢٥      b) ٤٠      c) ١٠٠

d) Ammonia levels have no adverse affects on birds.

٢٤. The term veal means:

- a) calves fed on milk until slaughtered      b) meat of adult calves  
 c) The meat from calves of one year old      d) Non of the above

٢٥. The optimum age of calves for fattening on green fodder in Egypt is:

- a) ٦-٨ months      b) less than ٦ months      c) ١٢ months      d) more than ١٢ months

٢٦. A gene effect that can transmit from parent to offspring:

- a) Additive gene effect      b) Genotypic effect      c) Phenotypic effect      d) All of them

٢٧. Two traits are genetically correlated when their inheritance controlled by genes characterized by

- a) Pleiotropy      b) Linkage      c) All of them      d) None of them

٢٨. Fertility is ----- trait

- a) Thershold      b) polygenic      c) SIT      d) a and b

٢٩. PA is a consequence of all permanent factors affecting a repeated trait such as

- a) Genetic factors      b) Ep      c) G + Ep      d) None of them

٣٠. When heritability of a character under selection is high, the method of selection of choice will be:

- a) Family selection      b) Mass selection      c) Within family selection      d) None of them

**Q٢. Answer each of the following statements with (True) or (False): ((٢٠ x 1/4 = ٥ marks))**

يتم تظليل الاجابة الصحيحة بالترتيب في الجدول المرفق

- 1) The feeding period of cattle should be terminated when the costs of feeding become equal or higher than the return from the BW gain of the animal
- 2) Regardless of the distance to the hatchery building, or the number of eggs are to be held, eggs should be transported in an environment of 27.8 °C and 70-75% relative humidity
- 3) The recommended amount of protein in a starter broiler ration is 23 percent. The protein level should be higher in a grower ration
- 4) A temperature of 24°C at 0 cm above the top of the litter is satisfactory for chicks at one day of age.
- 5) The best direction of poultry houses in lower Egypt should be north- south direction and in upper Egypt in east-west direction.
- 6) The effect of migration on changing gene frequency increases as the difference in allele frequency between natives and immigrants increases.
- 7) If linkage is the major cause for a genetic correlation, then the correlation would be expected to decrease over many generations of random mating.
- 8) Breeding value of an individual is the mean of additive and non-additive gene effects
- 9) Producing ability measures the ability of the animal to repeat its performance in future records.
- 10) In Labrador dogs the genotype bbEE gives a yellow color.
- 11) The amount of protein in the ration for growing pullet should be increased as her body weight increases. This is because the daily protein requirements of the growing bird are increasing with age.
- 12) Normally egg production does not start to decline until the average house temperature reaches 27 °C while egg size decreases at temperature over 24 °C
- 13) In layer production, lighting programs in conjunction with the body weight and feeding programs are responsible for the birds sexual development.
- 14) Optimum house temperature for laying birds is between 27 °C and 22 °C.
- 15) Young animals are more efficient in feed conversion than are older cattle as increases in BW of young animals is largely due to fat deposition
- 16) Threshold traits are polygenic categorical traits as Dystocia
- 17) Hybrid vigor and inbreeding depression are the consequences favorable and unfavorable gene combinations.
- 18) Predictions of BV and PA are used similarly in animal breeding.
- 19) The effective breeding program needs selection and mating system to modify the gene and genotypic frequencies respectively.
- 20) Inbreeding depression is the opposite effect of heterosis. It occurs as a result of pairing of good genes.

**Q3. Place the word or phrase that best fits the given definition: ((0 x 1/2 = 1/2 marks))**

1. **The degree to which a parent will pass his characteristics consistently so that, the performance of his progeny resembles its own and to each other.**

ANSWER: .....

2. **A Mating system functions to incorporate a specific allele or alleles existing in one population into another population**

ANSWER: .....

۳. Property of genes exists when genes at the same locus affect more than one characteristic at the same time

ANSWER: .....

۴. The relative frequency of a particular allele in a population.

ANSWER: .....

۵. Measure how much of the phenotypic variation of a trait in a population is due to genetic differences

ANSWER: .....

**Q۴. Write on the following: (۱۰ marks)**

- ۱. Write the genetic model of a repeated trait. Give examples. ۲ marks
- ۲. Measuring uniformity in layer flock ۲ marks
- ۳. A lighting program for a layer flock hatched in March ۱<sup>st</sup> and reared in open sided poultry house ۲ marks
- ۴. Mention the different systems of beef cattle production. Discuss A system which is prevalent in Egypt. ۲ marks
- ۵. Describe what preparatiopns must be done on a farm before and on the day of arrival of day old chicks ۲ marks

*Good Luck*

*Prof. Dr. Mohamed Atef Helal*



## Answer Sheet

Q<sub>1</sub>:

Question	Answer					Question	Answer				
no	a	b	c	d	e	no	a	b	c	d	e
1	O	O	O	O	O	16	O	O	O	O	O
2	O	O	O	O	O	17	O	O	O	O	O
3	O	O	O	O	O	18	O	O	O	O	O
4	O	O	O	O	O	19	O	O	O	O	O
5	O	O	O	O	O	20	O	O	O	O	O
6	O	O	O	O	O	21	O	O	O	O	O
7	O	O	O	O	O	22	O	O	O	O	O
8	O	O	O	O	O	23	O	O	O	O	O
9	O	O	O	O	O	24	O	O	O	O	O
10	O	O	O	O	O	25	O	O	O	O	O
11	O	O	O	O	O	26	O	O	O	O	O
12	O	O	O	O	O	27	O	O	O	O	O
13	O	O	O	O	O	28	O	O	O	O	O
14	O	O	O	O	O	29	O	O	O	O	O
15	O	O	O	O	O	30	O	O	O	O	O

Q<sub>2</sub>:

Question	Answer		Question	Answer	
no.	True	False	no	True	False
1)	O	O	11)	O	O
2)	O	O	12)	O	O
3)	O	O	13)	O	O
4)	O	O	14)	O	O
5)	O	O	15)	O	O
6)	O	O	16)	O	O
7)	O	O	17)	O	O
8)	O	O	18)	O	O
9)	O	O	19)	O	O
10)	O	O	20)	O	O

