

23. At one point in time, a cross between 2 horned Herefords resulted in a polled animal, which is the basis for the Polled Hereford Breed. The polled condition in beef animals is dominant – which means that for a calf to be born polled, at least one of its parents would have to have been polled.....Therefore a polled calf being born from horned parents can only be explained how?

- a. Tropism
- b. Evaluation
- c. Gene segregation
- d. Gene interaction

24. Where humans have bred organisms together based on traits we like.

- a. Evolution
- b. Natural Selection
- c. Extinction
- d. Artificial Selection

25. Which statement explains how a population's genetic variability and diversity can be affected by selective breeding?

- a. Genetic variability and diversity decrease because only select individuals are bred.
- b. Genetic variability and diversity increase because only select individuals are bred.
- c. Genetic variability increases and diversity decreases because only select individuals are bred.
- d. Genetic variability decreases and diversity increases because only select individuals are bred.

26. This can be done by adjusting phenotypic measurements for factors that affect the trait Heritability (h^2)

- a. Accuracy of Selection
- b. Environmental Uniformity
- c. Selection intensity (i)
- d. Response to selection

27. Using a dry cow treatment in dairy cows has been shown to:

- a. cure existing mastitis infections
- b. prevent new infections in the dry period
- c. increase milk production in the next lactation
- d. all of the above

28. Milk is the only source of _____ in nature

- a. Calcium
- b. Phosphorous
- c. Lactose
- d. Fatty acids

29. According to natural selection, which organisms are most likely to survive?

- a. The fastest organisms
- b. The biggest organisms
- c. The best-adapted organisms
- d. The most domesticated organisms

30. When humans breed organisms with specific traits to influence the traits of the next generation, it is _____.

- a. adaptation
- b. natural breeding
- c. natural selection
- d. selective breeding

31. What is 1 way selective breeding is DIFFERENT from natural selection?

(Selective breeding is also called artificial selection.)

- a. Selective breeding does not produce any offspring at all.
- b. Humans, not nature, control reproduction in selective breeding.
- c. Nature, not humans, controls reproduction in selective breeding.
- d. Animals are the only organisms that can be selectively bred, while both plants and animals can undergo natural selection.

32. How are HYBRIDIZATION and INBREEDING similar?

- a. Both are a form of natural selection.
- b. Both are a form of breeding tools gene changes.
- c. Both result in no change in genetic traits.
- d. Both involve breeding organisms with similar genetic traits.

33. Offspring from parents of two different species would be called _____.

- a. a hybrid
- b. its own species
- c. a crossbreed
- d. mating

34. Which of the following is NOT a result of inbreeding?

- a. surfacing of deleterious gene
- b. increase uniformity
- c. noticeable improvement of fourth generation
- d. reduction in performance

35. Which system is the mating of animals of different breeds?

- a. grading up
- b. outbreeding
- c. inbreeding
- d. linebreeding

36. I am breeding a brahman to an angus...what am I doing?

- a. grading up
- b. crossbreeding
- c. inbreeding
- d. linebreeding

37. I am breeding a brother and a sister, what am I doing?

- a. incrossbreeding
- b. close breeding
- c. inbreeding
- d. linebreeding

10. What is the most important management practice during dry off for the reduction of foot problems?

- a. Hoof trimming
- b. Hoof programming
- c. Hoof shoeing
- d. Foot baths

11. How long of a dry period should be given to old dairy cows between lactations?

- a. 40-50 Days
- b. 45 - 60 Days
- c. 25-35 Days
- d. 24-34 Days

12. What is the primary reason for culling of cows from the dairy herd?

- a. Lameness
- b. Dystocia
- c. Hypocalcemia
- d. Poor reproduction

13. What is the term use to measure expected future production of milking cows in the next generation?

- a. Repeatability
- b. ERPA
- c. MPPA
- d. hereditability

14. What are the two important sire selection tools?

- a. Heritability and repeatability
- b. Selection index and tandem selection
- c. Predicted death
- d. Progeny testing and sib selection

15. Livestock today are much more productive than 100 years ago; Animals produce more meat, milk, eggs and wool on less feed. For example, the United States produces 20% of the world's beef with only 7% of the world's cattle. How has American Animal Science sector accomplished this?

- a. Genetics interactions
- b. Selective breeding plans
- c. Environmental improving
- d. Either environment and genetic improving

16. What are livestock breeders doing when they select animals for breeding that will produce offspring with desirable characteristics?

- a. Applying Genetic Principles of Heredity
- b. Using environmental improving
- c. Applying breeding plan
- d. Applying mating system

17. If Taylor (who lives on Shaman Trail and keeps her animals in a heated barn) and John Mac (who lives up Yellow Jacket and keeps his animals in a muddy, outdoor pen) each owned a prized breeding bull – and these bulls were genetically identical to one another (they were genetic clones of one another).....but Taylor's bull weighed 2500 pounds, had long, lustrous hair, and exhibited excessive muscling.....while John Mac's bull weighed 1500 pounds, had short, fine hair, and little to no muscling.....to what could you attribute the differences?

- a. Genetic environment interaction
- b. Environment
- c. Genetic difference
- d. Evolution

18. If Holstein Sire has genes for Black Eyes & Brown Eyes, Black Hair & Red Hair, what is this combination of genes that the sire possesses called?

- a. Genotype
- b. Phenotype
- c. Selection
- d. Gene interaction

19. In Black Angus cattle, the black color is always expressed if it is present in an animal's genotype. Why is this the case? Because the black allele is what?

- a. Evolution
- b. Recessive
- c. Dominant
- d. Over dominant

20. A roan horse (a horse with red and white hairs) and the same found in shorthorn cattle, these are examples of what kind of genetic dominance because both genes for coat color are equally expressed?

- a. Codominance
- b. Over dominance
- c. Incomplete dominance
- d. Dominance

21. A golden colored calf, out of a Red Angus Cow and a White Charolais Bull is an example of what kind of genetic dominance because neither allele for coat color is dominant over the other?

- a. Codominance
- b. Over dominance
- c. Incomplete dominance
- d. Dominance

22. During meiosis, chromosomes line up together; sometimes they cross over one another and split – which forms new chromosomes with different combinations of genes that WERE not available in the parent's genotype. What is this called?

- a. Correlation
- b. Pleiotropy
- c. Crossover
- d. Linkage



Faculty of
Vet. Med.

Undergraduate Second Semester Exam

Course code & name	216 / 224, Animal and Poultry Production		
Department	Husbandry and Animal Wealth Development		
Program	Bachelor in Veterinary Medical Sciences	No of Papers	Ex. 5
Date	9 / 6 / 2021	Time	2h
Marks	25 (50% of Total Marks)		



Menofia
University

Student name	
Academic number	
Serial number	

All Questions Should be Answered

The exam consists of 70 multiple choice questions, worth 4 points each, please fill in answers on bubble sheet provided. (0.357 Mark per point)

Do not write on the exam!

1. Choose the correct answer on bubble sheet provided

1. What is the most reliable sign of estrus?

- Winning other cows
- Swollen vulva lips
- Increasing of body temperature by 1 °C
- Standing to be mounted

2. What is the normal length of the VWP?

- 4 Days
- 4.5 Days
- 5 Days
- 7 Days

3. Where does fertilization of an ovum occur?

- Vagina
- Oviduct
- Cervix
- Uterus

4. What hormone does the uterus normally produce 1" to 18 days after estrus?

- progesterone
- Pregnandione
- Somatostatinotropine
- perigestosterone

5. You have a 50 percent conception rate in your herd of 100 cows. How many cows will be bred two or more times?

- 50 Cows
- 55 cows
- 52 Cows
- 25 Cows

6. Which of the following is the most important cause of poor reproductive efficiency in dairy cattle?

- Abortion
- Retained Placenta
- Missed estrus
- Uterine infections

7. What occurs when the cow ovulates but shows little or no signs of heat?

- Poor reproduction
- Silent heat
- Puberty
- Maturity

8. How long is the fertile life of an ovum inside the cow?

- 14-15 hours
- 8 - 10 hours
- 19-20 hours
- 10-12 hours

9. A well-grown Holstein heifer should be bred to calve at what age?

- 24 Month
- 23 Month
- 22 Month
- 25 Month

61- Stimulation of parasympathetic division of GIT led to	A) Block enteric N.S.	B) Inhibit GIT function.	C) Block food movement.	D) Stimulate GIT function.
62- The GIT short reflexes includes reflexes that control	A) Peristalsis & mixing contraction.	B) Colon evacuation.	C) Stomach motility.	D) Ilium emptying.
63- The GIT long reflexes includes reflexes that control all the following Except:	A) Peristalsis & mixing contraction.	B) Colon evacuation.	C) Stomach motility.	D) Ilium emptying.
64- Gastrin hormone secreted by G cells and stimulate	A) Bile secretion.	B) Pancreatic juice secretion.	C) Gastric acid secretion.	D) Gall bladder contraction.
65- The main function of peristalsis movement of the GIT is	A) Mixing of food.	B) Movement of food.	C) Both of them.	D) None of them.
66- The peristalsis movement of GIT stimulated by	A) Gut distention.	B) Chemical irritation.	C) Parasympathetic stimulation.	D) All of them.
67- The gastrointestinal blood flow increased by all the following Except:	A) Parasympathetic stimulation.	B) Sympathetic stimulation.	C) ↑ metabolic rate.	D) Kinins.
68- The chewing process is caused by a chewing reflex which stimulated by	A) Presence of food bolus in mouth.	B) Chemical irritation.	C) Parasympathetic stimulation.	D) Gut distention.
69- The main functions of chewing process are	A) Cellulose membrane destruction.	B) ↑ food surface area.	C) Grinding of food.	D) All of them.
70- The area in medulla oblongata and lower pons that control swallowing called	A) Apneustic center.	B) Pneumotaxic center.	C) Deglutition center.	D) Chemotactic center.
71- The mechanism of the pharyngeal stage of swallowing includes	A) Trachea closure.	B) The esophagus is opened.	C) Fast peristaltic wave in esophagus.	D) All of them.
72- The functions of GIT secretory glands include	A) Digestive enzymes secretion.	B) Secretion of hormones.	C) Urine secretion.	D) Sweat secretion.
73- The GIT secretory glands secretion increased by	A) Parasympathetic stimulation.	B) Presence of food.	C) GIT hormones.	D) All of them.
74- The serous secretion of saliva contains all the following Except:	A) Ptyalin.	B) Mucin.	C) Bicarbonates.	D) Potassium.
75- All the following factors causes copious salivation Except:	A) Sour taste.	B) Irritating food in stomach.	C) Sympathetic stimulation.	D) Parasympathetic stimulation.
76- The main step of chemical mechanism of HCL formation is	A) Active pumping of H^+ ions into canaliculus.	B) Active pumping of HCO_3^- through luminal border.	C) Active pumping of H^+ ions into blood.	D) Active pumping of HCO_3^- into blood.
77- The pancreatic secretion containing more sodium bicarbonate fluid stimulated by	A) Histamine.	B) Secretin hormone.	C) Acetylcholine.	D) All of them.
78- The gastric secretion containing more hydrochloric acid stimulated by	A) Histamine.	B) Secretin hormone.	C) Somatostatin hormone.	D) All of them.
79- phase accounts for about 60 % of the total gastric juice secretion by gastric glands.	A) Cephalic.	B) Intestinal.	C) Gastric.	D) All of them.
80- The bile salts accounts for the amount of solutes in bile.	A) 25%.	B) 50%.	C) 75%.	D) 100%.

WITH MY BEST WISHES

Dr. Ibrahim said

- 39- All the following events occur in estrus stage Except:
 A) Estrogen reach its surge. B) Female accept male.
 C) Estrogen surge stimulates LH release. D) Progesterone begins to increase.
- 40- All the following animal are seasonally poly estrus animals except:
 A) Cow. B) Sheep. C) Goat. D) Mare.
- 41- Melatonin hormone secreted by pineal gland and considered as GnRH inhibitor in all animals except:
 A) Cow. B) Mare. C) Sheep. D) Bitches.
- 42- The ovulated oocyte considered as
 A) Secondary oocyte. B) Primary oocyte. C) Mature oocyte. D) Oogonium.
- 43- The secondary follicle surrounded externally by
 A) Cumulus oophorous. B) Zona pellucida. C) Theca folliculi. D) Corona radiata.
- 44- The meiosis division II of the secondary oocyte is reactivated by
 A) Ovulation. B) Fertilization. C) Luteinization. D) Luteolysis.
- 45- The ovulated oocyte must be supported by
 A) Corona radiata. B) Cumulus oophorous. C) Zona pellucida. D) All of them.
- 46- The ovulation process is spontaneous in all the following animals Except:
 A) Sheep. B) Cow. C) Camel. D) Horse.
- 47- The preovulatory LH surge stimulate
 A) Cumulus expansion. B) Protein synthesis in and around follicle.
 C) Increased blood flow to ovary & follicle. D) All of them.
- 48- The mature corpus luteum is fully developed and functioning during stage
 A) Proestrus. B) Estrus. C) Metestrus. D) Diestrus.
- 49- In most animal species the non-gravid uterus stimulates luteolysis by PGF2 α Except in
 A) Bitch. B) Cow. C) Sheep. D) Mare.
- 50- Prostaglandin F2 α causes luteolysis by stimulation of
 A) Estrogen secretion. B) Vasoconstriction of CL microvasculature.
 C) Progesterone secretion. D) Prolactin secretion.
- 51- The sperm must reach the site fertilization before ova by one the following mechanism
 A) Gravity. B) Sperm motility. C) Chemotaxis. D) All of them.
- 52- The sperm can penetrate the zona pellucida layer of oocyte through hydrolysis by
 A) Hyaluronidase enzyme. B) Acrosin enzyme. C) Zonolysin enzyme. D) Corona radiata reaction.
- 53- The fertilized ova can be protected from polyspermy by
 A) Cortical reaction. B) Zona reaction. C) Arborization. D) All of them.
- 54- The middle layer of fetal membrane that carry placental blood vessels and attaches fetus through umbilical cord called
 A) Allantois. B) Chorion. C) Amnion. D) Endometrial layer.
- 55- As an incomplete barrier the placenta allow the passage of
 A) Insulin. B) Heparin. C) Antibodies. D) Plasma proteins.
- 56- The placenta of pregnant women can secrete that maintain CL function.
 A) HCG. B) PMSG. C) Placental lactogen. D) Relaxin.
- 57- The placenta of pregnant ewe can secrete that help mammary gland growth.
 A) HCG. B) PMSG. C) Placental lactogen. D) Relaxin.
- 58- PMSG, a glycoprotein secreted from endometrial cups and detected in
 A) Urine only. B) Blood only. C) Both A & B. D) None of them.
- 59- The decline of progesterone level before parturition stimulates secretion in cow.
 A) Prostaglandin. B) Cortisol. C) Both A & B. D) None of them.
- 60- The myenteric plexus of GIT can control
 A) GIT motility. B) GIT secretion. C) GIT blood flow. D) Both A & B.

19- The secretion of seminal vesicle glands contains all the following Except:			
A) Fructose.	B) Prostaglandins.	C) Protein kinase.	D) Proteolytic enzymes.
20- The secretion of prostate gland contains			
A) Fructose.	B) Prostaglandins.	C) Proteolytic enzymes.	D) Protein kinase.
21- The secretion of bulbourethral glands contains mainly			
A) Mucous.	B) Fructose.	C) Protein kinase.	D) Proteolytic enzymes.
22- All the following environmental factor can affect testicular function Except:			
A) Temperature.	B) Light.	C) Rain fall.	D) Season.
23- The high concentration of testosterone maintained inside the seminiferous tubules by			
A) Its lipid solubility.	B) Androgen binding protein.		
C) Counter current exchange mechanism.	D) All of them.		
24- All the following hormones regulate the testicular function Except:			
A) Inhibin.	B) Cortisol.	C) Growth hormone.	D) Activin.
25- The site of sperm capacitation is			
A) Uterus.	B) Testis.	C) Epididymis.	D) Fallopian tube.
26- Sperm capacitation led to			
A) Deterioration of sperm acrosomal membrane.	B) Hyperactivated motility.		
C) Both of them.	D) None of them.		
27- The mechanism of sperm capacitation includes			
A) Removal of membrane cholesterol.	B) Removal of epididymal glycoproteins.		
C) Increase Ca^{2+} influx.	D) All of them.		
28- The site of fertilization is			
A) Uterus.	B) Testis.	C) Ovaries.	D) Fallopian tube.
29- The main function of ovaries includes			
A) Oogenesis.	B) Spermatogenesis.	C) Steroidogenesis.	D) A & C.
30- The function of uterus includes			
A) Part of birth canal.	B) Site of pregnancy.	C) Site of copulation.	D) Steroidogenesis.
31- All the following structures form the birth canal Except:			
A) Vulva.	B) Vagina.	C) Uterus.	D) Cervix.
32- Concerning Estrogen function all the following is true except:			
A) Induce endometrial gland growth.	B) Induce cervix opening.		
C) Induce mammary gland duct system growth.	D) Induce endometrial gland secretion.		
33- The metabolic functions of estrogen include			
A) \uparrow protein synthesis.	B) \uparrow lipolysis.	C) \uparrow water excretion.	D) \uparrow Ca^{2+} mobilization from bone matrix.
34- Progesterone hormone secreted by			
A) Uterus.	B) Graafian follicle.	C) Placenta.	D) Pituitary gland.
35- Inhibin secreted by granulosa cells of graafian follicle and inhibit			
A) FSH secretion only.	B) LH secretion only.	C) Both FSH & LH secretion.	D) Estrogen secretion.
36- High level of progesterone can inhibit			
A) FSH secretion only.	B) LH secretion only.	C) Both FSH & LH secretion.	D) Estrogen secretion.
37- The age of puberty can become earlier when			
A) Animal lives in tropics.	B) The animal is male.		
C) The animal given bad nutrition.	D) Animal lives in temperate zone.		
38- The follicular phase of estrus characterized by			
A) Short phase.	B) Include metestrus & diestrus stages.		
C) Corpus luteum predominate.	D) Progesterone hormone predominate.		

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Department of physiology
Course title: special physiology (222).
2nd year – 2nd term.
Date: 27 June 2021.
Time allowed: 2 hrs.



Q 1) Choose the correct answer for each statement of the following: (Total marks: 25 Ms).

- 1- One of the following organs is of the male external genitalia and share in testicular thermoregulation:
A) Penis. B) Clitoris. ☒ C) Scrotum. D) Vulva.
- 2- All the following structures share in seminal plasma production except:
☒ A) Epididymis. B) Seminal vesicle glands. C) Prostate gland. D) Bulbourethral glands.
- 3- One of the following cells present inside the seminiferous tubules and share in Spermatocytogenesis:
A) Granulosa cells. B) Sertoli cells. C) Leydig cells. ☒ D) Spermatogonia.
- 4- The Sertoli cells plasma membrane carry receptors.
A) FSH. B) LH. C) Testosterone. D) Estrogen.
- 5- The function of Leydig cells includes
A) Supportive & nutritive function. B) Secrete androgen binding protein.
C) Secrete androgens. D) Promote spermiation.
- 6- The function of anti-Mullerian hormone in male during fetal life is
A) Bind & transport iron. ☒ B) Deterioration of Mullerian duct.
C) Stimulate spermatogenesis. D) Inhibit estrogen secretion.
- 7- All the following structures are included in blood testis barrier Except:
A) The myoid peritubular cells. B) The tight junction between Sertoli cells.
C) Basement membrane of the seminiferous tubules. D) The tight junction between Leydig cells.
- 8- All the following share in testicular thermoregulation Except:
A) Scrotal muscles. B) Pampiniform plexus. C) Scrotal sweat glands. ☒ D) Testosterone hormone.
- 9- Spermatogenesis start in adulthood with the mitotic division of
A) Spermatogenic stem cells. B) Sertoli cells. C) Leydig cells. D) Myoid cells.
- 10- Each spermatogonia can be divided into haploid cells through the process of spermatogenesis.
A) 2. B) 4. C) 6. ☒ D) 8.
- 11- Both are essential for initiation and maintenance of spermatogenesis in adult male.
A) Testosterone & LH. B) Testosterone & FSH. C) Thyroxin & FSH. D) Testosterone & Prolactin.
- 12- The major types of steroids produced by testicles include all the following Except:
A) Androstenedione. B) Testosterone. C) Dihydrotestosterone. D) Estrogens.
- 13- In human, the Leydig cells produce testosterone under the effect of during fetal life.
A) HCG of placenta. B) LH from ant. pit. gland. C) Thyroid hormones. D) Prolactin hormone.
- 14- The effect of testosterone occurs through binding with receptors.
A) Estrogen only. B) Androgen only. C) Androgen & Estrogen. D) Estrogen & Progesterone.
- 15- The blood testosterone level can be regulated by
A) Neural mechanism. B) Positive feedback mechanism.
C) Negative feedback mechanism. D) Humeral mechanism.
- 16- The metabolic function of testosterone includes
A) Protein anabolism. B) Excretion of Na⁺ & K⁺. C) Water excretion. D) Protein catabolism.
- 17- Obstruction of efferent ductules prevent sperm transportation between &
A) Vas deferens – Ejaculatory duct. B) Epididymis – Vas deferens.
C) Vas deference – Efferent ductules. D) Rete testis - Epididymis.
- 18- The sperms recovered from the tail of epididymis are
A) Motile but Infertile. B) Immotile but Fertile. ☒ C) Motile & Fertile. D) Motile & Capacitated.



Menoufia University
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Final Exam of Veterinary genetics and genetic engineering-
2nd semester 7 - 6- 2021 time: 3hours (50 Marks)

Q1) Choose the best answer for the following questions:

- d 1-In a Robertsonian translocation fusion occurs at the.....
- a) Telomeres. b) Centromeres. c) Histones. d) Ends of the long arms
- d 2-The presence of two or more cell lines from different zygotes in a single individual is known as: *Free marten*
- a) mosaicism. b) diploidy. c) Aneuploidy. d) chimaerism.
- b 3-What are the repeating units of nucleic acids?
- a) Phosphate molecules b) nucleotides c) bases d) sugar molecules.
- a 4- Proteins are made of amino acids linked together by specific bonds called
- a) Peptide bonds b) Nitrogen bonds c) Hydrogen bonds d) Hydrogen & Nitrogen bonds
- d 5- Chromosomes studying are generally taken during.....
- a) Interphase b) Prophase c) Anaphase d) Non- of these
- b 6- The enzyme which builds a mRNA strand complimentary to the DNA transcription unit is called.....
- a) DNA polymerase b) RNA polymerase c) Helicase d) DNA ligase
- d 7- Which of the following is not true of DNA?



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Final Exam of Veterinary genetics and genetic engineering-
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- a) A pairs with T and G pairs with C b) Nitrogen bases are 0.34 nm apart on a DNA strand
c) The double helix is 2.0 nm wide
d) The double helix is 3.4 nm wide.

8- Which of the following is not needed for DNA transcription?

- a) Ribosomes b) Nucleotides c) DNA d) Enzymes

~~d) None of the above~~

9- Which of the following types of base substitutions results in a stop codon

- a) UAA, UAG, UGA b) UCG, UAG, CUA c) AUC, ACU, CUA
d) UAA, CUA, AUC

10- genetic code may be.....

- a) 4 codone
b) 3 codon
c) 5codon
d) 2 codon

11- In transcription of DNA strand.....

- a) There are several RNA primers b) DNA synthesis is discontinuous
c) Polymerization proceeds in 5'- 3' direction d) RNA polymerase

12- Amino-acyl-tRNA synthetases.....



Final Exam of Veterinary genetics and genetic engineering-

2nd semester 7 - 6- 2021 time: 3hours (50 Marks)

- a) Recognizes codons on mRNA b) Recognizes the anti-codon on the tRNA
c) Catalyses the binding of amino acid to its respective tRNA d) Recognizes the D arm of the specific tRNA

b 13-The bonds that stabilize the structure of DNA are.....

- a) Hydrogen bonds and peptide bonds b) Phosphodiester bonds and hydrogen bonds
c) Glycosidic bonds and thioester bonds d) Disulphide bonds and peptide bonds

b 14-The flow of genetic information is the following order:

- a) Translation → replication → transcription
b) Replication → transcription → translation —
c) Transcription → replication → translation —
d) Replication → translation → transcription

d 15-Which of the following types of RNA molecules that is involved in translation?

- a) transfer b) ribosomal c) messenger d) all of the above

d 16-the genetic codone characterized by

- a) universal b) non over lab c) coma free
d) all

b 17- core particle of nucleosome contain.....molecule of H1

- a) non b) one c) two d) three

D 18-The enzyme responsible for charging of tRNA.....

- a) ligase. b) DNA polymerase. c) RNA polymerase
amino-acyl transferas

D)

19-The process of copying a gene's DNA sequence into a sequence of RNA is



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called.....

.....

a) replication. b) transcription. c) translation. d)PCR.
20-polysomes are

.....

a) aggregation of ribosomes b) segregation of
mlysosomes

c) mRNA molecules to which many ribosomes are attached
simltaneously

d)all of the above

a 21- transcription process occure in

.....

a) nucluse b)lysosome c)ECOR1 d) nucleolus
polymerases

C 22- Transcription occurs along a ____ template forming an mRNA in the
____ direction.

a)5' to 3'; 5' to 3' b)5' to 3'; 3' to 5' c)3' to 5'; 5' to 3'

d)3' to 5'; 3' to 5'

C 23-translation process occurs in the

a)nucleolus b)nucleus c)cytoplasm d)lysosomes

~~24- which of the following is a restriction endonuclease?~~

~~a)DNA ligase b)Eco R1 c)Exncleases d) None of
all~~

25-.....is used in PCR process.



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- a) RNA polymerase b) Tag polymerase c) DNA polymerase 1 d) none of all

b 26-individual have abnormal karyotype, but its gonads don't correspond to the chromosomal sex.

- a) Phenotypic intersex b) chromosomal intersex c) gonadal inter sex d) Hermaphrodite.

34-There are many type of inter sex as.....

- a) Phenotypic type b) hermaphrodite c) freemarine d) all

d 27-the genetic material has several function and characters, for example.....

- a) replication and variation b) transcription and translation
c) none of all d) a & b

a 28-The presence of two or more cell lines from one zygotes in a single individual is known as:

- a) mosaicism. b) diploidy. c) Aneuploidy. d) chimaerism.

29-Quadrivalent can be seen during metaphase in abnormal cell due to.....

.....

- a) Gene knockout translocation b) gene therapy c) centric fusion d) reciprocal translocation

b 30-shifts occurred inchromosome

- a) one b) two c) three d) four

b 31-freematrins in cattle due to.....



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- a) double -yoked eggs b)choriovascular anastomosis
c)abnormality in reproductive tract d)reproductive tract dysgenesis

32-Feemartines present in.....

- a)cattle b)cat and piges c)buffalo d)a,b

33-during growing of DNA synthesis nucleotide added in
.....direction

- a) 3⁻-5⁻ b) 5⁻-5⁻ c) 3⁻-3⁻ d) 5⁻-3⁻

34-non inherited Down syndrome caused by.....

- a) Monosoy b)polyploidy c) trisomy d) none of all

35-inhetited Down syndrome couosed by :

- a) centric fusion translocation
b) ring chromosomes
c) robertsonian translocation
d) deletions

36-Which of the following best describes the key function of helicases during transcription?

- a) Relief of tension in the DNA strands to prevent breakage.
b)Separation of two strands of DNA; "unwinding" gives polymerases access to the strand.
c)Re-annealing of two DNA strands once transcription and translation processes are complete.
d) Catalyzing the interaction between transcription factors and the DNA strand.

37-deletion occurschromosomes



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a) one b)two c)four d)three

C 38-deletion havetypes

a) one b)two c)three
d)four

C 39-deletion in dominant genes cause the recessive gene act as
dominant thus called

a) viral vector methods b)compensation loop c)pseudo-
dominance methods d)all of the above

C 40- karotype is determine

a) Type ,size ,length b) height ,length ,shape
c)number, size, shape d) all

41- Telomerase need for

a)replicate DNA

b) expression telomere c)replicate telomere

d) all

42-in veterinary medicine amniocentesis for cytogenetic purposes has
been carried out atdays gestation in bitch.

a) 60 b)120 c)90 d)40

d 43-.....remain condensed throughout the cell cycle.

a) Euchromatine b)heterochromatine
c)chromosomes d)a&b

b 44-considered heterchromatin.....

A)X chromosome b) Telomeres region c)NOR regions d)all

C 45-replication and separation of chromosome without nuclear division
the process lead to endopolyploidy called

a) Endosomes b)endopolyploidy



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6) endomitosis ~~d),e~~ b, c

46-which of the following description of chromosomes is not correctly matched?

- a) Metacentric—chromosome arms are almost equal in size.
- b) Sub metacentric — chromosome arms are slightly different in size.
- c) Acrocentric— chromosome arms identical in size
- d) all of the above

47-monyploidy synonymous with.....

- A)diploid
- b)parthenogenesis
- c)haploidy
- d)polyploidy

C 48-balanced structural changes as.....

- a)duplications
- b)rig chromosomes
- c)inversions
- d)isochromosome

b 49-compansating loop which occurred during synapsis occur when

- a) Shifts
- b) duplications
- C) inversions
- d) inversion. duplication , deletions

C 50-what the type of bond forms between purines and pyrimidine?

- a) covalent bond
- b)ionic bonds
- c)Hydrogen bonds
- d)non-covalent bonds

a 51- Parts of a gene that does not transcribe into mRNA are termed.....

- a) introns
- b)exons
- c)promoter
- d)leader sequence

d 52-freematrins have been reported in



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- a) pigs b) goats and sheep c) equines d)
a a b

C 53-.....Affected individuals have XY males ,but show no evidence of any sex duct development.

- a) dosage compensation b) gonadal dysgenesis
c) testicular feminization syndromes d) secondary sex differentiation

a 54-in.....condition the centromere split along axis of the chromosome and homologous parts of sister chromatids move to opposite poles

- a) normal b) isochromosomes c) duplication d) deletion

a 55-Cri-du-chat Syndrome is due to

- a) heterozygous deletion in 5p- b) heterozygous deletion in 5q-
c) heterozygous inversion in 5p- d) homozygous deletion in 5p-

C 56-.....act as a signal for starting transcription.

- a) Terminator b) Initiator c) promoter
d) Elongator

d 57-RNA polymerase is direct for synthesis of

- a) mRNA b) rRNA c) tRNA d) all of above

C 58-the end product of genetic expression is.....

- a) ribonucleotide chain b) nucleotide chain
c) polypeptide chain d) deoxyribonucleotide chain

C 59-individuals are those with more than two complete set of chromosomes.....

3n



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aarb

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c) polypeptide chain d) deoxyribonucleotide chain

59-individuals are those with more than two complete set of chromosomes.....

3n



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- a) monosmy b) haploid c) polyploid
d) trisomy

b 60-RNA chain termination needs

- a) termination codons b) termination factor c) polycistronic enzymes d) all

a 61-tRNA haveloops

- a) two b) three c) four d) five

b 62-charging tRNA means

- a) carry mRNA b) carry amino acids c) carry another tRNA d) all

b 63-chromatine can be isolated

- a) biophysically b) biochemically c) b cannot d) biostatically

b 64-partial karyotype can be prepared in

- a) Human samples b) bird samples c) large animal d) small ruminant

d 65-different types of banding techniques

- a) Q- band b) G- band c) R- bands d) all

b 66-banding technique for specific patterns as.....

- a) G-bands b) NOR- bands c) Q-bands d) all

67-Barr body considered

- a) Constitutive heterochromatin b) facultative heterochromatin
c) chromosomal heterochromatin d) all



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- 68-mullerian ducts are precursors ofin primary sex differentiation
a) sperm ducts b) oviducts c) none d) secondary ducts
- 69-testicular feminization syndrome has been described in
a) mice b) rats c) humans d) all
- 70-in cattle fetal sex determination beforedays
a) 60 b) 30 c) 250 d) 120
- 71-in both male and female freemartins diagnosed by blood cultures to check the presence of
a) xx/xy chimaerism b) xx/xymosaicism c) xx/xy complement d) all
- 72-which animal sexual development is due to the abnormal sex chromosomes
a) gonadal intersex b) chromosomal intersex c) phenotypic intersex d) all
- 73-RNA differs from DNA in
a) Number of strands b) nitrogenous base c) pentose sugar d) all
- 74-.....character of genetic material
a) replication b) storage of information c) variation by mutation d) all
- 75-Chargaff's rules developedtechnique to measure the helix
a) chemically b) x ray c) physically d) autographic
- 76-the double helix measuresnm in diameter
a) four b) three c) two d) one
- 77-almost female calves born co-twin to male will be



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a)freemartin b) no Martine c) gonad martin d)all

b 78-when there are more than one x chromosomes only one x active how ever the inactive x chromosomenot totally in active this known as

a)loop compensation d) dosage compensation c)testricular femmnization
d)all

b 79-is precursor of sperm duct differentions

a)mullarian ducts b)wolffian ducts c)human ducts d)all

d 80-.....general Couse of abnormal karyotypes

a)drugs and chemicals b)ionizing radiation c)viruses andmycoplasma d)all

With my best wishes

DR: Hanim Heikal

- Q65. Rabbits get all their daily water requirements from vegetables ?
A) T
B) F
- Q66. The hierarchy character is clearly observing in sheep.
A) T
B) F
- Q67. Serotonin is a neurotransmitter involved in regulating mood, sleep, appetite and sexuality.
A) T
B) F
- Q68. There is an evidence of intra-abdominal pressure in rumination of cattle.
A) T
B) F
- Q69. If given a choice, camels prefer to eat sweaty plants.
A) T
B) F
- Q70. About 2 months do rabbits mature and become sexually active.
A) T
B) F
- Q71. Exploration in Fowl occurs for dust bathing.
A) T
B) F
- Q72. Trills are startle like response calls produced by chicks as a result of separation from the mother.
A) T
B) F
- Q73. Insight learning is the sudden production of new response, which is not the result of habituation.
A) T
B) F
- Q74. The limbic system is the central representative of the autonomic nervous system which consists functionally of interconnected group of brain structures.
A) T
B) F
- Q75. "Lock and tie for 20 min" is a normal behaviour in bitch during copulation for the first time.
A) T
B) F
- Q76. Estrus cycle in cat queen is about 3 weeks.
A) T
B) F
- Q77. Squeal is the sound of sexual rejection by mare which not in receptive estrus.
A) T
B) F
- Q78. A relaxed facial expression, with ears outward and the eyelids relaxed, together with an open-mouth, indicates a distress response in horse.
A) T
B) F
- Q79. Coprophagia is seldom displayed by adults horse but it is common in foals up to 3-4 weeks of age.
A) T
B) F
- Q80. Communication is the passage of information from one animal to another by means of signals to influence its behaviour.
A) T
B) F

GOOD LUCK!

Please, carefully think before getting the answer.

Dr. Ibrahim Rehan

- Q44. Type of vocalization that is produced by fowl as a result of exposure to electric shock is ?
 A) Shrieks B) Trills C) Peeps D) Twitters
- Q45. Body, head and tail shakings occur as grooming behaviour in fowl but also appear during ?
 A) Sexual displays B) Feeding behaviour C) Social behaviour D) Exploratory behaviour
- Q46. Drinking in inexperienced chicks can be elicited by moving surface of the water which is, considered a stimulation ?
 A) Olfactory B) Visual C) Tactile D) Auditory
- Q47. is a behaviour that deviates from a defined, standard behaviour shown by most individuals.
 A) Abnormal behaviour B) Behavioural drift C) Epimelitic behaviour D) Et-epimelitic behaviour
- Q48. is a deviation from the natural order, particularly in relation to species-specific defects.
 A) Activity displacement B) Allelomimetic behaviour
 C) Anomalous behaviour D) Imprinting
- Q49. The neurons have a secretory capability in production of releasing hormones.
 A) Amygdale B) Hippocampus C) Hypothalamic D) Pituitary
- Q50. Pheromone secreted by the animal to the outside of the body and perceived by a second animal of the same species resulting in a specific behavioural reaction called
 A) Coleman response B) Edward response C) Flehmen response D) None
- Q51. Body care behaviour of horse includes
 A) Grooming B) Pandiculation C) Comfort seeking behaviour D) All
- Q52. is the hormone of sleep, produced in the pineal gland of horse.
 A) Estrogen B) Melatonin C) Progesterone D) Oxytocin
- Q53. In horse, the main thrust of raising comes from the
 A) Hind limbs B) Fore limbs C) Head D) All
- Q54. During grazing, cattle react more negatively to food of
 A) Bitter taste B) Glucose and salt C) Salty taste D) Sweetly taste
- Q55. During suckling, typically the calf stand
 A) Broadside the mother facing caudally B) Broadside the mother facing cranially
 C) Alongside the mother facing cranially D) Alongside the mother facing caudally
- Q56. In cattle, the social rank of the young determined by his
 A) Age and his mother's social position B) Weight and his father's social position
 C) Weight and his father's social position D) Weight and his mother's social position
- Q57. Body of sheep is white while head is brown.
 A) Barki B) Baladi C) Rahmani D) Sudani
- Q58. Ingestive behaviours include
 A) Grazing, feeding, suckling, and drinking B) Grazing, feeding, suckling, rumination and drinking
 C) Grazing, suckling, rumination and feeding D) Feeding, suckling, rumination and drinking
- Q59. The short-termed memory depends on electric activity of the
 A) Brain B) Leg C) Nerve D) Artery
- Q60. Sensitization is a process with effect apparently opposite to that of
 A) Insight learning B) Habituation C) Imprinting D) Conditioning

II- Answer on the following with (T: True) or (F: False):-

- Q61. Sheep rests in standing position.
 A) T
 B) F
- Q62. All animals including the human one are equal and should have equal rights.
 A) T
 B) F
- Q63. Most beef cows calve in spring season of the year.
 A) T
 B) F
- Q64. Camel's liver has a gall bladder.
 A) T
 B) F

- Q20.** Measures of animal welfare are
 A) Psychology & behaviour B) Physiology & immunology C) General health & pathology D) All
- Q21.** Sources of pheromones, particularly in dogs, are
 A) Urine B) Special scent glands C) Saliva D) All
- Q22.** In, fast activity electroencephalograph output by the brain of cattle.
 A) Alert wakefulness B) Drowsiness C) Active sleep D) Deep sleep
- Q23.** Cattle spent about /day in grazing cycle.
 A) 2-5 hours B) 4-9 hours C) 12-16 hours D) 16-24 hours
- Q24.** The degree of rumination during the first stage of labour in cattle is
 A) Reduced B) Increased C) Stopped D) Not affected
- Q25.** The cow herd during the fighting is leaded by.....
 A) Old cows B) Old bulls C) Bull claves D) Mature bulls
- Q26.** Factors affecting grazing patterns in cattle are stimuli.
 A) Visual B) Gustatory C) Olfactory & tactile D) All
- Q27.** In pre-parturient stage of cow, escaping of coloured fluid from its vulva.
 A) Yellow B) Red C) White D) Black
- Q28.** The peak of rumination activity time in camel is
 A) After night fall B) At morning C) At noon D) At Afternoon
- Q29.** On average, sheep consume food equivalent to..... of their body weight per day.
 A) 1% B) 2.5% C) 5% D) 10%
- Q30.** A premature onset of maternal behaviour in ewes leads to
 A) Early abortion B) Milk letdown C) Lamb stealing D) Hemorrhage
- Q31.** 10- The most widespread Egyptian breed of sheep is
 A) Baladi B) Barki C) Rahmani D) Seidi
- Q32.** 10- In sheep, the tongue.....
 A) Does not protrude during grazing B) Nearly protrude during grazing
 C) Protrude during grazing D) To somewhat protrude during grazing
- Q33.** Candling infertile chicken eggs at 7th day of incubation reveals what ?
 A) Clear egg B) Dark mass C) Dark ring D) Spider shape
- Q34.** A bird that suddenly stops laying and begins to set on eggs is called ?
 A) Broody bird B) Fertile bird C) Hatching bird D) Laying bird
- Q35.** At which time of the day the frequency of mating in Fowls is high ?
 A) Early morning B) Early afternoon C) Late afternoon D) Nighttime
- Q36.** The grunt is a sound emitted by horse during
 A) At the beginning of sexual encounters B) Before feeding
 C) Mare is worry about her foal D) All of them
- Q37.** Activation of the parasympathetic nervous system has the following effect
 A) Activation of the salivary glands B) Pupil constriction
 C) Stimulating the secretions of the stomach D) All of them
- Q38.** is the scientific study of animal behaviour.
 A) Ethology B) Reactivity C) Umwelt D) Welfare
- Q39.** Adult horse urinates ... times per day.
 A) 1-2 B) 3-6 C) 6-12 D) 12-14
- Q40.** is a form of grooming in horse.
 A) Rolling B) Parturition C) Vocalization D) Elimination
- Q41.** The incubation period for fowl eggs is ?
 A) 18 days B) 21 days C) 28 days D) 30 days
- Q42.** The main feeding pattern in domestic fowl is ?
 A) Food running B) Picking C) Bill wiping D) Bill beating
- Q43.** A comfort behaviour pattern performed by fowl that also appears in conflict situations is what ?
 A) Feather ruffling B) Yawning C) Wing flapping D) Preening



Department of Husbandry and Development of Animal Wealth
Faculty of Veterinary Medicine



Menoufia University

Animal and Poultry Behaviour Exam - 2nd year students
30th June, 2021

Time: 2 hours

I- Choose the best answer:-

- Q1. Dopamine hormone is a neurotransmitter involved in regulating
A) Arousal B) Motivation C) Sexuality D) Stress
- Q2. The psychological tests to measure the welfare are:
A) Preference tests A) Open field tests A) Anxiety tests A) All
- Q3. Chemical substances secreted by the animal to the outside of the body and perceived through the Vomero-nasal organ.
A) Pheromones B) Neurotransmitters C) Hormones D) None
- Q4. Vices in cattle causing losses of milk, contamination of the udder and sometimes indigestion of the animal itself.
A) Suckling B) Kicking C) Licking D) Coprophagia
- Q5. One of behavioural signs of approaching parturition within 1-2 hours in cow .
A) Water sac from vulva B) enlargement of udder C) sleeping D) None
- Q6. Sheep could graze any grass of the ground level.
A) The same B) More than 10 cm C) Less than 10 cm D) Less than 5 cm
- Q7. A behaviour in which two animals stand few meters apart with their heads lowered, eyes on each other and their horns directed in the same manner.
A) Reciprocal threat B) Play C) Exploratory D) Alert wakefulness
- Q8. The peak of rumination activity time in cattle is
A) After night fall B) At morning C) At noon D) At Afternoon
- Q9. Which direction should the show-person walk in relation to the cow ?
A. Forward B) Right side C) Backward D) Left side
- Q10. A period when camel is difficult to control.
A) Maternity B) Copulation C) Kneeling D) Masculine
- Q11. Complicated stomach in camel is not consisting of
A) Rumen B) Reticulum C) Omasum D) Abomasum
- Q12. Some ewes show a premature onset of maternal behaviour leads to
A) Lamb stealing B) Milk letdown C) Making nest D) Stop rumination
- Q13. The neonate lamb is removed immediately after birth and returned to its dam within; it is usually rejected.
A) 10-20 minutes B) ½ hour C) ½-1 hour D) 2-4 hours
- Q14. The most important feature of social behaviour in sheep is
A) Linear hierarchy B) Allelomimetic activity C) Complex hierarchy D) None
- Q15. What time of the day do rabbits usually eat ?
A) At night B) At morning C) At noon D) At Afternoon
- Q16. What mineral should always be available to rabbits ?
A) Iron B) Zink C) Potassium D) Salt
- Q17. After the litter of rabbits is weaned when should the doe be rebred ?
A) After 7 days B) Immediately C) After 1-2 days D) After 14 days
- Q18. In pseudo rumination, rabbits re-ingest rapidly.
A) Bedding B) Ingesta C) Fur D) Faeces
- Q19. Types of neurotransmitters are
A) Biogenic amines B) Amino acids C) Neuro peptides D) All