



Animal Breeding & Production Exam,

2nd Year

June 23, 2014

Time allowed: 2 hours

Answer the following questions: (Total points 100 equal 25 Degrees)

I. Fill in the blank with the best answer or phrase (20 points)

1. Connective tissue which surround the entire muscle.	
2. A very dense fibrous yellow tissue and is a structural component of ligaments, arteries, organs and muscles. Or it is a very rubbery substance which will not hydrolyze when heated, even in the presence of water.	
3. Holding beef under refrigeration (4°C) for 7-14 days postmortem.	
4. In sheep is largely determined by the number of eggs liberated by the ovary at the heat period and by the amount of fetal atrophy.	
5. The practice of feeding thin ewes more generously during the period of 2 or 3 weeks immediately prior to breeding.	
6. Are selected on the basis of desirable type, quality, health, thrift and projected gains and finish with feeding.	
7. It is the major supporting ligament and composed of strong, elastic tissue that extends between the halves of the udder.	
8. Located posterior to the two rear teats and have no streak canal and therefore, no connection to the internal structure of the gland.	
9. These are mucosal folds of the streak canal lining at the internal end of the canal.	
10. Are specialized muscle cells, which envelope the alveoli and small ducts and contract during milking, causing milk letdown.	
11. About 15-25% of the total of milk in the udder at start of milking is not removed during milking.	
12. Prolonged and steady production after the peak.	
13. Have a gray and black speckled breast.	
14. Necessary when pedigree breeding and progeny testing are done.	
15. Pink or red fleshy protuberance on the head of tom.	
16. Removal of the dewbill in turkey.	
17. An ostrich variety characterized by small size and fine white feather on the wing and tail and high egg production rate.	
18. Have an area 2-4 times the house and it is preferable to have source of running water.	
19. Distinct voice of male duck.	
20. Characteristic position of doe rabbit in heat, with back arched downward and hindquarters raised.	

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II. Correct the following statements (put line under the wrong word/s, then correct between brackets) (25 points)

1. Milk is the leading source of calcium. Unless milk and milk products are consumed regularly, there may be a deficiency potassium of in the diet. ()
2. The sale of milk accounts for approximately 90 % of the production expenses in average dairy operations. ()
3. Calving interval is a very accurate indicator of what has happened in the future, but does not indicate current status. ()
4. In dairy breeds, heifers reach puberty at about 35% of average mature live weight, at conception reach about 65% of average mature live weight, and at calving reach about 100% of average mature live weight. ()
5. Heifers should calve around 24 months of age to minimize productive lifetime performance (more lactation peaks are accomplished per lifetime). ()
6. Early calving increases generation intervals and therefore, hastens genetic gain. ()
7. Three times-a-day observation will detect about 90% of all heats, whereas once-a-day observation will only detect 80%. ()
8. As the lean is exposed to air, the myoglobin in the tissues absorbs the oxygen, becoming metmyoglobin and changing the lean to a bright red color. ()
9. It is well known that longer sarcomeres in myofirils will be less tender than shorter sarcomeres. ()
10. Collagen cross-linkages are established before slaughter and change very little during postmortem aging. ()
11. Bone growth has the fastest growth rate of muscle, fat and bone tissue. ()
12. The only non-nutritional environmental factor which has been found to have a significantly depressive effect on the ram function, sperm production and sperm quality, is low ambient temperature. ()
13. Sheep are generally more prolific than goat. ()
14. If the canal is small or the sphincter muscle is unusually weak, the cow is a hard and slow milking. ().
15. If oxytocin release is stimulated before the milk-ejection stimulus, it almost completely blocks milk-ejection. ().
16. After peak production, each month's yield is approximately 85% of the previous month. ().
17. Utilization of roughage portion of ration of high persistent cows is lower than low persistent cows. ().
18. Potassium level in colostrum is higher than normal milk. ().
19. Feeding polyunsaturated fat may increase milk fat %. ().

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20. The average duration of fertility after removal of male quail is slightly over three days.
()
21. Artificial lighting will bring turkeys into production as much as two weeks before unlighted birds. ()
22. Candling of ostrich eggs usually practiced at 7th and 28th day of incubation. ()
23. It is not desirable to bring breeder ducks into full production before ten months of age.
()
24. Indian runner eggs required 35 day of incubation, all other domestic duck eggs required 28 days.
()
25. Immediate mating after kindling is usual protocol of extensive rate of reproduction in rabbit.
()

III. Choose the best answer, only one answer per question insert in table (25 points)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25					

1. Castrated male horse means:
A. Stallion B. Gelding C. Mare D. Wether
2. Ovulation time in dairy cows:
A. 24 - 48 hrs B. E. Est. B. Induced by copulation
C. Near end of estrous D. 10 - 14 hrs A. E. Est.
3. Meat from a sheep older than one year of age called:
A. Mutton B. Beef C. Lamb D. Meat
4. The best time to breed cow-buffaloe is:
A. 2nd - 3rd day of estrous B. During last one-half of the standing heat
C. 3rd or 4th day A. E. Est. D. 2nd day of estrous
5. Which one of these are the advantages of dairy farming:
A. Requires a large initial investment B. Requires considerable training and experience
C. Has a well-established role in diversified (multiform) farm D. A full-time, demanding job
6. Which one of these are not the disadvantages of raising all or most of the forage and a part of the concentrates needed:
A. Larger initial investments needed B. Additional management skills and labor required,
C. More economical feed costs D. Needed land resources may not be available at reasonable cost
7. In general, a cow which calves at 24 months of age will usually prefers by a producer than that a cow calves at 36 months due to:
A. Produce more milk in an average total life time production
B. Shortens the generation interval which is an important consideration in genetic improvement of the herd
C. Too Long calving interval D. Only A and B are correct
8. Whey or serum phase of milk composed of skimmed milk minus:
A. Albumin B. Lactose C. Casein micelles D. Whole milk
9. Is the major blood precursor of β -lactoglobulin:
A. Fatty acids B. Lactose C. Glycerol D. Amino acids
10. Fat, protein and lactose yield of Holstein Friesian is Jersey.
A. Equal B. Higher than C. Lower than D. Non of the above

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11. By the month of pregnancy, milk yield may be 20% less for that month compared with non-pregnant cow.
A. 7th B. 5th C. 6th D. 8th
12. During mastitis which of the following milk constituents increased:
A. Lactose B. Casein C. Potassium D. Chloride
13. 30 to 40 days dry period is recommended for:
A. Fleshy and low milk producer B. High milk producer thin cows
C. Low milk producer thin cows D. High milk producer fleshy cow
14. During the first two-thirds of the pre-natal period, most of the increase in muscle weight is due to:
A. Hyperplasia B. Hypertrophy C. Both of them D. None of them
15. The right order for muscle formation is:
A. Myofilaments, myofibrils, muscle fibers, bundles or fasciculi and finally the entire muscles
B. Myofibrils, myofilaments, muscle fibers, bundles or fasciculi and finally the entire muscles
C. Muscle fibers, myofilaments, myofibrils, bundles or fasciculi and finally the entire muscles
D. Muscle fibers, myofibrils, myofilaments, bundles or fasciculi and finally the entire muscles
16. A change in meat pH can affect:
A. The color, water-binding capacity B. Tenderness and storage life of the muscle
C. Water-binding capacity and aroma D. Only a and b E. All of the above
17. Factors to consider in establishing the flock:
A. Selection of the breed, size and price B. Size of the flock, time to start and uniformity
C. Health, age, soundness of the udder D. All of the above
18. Low body condition and severe under-nutrition at pre-mating period, may be associated with:
A. Delayed onset of seasonal oestrus and lengthening of the oestrus cycle
B. Failure of ovulation C. Ovulation with behavioral oestrus
D. Only a and b E. All of the above
19. The age at which goats become sexually mature depends on:
A. The precocity (maturity) of the breed and the system of management
B. The level of nutrition C. The season of birth
D. Only a and c E. All of the above
20. Rabbit kids weaned at 4-5 weeks of age inrate of reproduction
A. Extensive B. Semi- intensive C. Intensive
21. Layer hens as an alternative to formulate ostrich farm project have the following advantages:
A. Rapid start of egg laying, high mortality and total number of egg is known per hen
B. Rapid start of egg laying, lower costs and total number of egg is known per hen
C. Rapid start of egg laying, lower mortality and total number of egg is unknown per hen
D. Rapid start of egg laying, lower mortality and experience in dealing with layer hens
E. Non of the above
22. Symptoms of pseudo pregnancy in doe rabbit terminate atday.
A. 12th B. 16th C. 19th D. 23th
23. Cooling incubated eggs of ducks, usually carried out by:
A. Opening the incubator door once a day for 5 to 30 minutes
B. Opening the incubator door twice a day for 5 to 3 hours
C. Opening the incubator door twice a day for 5 to 30 minutes
D. Opening the incubator door twice a day for 5 to 30 seconds
E. Non of the above
24. All the following are disadvantages of cotrunix except:
A. Odour is objectionable B. More feed is wasted if feeder over filled
C. Shell damages occur more frequently D. They are more photosensitive
E. Non of the above
25. Fertile egg as an alternative to formulate ostrich farm project have the following disadvantages:
A. Higher costs, probability of infertility and high mortality of hatched chicks
B. Higher costs, probability of infertility and probability of unknown species
C. probability of unknown species, probability of infertility and high mortality of hatched chicks

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- D. Rapid start of egg laying, lower mortality and experience in dealing with layer hens
E. Non of the above

IV. Match each of the terms in the right column to the best fitting phrase from the left column (10 points)

Answer letter	Phrase	Terms
	Types of estrous in she-camels.	A. Colostrums B. Lactation length C. Reproductive efficiency D. 90% E. Dry period F. 40 days G. Reproductive performance H. Non-return rate% I. Seasonal polyestrous J. Lateral suspensory ligament K. Calving interval L. DFS M. 60- 90 days N. Standing heat O. Days open P. S/c
	The number of days between the most recent calving and conception (calving-conception interval).	
	Time from parturition to next successful breeding.	
	Produced by the udder immediately after parturition.	
	A period of time in which the cow is the most active in her desire and stand to be mated.	
	The percentage of animals inseminated for the first time within a certain period and for which not returned for another service because they are presumed pregnant.	
	Calf-crop (%).	
	Days to first observed heat (post-partum) (days).	
	The ability of a dairy producer to get cows bred back soon after calving, with a minimum number of breeding per cow.	
	An ideal, but impossible, goal is 1 and more realistic 1.7.	

V. Mention the cause (10 points)

1. The dairy cow has earned the title "Foster mother of the human race".
2. Milk is nature's most perfect food.
3. A dairy producer can control calving interval by changing any management component that affects days open.
4. Why veal (generally under three months of age) has a lean of light pink color compared to the bright red color of beef.
5. Cuts with high % of connective tissue are often cooked with moist heat for a long period of time.
6. Cows calving in late fall to spring produce more milk (up to 8% more) than cows calving in the summer.
7. As the proportion of the concentrate in the ration increases, milk fat % tends to decline.

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8. Yolk breakage of turkey eggs is more easier than chicken's egg.
9. Breeders depend on the green pastures and roughage to feed ostrich.
10. Duck raising as a business is limited.

VI. Answer the following questions (10 points)

1. A good feed-production program in dairy farms will result in what?
2. Successful reproduction demands a lot of expertise by the producer because many factors affect the likelihood of pregnancy: Mention these factors?
3. Individual cows may not be observed in estrus for one of two reasons. Mention these two reasons?
4. How you can increase the gross income in dairy farms?
5. Secreted from the posterior lobe of the pituitary gland into the blood circulation as a response to stimulation of teats and cause contraction on myoepithelial cells around aveoli and small ducts?
6. The length of dry period is determined by what?
7. The most important connective tissue is collagen, why?
8. Flushing in sheep is important, why?
9. Drakes should come from the earlier hatched flocks, why?
10. Farm geese are usually marketed in the autumn and winter, why?

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