PRELIMINARY SURVEY VISIT

AREA 3.

CURRICULUM AND INSTRUCTION

C.
ASSESMENT OF ACADEMIC PERFORMANCE

C.1.SAMPLE COPIES OF SUMMATIVE EXAMINATION (midterm and final) WITH TABLE OF SPECIFICATION

Republic of the Philippines
UNIVERSITY OF SOUTHERN MINDANAO
Kabacan, Cotabato
COLLEGE OF VETERINARY MEDIINE
Department of Veterinary Technology
Final Examination
Vet Tech 315

Name: _____Date:____
Yr/ Cr/Sec:_____

EXAM INSTRUCTIONS

1. Shade your answers carefully.
2. **SATA (Select All That Apply):** Shade **ALL correct options.** Missing or adding any option makes the item wrong.
3. **Single-Answer Items:** Shade **ONLY ONE** answer.
4. **No erasures allowed.**
5. Avoid stray marks and review your work before submitting.

1. Large animal neonates are born immunocompetent but lack antibodies. In their first few hours of life, neonates must suckle good quality colostrum from the dam to obtain maternal antibodies (immunoglobulins). Which of the following factors might compromise the quality of colostrum?
   A. Disease during gestation
   B. Late-gestation vaccination of dam
   C. Maternal rejection of neonate
   D. Neonatal prematurity
2. Foals are susceptible to developing sepsis, and most often this is due to failure of passive transfer. Other risk factors for sepsis in foals include each of the following EXCEPT?
   A. Foaling in a grass field
   B. Intrauterine infection
   C. Low gestational age of the foal
   D. Unsanitary environment
3. Neonatal dogs and cats lack the ability to thermoregulate until approximately 4 weeks of age. Which of the following is the best way to ensure they stay warm enough during the first week of life?
   A. Crate kept over a heating vent
   B. Heating pad
   C. Insulated crate
   D. Overhead heat lamp
4. In the presence of a teaser stallion, a mare raises the tail, squats, urinates, and "winks" the vulva. This mare is most likely to be in which stage of the estrous cycle?
   A. Anestrus
   B. Diestrus
   C. Estrus
   D. Pregnancy
5. Which of the following is LEAST likely to cause abortions in cattle?
   A. Bovine viral diarrhea
   B. Heat stress due to pyrexia
   C. Neospora caninum
   D. rauma
6. Mares ovulate every 21 days during the breeding season. Veterinarians can perform palpation per rectum for pregnancy determination starting at 14 to 18 days after ovulation. Detection of the following during rectal palpation approximately 14 to 18 days after ovulation is most consistent with early pregnancy?
   A. A 3.5 cm bulge at the base of one uterine horn
   B. A closed and elongated cervix with a prominent portio vaginalis
   C. Prominent endometrial folds
   D. A relaxed and edematous cervix
7. Which body features do cats commonly use for visual and postural signaling? Select all that apply.
   A. Eyes and pupils
   B. Whiskers
   C. Coat hair
   D. Paw pads only
   E. Tail
8. Select all that apply Which functions require water in the animal's body?
   A. Digestion
   B. Body temperature regulation
   C. Milk production
   D. Movement of feed through the digestive tract
   E. Bone repair
9. Which are macro minerals? Select all that apply
   A. Calcium
   B. Phosphorus
   C. Sodium
   D. Iron
   E. Potassium
10. A swine producer offers a high-fiber ration to pigs, but weight gain is poor. Why? Select all that apply.
    A. Pigs lack microbial fermentation in the foregut
    B. Pigs cannot efficiently digest cellulose
    C. Their simple stomach cannot break down fiber
    D. They depend primarily on enzymatic digestion
    E. They have a large rumen
11. You are helping move horses from a pasture into a holding pen. The animals appear alert and are moving quickly. To reduce stress and avoid injury, which actions should you take based on correct equine-handling principles?
    Select all that apply.
    A. Move slowly with calm movements
    B. Approach directly from behind
    C. Avoid loud noises
    D. Stay out of the blind spot under the nose and directly behind the horse
    E. Separate mares from foals to speed up movement
12. A horse suddenly pins both ears back and swishes its tail repeatedly. What does this behavior most likely indicate?
    A. Curiosity
    B. Fear or agitation
    C. Relaxation
    D. Hunger
13. You observe a goat attempting to climb the race panels during movement. Which behavioral traits are responsible for this?Select all that apply.
    A. High agility
    B. Tendency to spook at shadows
    C. Strong herd instinct
    D. Ability to turn in narrow spaces
    E. Minimal endurance
14. A sheep is being drafted through a race. The handler walks opposite the direction of desired movement. What is this technique called?
    A. Counter-pressure method
    B. Parallel movement
    C. Reverse zone technique
    D. Eye-contact avoidance
15. A cattle chute is being evaluated. Which features reduce slipping and improve safety?
    Select all that apply.
    A. Grooved concrete
    B. Smooth steel flooring
    C. Rubber mats
    D. Deep sand
    E. Wet surfaces for lubrication
16. Which principles apply across all large species for low-stress handling?
    Select all that apply.
    A. Avoid sudden movement
    B. Use species-appropriate flight zone techniques
    C. Loud noises encourage movement
    D. Use solid-sided alleys when possible
    E. Provide time for animals to calm after agitation
17. A group of horses refuses to move toward a loading trailer because the approach is dark. What is the simplest solution?
    A. Force horses through with pressure
    B. Shine a bright spotlight directly into eyes
    C. Illuminate the entrance softly
    D. Use loud noise to encourage movement

A cow with a displaced abomasum has a problem in which part of its digestive system?
A. True stomach
B. Foregut fermentation chamber
C. Cecum
D. Omasum

19. A veterinarian notes that a young calf has poor rumen development. This is likely because the calf:
A. Has consumed only milk
B. Has consumed too much grain
C. Has a fully functional rumen at birth
D. Has no microbial population

20. A student compares the digestive systems of cattle and horses. Which statements accurately describe horses? Select all that apply.
A. They ferment fiber in the hindgu
B. They lack a multi-compartment stomac
C. They depend heavily on microbial digestion in the large intestine
D. They regurgitate and rechew their feed
E. They have a simple stomach

21. The estrous cycle of the ewe is approximately:
A. 10 days
B. 17 days
C. 21 days
D. 28 days

22. Select all that apply .During a breeding soundness exam, which structures of the ram should be evaluated for tone, symmetry, and abnormalities?
A. Testes
B. Epididymis
C. Teeth
D. Hooves
E. Prepuce

23. A ram is considered to have adult breeding capacity at approximately:
A. 6 months
B. 9 months
C. 1 year
D. 2 years

24. Which factors influence puberty in the ewe? Select all that apply
A. Nutrition
B. Breed type (mutton vs wool)
C. Ram scrotal circumference
D. Season of the year
E. Horn size

25. Which statements describe normal neonatal lamb care? Select all that apply
A. Spontaneous breathing should start within 20–30 seconds
B. Lambs should stand and nurse within 20 minutes
C. Umbilicus should be dipped in 7% iodine
D. Must receive 50 mL/kg of colostrum within first 2 hours
E. Heat support is needed for lambs below 100°F

26. At what age do most ewes reach puberty under normal conditions?
A. 3 to 4 months
B. 6 to 7 months
C. 9 to 10 months
D. 12 months

27. Which factors influence puberty in ewes?
A. Nutrition
B. Reaching 65% of mature body weight
C. Breed differences (mutton breeds earlier)
D. Selecting rams with large scrotal circumference
E. Daily exercise level

28. Rams are fertile as early as:
A. 3 months
B. 6 months
C. 7.5 to 9 months
D. 18 months

29. Which glands are considered accessory sex glands in the ram?Select all that apply
A. Seminal vesicles
B. Prostate
C. Bulbourethral gland
D. Bartholin's gland
E. Vesicular glands

30. A normal BCS (body condition score) for breeding ewes is:
A. 1.0 to 2.0
B. 2.5 to 3.5
C. 4.0 to 5.0
D. 3.5 to 4.5

31. Select all that apply. Which conditions should be checked during the physical soundness exam of a ram?
A. Foot rot
B. Pizzle rot
C. Ulcerations on lips or legs
D. Dental soundness
E. Eye color

32. Which organism causes epididymitis in rams and is a major reproductive concern?
A. *Brucella melitensis*
B. *Brucella ovis*
C. *Coxiella burnetii*
D. *Mannheimia haemolytica*

33. What is the average length of the estrous cycle in ewes?
A. 10 days
B. 14 days
C. 17 days
D. 21 days

34. Which behaviors indicate estrus in ewes? Select all that apply
A. Seeking the ram
B. Standing immobile while being investigated
C. Tail wagging
D. Clear mount attempts on other ewes
E. High fever

35. Optimal breeding time in ewes is:
A. Immediately at first signs of estrus
B. 6 hours after onset of estrus
C. 12 to 18 hours after first signs of estrus
D. After estrus ends

36. Which methods are used to diagnose pregnancy in ewes? Select all that apply.
A. Failure to return to estrus
B. Progesterone assay at 17–18 days
C. Rectal ultrasound at 30 days
D. External transabdominal ultrasound at 40 days
E. Rumen auscultation

37. Ewe gestation length is approximately:
A. 90 days
B. 120 days
C. 145 to 155 days
D. 200 days

38. Which are common CAUSES of dystocia in ewes?
A. Ringwomb (failure of cervical dilation)
B. Fetopelvic disproportion
C. Malposition of the head
D. Elbow lock
E. Transverse presentation

39. Which glands are accessory sex glands of the ram? Select all that apply.
A. Seminal vesicles
B. Prostate
C. Bulbourethral gland
D. Cowper's gland
E. Sebaceous gland

40. Select all that apply. A mare on a high-grain diet develops hindgut acidosis. Which parts of the digestive system are most affected in hindgut fermenters?
A. Cecum
B. Large colon
C. Rumen
D. Reticulum
E. Small intestine

41. The ideal body condition score for a breeding ewe is:
A. 1.0–1.5
B. 2.5–3.5
C. 4.0–5.0
D. 3.5–4.5

42. Select all that apply.Which diseases present a zoonotic risk during sheep reproductive management?

A. Q fever
B. Brucellosis (B. melitensis)
C. Contagious ecthyma
D. Caprine arthritis encephalitis
E. Caseous lymphadenitis

43. A newborn lamb should begin spontaneous breathing within:
A. 5–10 seconds
B. 20–30 seconds
C. 1–2 minutes
D. 5 minutes

44. Poor nutrition can lead to all of the following except:
A. Poor conception rates
B. Higher weaning weights
C. Difficult births
D. Lower immune protection

45. A handler is preparing to restrain a goat using the Herculean method. Which steps are correct? Select all that apply.
A. Hold under neck with left hand
B. Grab flank fold with right hand
C. Push knees into side
D. Lift by horns
E. Sit goat onto rump

46. Which are components of offensive aggression in cats? Select all that do not apply.
A. Rump elevated
B. Head and neck fixed
C. Tail down with piloerection
D. Pupils constricted
E. Ears flattened tightly against the head

47. A loss of approximately 20% of body water will result in:
A. Dehydration only
B. Reduced milk production
C. Death
D. Weight loss but survival

48. Which are common feed additives? Select all that apply.
A. Antibiotic
B. Coccidiostats
C. Hormones
D. Pellet binders
E. Flavoring agents

49. Which vitamins are water-soluble? Select all that apply.
A. Vitamin C
B. Vitamin B1 (thiamin)
C. Vitamin B12
D. Vitamin D
E. Niacin

50. A veterinarian is explaining to a student why cattle can utilize low-quality forage effectively. Which characteristics support this ability? Select all that apply.
A. Multi-compartment stomach
B. Microbial fermentation in the foregut
C. Ability to regurgitate and rechew feed
D. Simple stomach with minimal fermentation
E. Very short intestinal transit time

51. A farmer asks why his goat can digest roughage but his dog cannot. Which factors explain this difference? Select all that apply.
A. Presence of rumen microbes
B. Ability to ferment cellulose in the foregut
C. Simple stomach in the dog
D. Very long and complex large intestine in the dog
E. Rumen regurgitation and rumination

52. A cow is not thriving on a diet of finely ground feed. The nutritionist explains that cattle require effective fiber to maintain rumen health. Effective fiber aids in: Select all that apply
A. . Stimulating rumination
B. Stabilizing rumen pH
C. Increasing saliva production
D. Eliminating need for fermentation
E. Increasing gastric acidity

53. A group of cattle refuses to enter a working alley. According to cattle behavior principles, which environmental factors may be causing the problem? Select all that apply.
A. Shadows across the alley
B. A sudden change in wall color
C. Loud hydraulic pump noises
D. Rattling chains
E. Solid-sided chutes

54. A sheep refuses to move forward in the race and turns to face the handler. What is the most likely reason?
A. The handler is standing in the animal's flight zone
B. The sheep is in its blind spot
C. The handler is positioned in the wrong color area
D. The handler is standing too long *in the blind spot*

55. During cattle handling, excessive noise and rushing animals can cause significant stress. Which consequences are documented effects of improper handling? Select all that apply.
A. Reduced immune function
B. Increased conception rates
C. Increased bruising
D. Reduced effectiveness of vaccinations
E. Improved feed efficiency

56. Goats in a school setting are unusually easy to handle because:
A. . They have a very large flight zone
B. They are poorly habituated
C. They have minimal or no flight zone due to extensive handling
D. They have poor vision

57. You are planning to catch a sheep in an open pen. Which techniques follow safe and proper sheep-catching methods? Select all that apply.
A. Cup hand under the jaw
B. Grab wool for better grip
C. Move calmly into a corner
D. Lift head upward to stop forward motion
E. Catch by hind leg above the hock (young lambs only)

58. A newly arrived group of pigs should *not* be handled for the first few days. Why is acclimation important? Select all that apply.
A. Transport stress alters physiology
B. Immune function may be suppressed
C. Animals need time to establish social hierarchy
D. Handling too early increases risk of injury
E. Pigs need to fast before acclimation can begin

59. While moving pigs into a new pen, a caretaker uses a soft, soothing voice and offers food rewards. Why is this recommended?
A. Pigs dislike touch but enjoy food
B. Pigs respond strongly to familiar positive cues
C. It distracts them from environmental hazards
D. It is required by regulation

60. A handler is trying to understand how to safely approach a goat. Which vision-related factors must be considered? Select all that apply.
A. Goats have panoramic vision of 320–340°
B. They have a blind spot directly behind them
C. Goats see better in dim light
D. Shadows and bright spots may cause balking
E. They can see directly behind themselves clearly

61. A handler wants to move cattle through a curved chute. Why are curved chutes preferred?
A. They cost less to build
B. They prevent animals from seeing the end until they arrive
C. They reduce the need for solid fencing
D. They increase animal speed

62. When working in cattle facilities, which structural features improve safety and cattle flow? Select all that apply.
A. Catwalks for handlers
B. One-way gates
C. Smooth concrete floors
D. Solid walls in working alleys
E. Properly placed escape gates

63. A ram becomes aggressive during restraint. What is a safe initial approach?
A. Grab wool behind the neck
B. Place hand under jaw and control head position

C. Pull tail to stop movement
D. Approach from the blind spot

64. Young, rapidly growing animals require diets higher in:
A. Fats
B. Minerals
C. Protein
D. Simple sugars

65. A handler wants to move a cow forward through a chute. Where should the handler position themselves relative to the cow's point of balance?
A. Directly behind the animal
B. In front of the shoulders
C. Behind the shoulders
D. At the animal's blind spot

66. Which details about urine spraying are correct? Select all that apply.
A. Performed only by intact males
B. Can be done through backing up to a surface
C. Can be done while squatting
D. Communicates reproductive status
E. Provides information about territory

67. A pig refuses to move into a dark examination room. This is because:
A. Pigs prefer to avoid entering darker areas
B. The pig recognizes the equipment
C. The pig is protecting its territory
D. The handler is in the flight zone

68. Which species has a typical flight zone close to zero under school-level handling conditions?
A. Beef cattle
B. B. Sheep
C. Dairy goats
D. Swine

69. Handlers are preparing to muster sheep during hot weather. Which actions reduce stress?
A. Allow animals to walk, not run
B. Rest animals if agitated
C. Muster at peak midday heat
D. Avoid overfilling yards
E. Return animals to feed/water quickly

70. A pig is being restrained for injection using a sling. What is a common requirement for sling training?
A. No need for acclimation
B. One hour of training immediately before use
C. Daily sessions for about two weeks
D. Hold the pig upside-down first

71. A group of cattle refuses to enter a working alley. According to cattle behavior principles, which environmental factors may be causing the problem? Select all that apply.
A. Shadows across the alley
B. A sudden change in wall color
C. Loud hydraulic pump noises
D. Solid-sided chutes
E. Rattling chains

72. Which management practice increases ovulation rate in ewes through improved nutrition? Select all that apply
A. Whitten effect
B. Flushing
C. Steaming up
D. Tail docking

73. Which statements describe the ewe's estrus cycle characteristics? Select all that apply
A. They are short-day breeders
B. Estrus lasts 10–30 hours
C. Ovulation occurs before estrus
D. Optimal breeding is 12–18 hours after first signs of heat
E. Light manipulation can induce cycling

74. Select all that apply.Which methods can be used for pregnancy diagnosis in ewes?
A. Failure to return to estrus
B. Progesterone assay
C. Vaginal smear cytology
D. Abdominal ballottement
E. Transabdominal ultrasound

75. Select all that apply , Which are common fetal causes of dystocia in ewes?
A. Head-only presentation
B. Elbow lock
C. Ringwomb
D. Malposition of forelegs
E. Transverse presentation

76. A scrotal circumference of greater than 33 cm is expected in:
A. Ram lambs
B. Yearling rams
C. Mature breeding rams
D. Rams under 40 kg

77. Which statements about Q fever in sheep are correct? Select all that apply.
A. Caused by *Coxiella burnetiid*
B. Causes late-term abortion
C. Zoonotic
D. Spread through aborted materials and milk
E. Not detectable with serology

78. Which are common causes of dystocia in goats? Select all that apply.
A. Deviation of fetal position, posture, or presentation
B. Fetomaternal disproportion
C. Cervical dilation failure (ringwomb)
D. Uterine torsion
E. Primary and secondary uterine inertia

79. What is the optimal breeding time in the doe relative to the onset of estrus?
A. Immediately at the first sign of estrus
B. 6 to 12 hours after onset of estrus
C. 12 to 24 hours after onset of estrus
D. 48 hours after the end of estrus

80. Which are common signs of estrus (heat) in the doe? Select all that apply.
A. Restlessness
B. Increased vocalization
C. Rapid tail wagging
D. Standing to be mounted or attempting to mount other goats
E. Hypothermia

81. Select all that apply. Which are correct characteristics of buck semen?
A. Volume is low, about 1 mL per ejaculate
B. Sperm concentration is very high
C. Semen is normally clear and watery with few sperm
D. Wave motion (swirling masses) is seen with good motility
E. Collected semen volume is usually 20 to 50 mL

82. Which statements about Q fever in goats are correct?Select all that do not apply.
A. Clinical signs include later-term abortion.
B. The organism may be transmitted by contact with aborted material and vaginal discharge
C. Infected animals never shed the organism in milk
D. Diagnosis can be based on placental findings and serology
E. Suspected carrier animals are usually culled

83. Which description best fits the penis of the buck? Select all that apply
A. Musculocavernous penis
B. Fibroelastic penis
C. Os penis
D. Cartilaginous penis

84. Which factors contribute to neonatal calf mortality associated with dystocia? Select all that apply
A. Hypoxia during birth
B. Injury from excessive force
C. Poor-quality colostrum
D. Inability to stand
E.Neurological damage

...at is the average length of estrus in cattle?
A. 6 to 8 hours
B. 18 to 24 hours
C. 2 to 3 days
D. 48 hours

86. Which tranquilizer should be avoided in stallions due to risk of penile paralysis?
A. Xylazine
B. Promazine
C. Detomidine
D. Acepromazine

87. Select all that apply. Which steps are part of treating house soiling due to separation anxiety?
A. Desensitizing pre-departure cues
B. Slowly increasing the pet's tolerance for being alone
C. Using punishment when accidents occur
D. Providing more exercise
E. Using drug therapy early in the program

88. When addressing excessive barking, owners should avoid:
A. Identifying triggers
B. Rewarding quiet behavior
C. Picking up or soothing the dog during barking
D. Using desensitization techniques

89. Select all that apply. Which items are included when obtaining a complete behavioral history?
A. Family lifestyle
B. Signalment of the pet
C. Details of recent and past behavior incidents
D. Weather conditions during adoption
E. Level of exercise and daily routine

90. Before correcting a behavioral problem, what must always be ruled out?
A. The owner's training skill
B. A medical cause
C. The breed of the pet
D. Whether the pet knows commands

91. Which are examples of behavior modification using learning theory? Select all that apply.
A. Counterconditioning
B. Systematic desensitization
C. Positive punishment
D. Shaping
E. Debarking surgery

92. If a pet was acquired unexpectedly and its background is unknown, the first step should be:
A. Begin formal obedience training
B. Avoid socialization until the pet settles in
C. Have the pet examined and assessed by a veterinarian
D. Wait for behavioral problems to surface

93. Which statements reflect the benefits of puppy and kitten classes? Select all that apply.
A. Owners receive guidance on behavior and social development
B. Pets learn in a safe environment with conspecifics
C. Owners no longer need to train their pets at home
D. Trainers can directly observe behavior and provide corrections
E. They replace regular veterinary checkups

94. Select all that apply. Which species traits should owners consider when selecting a pet?
A. Hair coat pattern only
B. Physical traits
C. Nutritional needs
D. Social needs
E. Life span

95. Which characteristics describe the monocular and binocular vision of cats? Select all that apply
A. Binocular field of 120 to 130 degrees
B. Monocular field about 80 degrees per eye
C. Excellent depth perception
D. Limited night vision
E. Vision helps with short-distance signaling

96. Which factors influence cat behavior? Select all that apply.
A. Genetics
B. Environment
C. Learning and experience
D. Physiology
E. Blood type

97. Which statements describe visual communication in cats? Select all that apply.
A. Often missed by humans
B. Relies on subtle body language
C. Best used for long-distance communication
D. Uses ears, tail, eyes, and whiskers
E. Indicates intentions or emotional state

98. Select all that do not apply Which signs indicate a friendly, relaxed cat?
A. Tail held horizontally
B. Pupils dilated
C. Hair smooth without piloerection
D. Ears erect
E. Whiskers outwardly erect

99. Which form of learning increases a behavior when a pleasant stimulus follows the action?
A. Operant conditioning
B. Habituation
C. Negative punishment
D. Extinction

100. Which physical abnormalities in bulls can reduce breeding ability? Select all that apply.
A. Sickle hocks
B. Overgrown hooves
C. Weak pasterns
D. Enlarged glans
E. Postlegged conformation

-END-

Wishing you a relaxing holiday after all your effort this term.....

TABLE OF SPECIFICATIONS

Disposal of Unwanted Drugs						
II. Routes and Techniques of Drug Administration A. Introduction B. Dosage Forms Drug Preservatives and Solvents	2	14.3%	14	4	6	4
C. Drug Administration D. Medication Orders E. Dispensed Medication Labelling Controlled Substances	2	14.3%	14	4	4	4
C. Practical Calculations	2	14.3%	14	4	6	4
III. Drugs Used in Gastrointestinal System Disorders	2	14.3%	14	4	6	4
TOTAL		100%	100	30.00	40.00	30.00

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COLLEGE OF VETERINARY MEDICINE

Midterm Examination SY 24-25
VT 08- Basic Pharmacology and Therapeutics

INSTRUCTIONS: MULTIPLE CHOICE. In your answer sheet, shade the letter that corresponds to your answer. Every answer is final. Double answers will be mark wrong. **STRICTLY NO ERASURES.**

1. What is the rationale behind administering drugs via continuous IV infusion in certain clinical situations?
   A. To reduce the total dosage required
   B. To increase patient comfort
   C. To maintain consistent therapeutic levels of the drug
   D. To decrease the frequency of drug administration
2. A person studying how the body absorbs, uses, and gets rid of codeine is engaged in the pharmacological specialty called
   A. pharmacotherapeutics
   B. pharmacodynamics
   C. pharmacokinetics
   D. pharmaconeurology
3. A new drug is developed with an LD50 of 250 mg/kg and an ED50 of 50 mg/kg. The manufacturer claims that it is safer than an existing drug with an LD50 of 200 mg/kg and an ED50 of 40 mg/kg. Is this claim accurate?
   A. Yes, the new drug has a higher therapeutic index, indicating it is safer.
   B. No, the existing drug has a higher therapeutic index, indicating it is safer.
   C. Both drugs have identical therapeutic indices, so neither is safer than the other.
   D. The claim cannot be determined without additional data on the drugs' side effects.
4. A weakly alkaline drug is administered to a dog with a gastrointestinal pH of 8. The drug has a pKa of 9. What will be the predominant form of the drug in the gastrointestinal tract, and how will this influence its absorption?
   A. Nonionized, enhancing absorption due to lipophilic properties.
   B. Ionized, reducing absorption due to its hydrophilic nature.
   C. Nonionized, reducing absorption due to its hydrophilic nature.
   D. Ionized, enhancing absorption due to its lipophilic nature.
5. A noncompetitive antagonist binds to a receptor, and an agonist is administered afterward. What effect will the agonist have, and why?
   A. The agonist will produce a maximal effect, as it can still bind to the receptor.
   B. The agonist's effect will be partially blocked but still significant.
   C. The agonist will not produce any effect, as the receptor has been altered by the noncompetitive antagonist.
   D. The agonist will increase the antagonist's efficacy, further reducing receptor activity.
6. A drug that has a margin of safety of 75 is
   A. safer than a drug whose margin of safety is 5.
   B. less safe than a drug whose margin of safety is 5.
   C. more likely to cause toxic side effects.
   D. not marketable in the United States.
7. A veterinarian chooses a brand-name drug over a generic equivalent for a patient. What is the most reasonable justification for this choice?
   A. The veterinarian believes brand-name drugs are always safer.
   B. The brand-name drug has shown consistent therapeutic results in the patient.
   C. The veterinarian receives a financial incentive for prescribing brand-name drugs.
   D. Brand-name drugs are guaranteed to work better than generic drugs.
8. A weakly acidic drug is prescribed to a patient. How can changing the patient's urine pH improve excretion of the drug?
   A. Increasing the urine pH converts the drug to its ionized form, promoting excretion.
   B. Decreasing the urine pH converts the drug to its ionized form, reducing excretion.
   C. Increasing the urine pH converts the drug to its nonionized form, decreasing excretion.
   D. Decreasing the urine pH converts the drug to its nonionized form, promoting reabsorption.
9. An animal is administered a drug that is a weak base. The veterinarian prescribes an additional medication to acidify the urine. What impact will this have on the excretion of the weak base drug?
   A. The weak base drug will be reabsorbed more in the kidneys, delaying excretion.
   B. The weak base drug will ionize and be excreted more rapidly in the urine.
   C. The weak base drug will lose its therapeutic effect because of increased excretion.
   D. The weak base drug will bind to plasma proteins and have an increased half-life.
10. An injectable drug placed into a substance that delays absorption is called a
   A. parenteral drug
   B. repository preparation
   C. suspension
   D. solution
11. A drug with a high affinity for its receptor is administered at a low dose. What can you expect about the pharmacological response, and why?
   A. The drug will produce a minimal response due to the low dose.
   B. The drug will produce a strong response because high affinity compensates for the low dose.
   C. The drug will have no effect unless given in higher doses.
   D. The drug will produce an unpredictable response due to receptor desensitization.
12. A veterinary prescription includes the instruction "ad lib" for a dietary supplement. After three weeks, the animal shows signs of nutrient toxicity. Which adjustment should the veterinarian consider?
   A. Increase the frequency of administration to balance the nutrient absorption.
   B. Change the supplement to a controlled dosage at specific times of the day.
   C. Reduce the dosage but maintain the "ad lib" instruction.
   D. Stop the supplement entirely, as "ad lib" may not be suitable.
13. Neonatal animals are less tolerant of some drugs than older animals, because in neonates the drugs are
   A. Biotransformed (metabolized) more rapidly
   B. Absorbed more slowly from the gastrointestinal tract
   C. Not biotransformed
   D. Biotransformed (metabolized) more slowly
14. What would happen to the therapeutic index if the ED_{50} of a drug decreased while the LD_{50} remained the same?
   A. The therapeutic index would increase.
   B. The therapeutic index would decrease.
   C. The therapeutic index would remain unchanged.
   D. The therapeutic index would become negative.
15. In what form do the majority of acidic drugs exist in an acidic environment?
   A. nonionized
   B. ionized
16. A prescription reads "2 tab q4h po prn until gone." The translation of these instructions is _____.
   A. Two tablets are to be taken four times per day for pain until all tablets are gone.
   B. Two tablets are to be taken four times per day under supervision by the veterinarian until all tablets are gone.
   C. Two tablets are to be taken every 4 hours with food and water until all tablets are gone.
   D. Two tablets are to be taken every 4 hours by mouth as needed until all tablets are gone.
17. A new drug is tested, and it is found to have a very low dissociation constant (K D) for a specific receptor. What can be inferred about this drug's binding characteristics and required dose?
   A. The drug binds weakly to the receptor, requiring a higher dose for effect.
   B. The drug binds strongly to the receptor, requiring a lower dose for effect.
   C. The drug does not bind to the receptor, so its dose is irrelevant.
   D. The drug's affinity is unrelated to its dissociation constant, so dosing remains the same.
18. All of the following are Schedule IV Controlled Substances, EXCEPT
   A. diazepam
   B. phenobarbital
   C. butorphanol
   D. thiopental
19. A drug with a pKa of 7 is administered to a patient with an intestinal pH of 8. How does this pH affect the drug's absorption, and what form will the drug predominantly take?
   A. Ionized, which decreases its absorption in the intestine.
   B. Nonionized, enhancing its absorption in the intestine.
   C. Ionized, improving its absorption in the stomach.
   D. Nonionized, leading to delayed elimination.

20. Which animal has a greater volume of distribution?
A. a 7 percent dehydrated cat
B. a normal cat

21. A dog has decreased renal perfusion. What will this do to the blood levels of a drug excreted through the kidneys?
A. It will decrease
B. It will increase
C. It will remain normal
D. It will totally stop

22. A drug that has extreme potential for abuse and no approved medicinal purpose in the United States is classified as
A. C-I
B. C-II
C. C-III
D. C-IV
E. All of the above schedule has potential for abuse and misuse

23. Which of the following is TRUE?
A. Drugs with short half-lives need not be given more frequently
B. Noncompetitive antagonists are easily reversed in a clinical setting
C. Thin animals with low plasma protein levels require more drug than animals of normal weight
D. Giving fluids to an animal will increase the excretion of drug

24. Drug elimination which occurs at the level of the nephron and works by pushing water and small molecules through a tuft of capillaries.
A. Tubular secretion
B. Tubular reabsorption
C. Glomerular filtration
D. Glomerular secretion

25. Controlled substances are drugs that
A. Cannot be used in any animal intended for use as human food
B. Have a high potential for abuse
C. Are very hazardous to anyone handling them
D. Are environmentally hazardous

26. A drug is administered by intraperitoneal (IP) injection in a laboratory animal. What is a potential risk associated with this route?
A. Rapid onset of action
B. Delayed drug absorption
C. Risk of injuring internal organs
D. Excessive drug elimination

27. If a therapeutic index (TI) calculation shows a TI of 2 for a drug, what is the implication for clinical use?
A. The drug is very safe with a wide margin for error in dosing.
B. The drug has a narrow safety margin and requires precise dosing.
C. The drug is ineffective and requires higher doses to achieve therapeutic effects.
D. The drug is unlikely to produce any adverse effects.

28. Which of the following is an example of drug compounding?
A. splitting a pill along its score line
B. dispensing an unopened bottle of pills to a client
C. using expired drugs to treat an animal's illness
D. adding flavoring to formulated drugs

29. Ten milliliters of a 2.5% solution of thiopentone contains
A. 250 mg of thiopentone
B. 2.5 g of thiopentone
C. 100 mg of thiopentone
D. 2.5 mg of thiopentone

30. If a young animal has a less-developed enzyme system, how would this affect the pharmacokinetics of drug metabolism, and what adjustments might be necessary in dosing?
A. The drug would be metabolized faster, requiring a higher dose.
B. The drug would be metabolized more slowly, requiring a lower dose or less frequent administration to avoid toxicity.
C. The drug absorption rate would increase, allowing for less frequent dosing.
D. The enzyme deficiency would only affect drugs administered intravenously.

31. A dog has been prescribed "sol'n po bid." The owner asks how long to wait between doses. What would be the appropriate response?
A. The medication should be administered twice a day, so approximately 12 hours apart.
B. The medication should be given once every 6 hours throughout the day.
C. The medication should be given once a day in the morning.
D. The medication can be administered anytime, as long as it's in liquid form.

32. During surgery, the veterinarian administers a lipophilic a... which of the following environments will this drug be absorbed most efficiently, and why?
A. In a low surface area environment, because fewer drug molecules will be absorbed at a time.
B. In an acidic environment, because lipophilic drugs dissolve better in acidic conditions.
C. In a lipid-rich environment, because lipophilic drugs pass through cell membranes more easily.
D. In a water-based environment, because lipophilic drugs rely on water to transport them.

33. A drug given by which of the following routes reaches its peak plasma concentration the fastest?
A. Orally
B. Intramuscularly
C. Subcutaneously
D. Intravenously

34. Repository forms of parenteral drugs
A. Contain a special coating that protects the drug from the harsh, acidic environment of the stomach
B. Are formulated to prolong absorption of the drug from the site of administration
C. Are composed of specially prepared plant or animal parts rather than being manufactured from chemicals
D. Are extremely irritating to the tissues

35. A veterinarian is deciding between administering a drug orally or intravenously (IV) for a patient requiring immediate pain relief. What is the primary consideration in choosing IV administration over oral?
A. IV administration has slower absorption but longer-lasting effects.
B. IV administration bypasses the first-pass effect, providing a faster therapeutic response.
C. Oral administration offers greater bioavailability in most drugs compared to IV.
D. Oral administration is the only route that ensures complete drug distribution.

36. A veterinarian is treating a horse with a weakly acidic drug that has a pKa of 4. The drug is administered orally, and the veterinarian wants to know where the drug will be most effectively absorbed. Which of the following environments will facilitate the greatest absorption?
A. The stomach (pH 2), where the drug will be predominantly nonionized.
B. The small intestine (pH 8), where the drug will be predominantly nonionized.
C. The stomach (pH 2), where the drug will be predominantly ionized.
D. The small intestine (pH 8), where the drug will be predominantly ionized.

37. A drug manufacturer's patent expires, allowing other companies to produce the same drug under different trademarks or as a generic version. What impact does this have on the veterinary practice?
A. All drugs on the market will now have the same price.
B. Veterinarians must monitor for variations in therapeutic response when switching products.
C. Veterinarians should only prescribe brand-name drugs for consistency.
D. Veterinarians can assume all versions of the drug will be equally effective.

38. A drug classified as an *antagonist* may exert its influence by
A. Mimicking the activity of the neurotransmitter used in the impulse
B. Preventing the breakdown of the neurotransmitter used in the impulse
C. Blocking the neurotransmitter receptor on the effector organ
D. Enhancing the release of the neurotransmitter used in the impulse

39. Why would a weakly alkaline drug administered orally be poorly absorbed in the stomach but well absorbed in the small intestine?
A. The drug becomes ionized in the stomach, which limits absorption.
B. The drug becomes nonionized in the stomach, enhancing absorption.
C. The drug is ionized in the small intestine, increasing absorption.
D. The drug is nonionized in the small intestine, reducing absorption.

40. Which route of drug administration do gastric fluids affect?
A. IM
B. Per Os
C. IV
D. SQ

A drug is administered intramuscularly (IM) to a patient. The veterinarian advises against using the same drug subcutaneously (SQ). What is the most likely reason for this recommendation?

A. IM administration allows for faster absorption due to the dense blood supply in the muscles.
B. SQ administration provides a more immediate effect but increases the risk of side effects.
C. IM administration leads to reduced bioavailability compared to SQ administration.
D. SQ administration promotes slower drug metabolism, delaying therapeutic action.

42. What type of drug is well absorbed from the gastrointestinal tract?

A. Hydrophilic
B. Lipophilic
C. water based
D. charged

43. When a drug is used by a route, in a species, or for another indication other than that specified by the manufacturer, this use is

A. A felony offense
B. An extra label use
C. Prohibited by the AVMA
D. An implied consent from the manufacture

44. A veterinarian prescribes a medication "q8h" with the instruction "prn." The patient's owner administers the medication three times in a day but claims the animal still shows discomfort after each dose. How should the owner adjust the administration of the medication based on the instructions?

A. Administer the medication every 4 hours instead of every 8 hours.
B. Continue giving the medication every 8 hours and only as needed.
C. Administer an extra dose at night, disregarding the 8-hour interval.
D. Discontinue the medication immediately and report to the veterinarian.

45. The higher the schedule number (for example, V versus I) of a controlled-substance drug,

A. the higher the risk for human abuse potential.
B. the more questionable its manufacture is.
C. the lower the risk for human abuse potential.
D. the less medical value it has.

46. Given that fever may cause drug molecules to move faster and increase absorption, how should this affect the administration of drugs to febrile animals?

A. The dosage should be increased due to the risk of lower drug bioavailability.
B. The dosage should be reduced, or administration should be monitored to prevent overdose due to faster absorption.
C. The route of administration should be changed to reduce absorption speed.
D. No adjustments are needed as fever does not affect drug absorption significantly.

47. Which drug has a greater percent that actually enters the systemic circulation?

A. a drug with a bioavailability of 0.8
B. a drug with a bioavailability of 0.2

48. Which of the following is a significant disadvantage of the subcutaneous route of drug administration compared to the intramuscular route?

A. Increased risk of infection
B. Faster drug absorption
C. Delayed onset of action
D. Difficulty in administration

49. All of the following are Schedule II Controlled Substances, EXCEPT

A. amphetamines
B. ketamine
C. etorphine
D. codeine

50. On a drug label, which part is usually in capital letters with a superscript R by it?

A. generic name
B. drug concentration
C. manufacturer's name
D. trade name

51. All of the following are forms of intramuscular injection, EXCEPT

A. Aqueous solutions
B. Oily suspensions
C. Emulsions
D. Injectable pellets

52. A drug intended for oral administration in a dog is destroyed by stomach acid. What alternative route would allow the drug to bypass the acidic environment?

A. Subcutaneous
B. Rectal
C. Intramuscular
D. Intravenous

53. Which scenario would result in the lowest therapeutic index for a drug?

A. High LD50, low ED50
B. Low LD50, high ED50
C. High LD50, high ED50
D. Low LD50, low ED50

54. Which of the following scenarios best demonstrates ion trapping and its role in drug distribution?

A. A drug remains in its lipophilic form after crossing the cell membrane, leading to accumulation in tissues.
B. A drug changes from its nonionized form to its ionized form after moving into a compartment with a different pH, trapping it there.
C. A drug remains evenly distributed between the bloodstream and tissues, ensuring equal efficacy.
D. A drug's bioavailability decreases after absorption due to changes in its pKa.

55. A partial agonist binds to all available receptors on a cell but produces only a partial response. Which of the following best explains this phenomenon?

A. The partial agonist fits poorly into the receptor, leading to weak activation.
B. The partial agonist's effect is due to competitive inhibition from other drugs.
C. The partial agonist activates the receptor but cannot produce a full response, even with full receptor occupancy.
D. The partial agonist enhances the effect of full agonists, amplifying the response.

56. A prescription for a cat indicates "IM q4h." However, after two doses, the cat becomes unresponsive. Which of the following might be the most critical factor to review with the veterinarian?

A. Whether the medication should have been administered intravenously instead.
B. The frequency of administration, ensuring "q4h" was interpreted correctly.
C. Whether the veterinarian meant to prescribe the drug "po" instead of "IM."
D. If the cat is allergic to the IM administration route for the drug.

57. In general, which route of drug administration has a longer duration of action than IV, yet a shorter duration of action than oral?

A. Rectal
B. Transdermal
C. Inhalation
D. IM

58. The following information was provided for a prescription written by a veterinarian: Canine patient, Amoxicillin 100 mg tablets, Sig: 1 tab q8h po pm 2 refills. Date: 1/5/96. What does *pm* mean?

A. Administer every other day
B. Administer by mouth
C. Administer as needed
D. Administer on an empty stomach

59. A drug is prescribed as "IV q12h" with a dosage of "mEq/kg." After reviewing the patient's records, the veterinarian suspects a miscalculation in dosage based on body weight. What is the best approach to avoid potential toxicity?

A. Administer the drug at a lower frequency, such as q24h.
B. Adjust the dosage according to the exact mEq to body weight ratio.
C. Change the administration route to IM for better control.
D. Switch to a generic version of the drug to minimize the risk.

60. A drug with a pKa of 6 is administered orally. It encounters an environment with a pH of 6. What percentage of the drug will be in its ionized form, and how might this affect its absorption?

A. 10%, which will enhance absorption due to the nonionized form predominating.
B. 50%, as the drug will be equally ionized and nonionized, making absorption moderate.
C. 90%, leading to poor absorption due to the dominance of the ionized form.
D. 100%, as the drug will fully ionize, leading to reduced absorption.

61. Organization of pharmaceuticals within a clinic should be ____.

A. designed so that all drugs are within reach.
B. arranged alphabetically by drug category.
C. designed to take into account special refrigeration and security needs.
D. designed so that liquid medication is near a sink for easier reconstitution

62. Translate 1:70 into a percent.

A. 10%
B. 1.4%
C. 1%
D. 2.5%

63. Based on blood perfusion, which body compartment will get adequate drug levels more quickly?
A. Fat
B. Heart
C. skeletal muscle
D. smooth muscle

64. Why might a drug in Schedule I (C-I) be considered more dangerous than a drug in Schedule II (C-II)?
A. Schedule I drugs have no accepted medical use and are considered unsafe.
B. Schedule I drugs are less addictive than Schedule II drugs.
C. Schedule II drugs are often over-the-counter medications.
D. Schedule II drugs have no potential for abuse.

65. A technician prepares an oily suspension for intramuscular injection in a dog. What is the expected effect of using this formulation?
A. Faster drug absorption
B. Slower and prolonged drug absorption
C. Higher peak plasma levels
D. Immediate therapeutic effects

66. A weak agonist is administered to a patient. What is likely to happen at the receptor level, and how will this affect the drug's efficacy?
A. Only a few receptors need to be occupied for maximal effect, leading to high efficacy.
B. The drug will not bind to any receptors, resulting in no response.
C. Many receptors must be occupied for a minimal effect to occur, reducing efficacy.
D. The drug will produce a partial effect regardless of receptor occupancy.

67. Drug affinity is the _____.
A. strength of binding between a drug and its receptor
B. the measure of the drug's action
C. number of receptors that must be occupied by the drug.
D. binding of the drug to its receptor.

68. All of the following are examples of solutions, EXCEPT
A. syrups
B. elixirs
C. tinctures
D. emulsions

69. The term *drug compounding* refers to which of the following activities?
A. Diluting or combining drugs for ease of administration
B. Delivering a drug via a different route than is directed on the label
C. Delivering a drug at a different dose than is directed on the label
D. Delivering the drug to a different species than is directed on the label

70. All the following are true about a veterinarian-client-patient relationship EXCEPT:
A. The veterinarian has seen and treated all the client's pets except a dog for which the owner would like to buy heartworm preventative.
B. The veterinarian has assumed responsibility for making clinical judgments about the health of the animal(s) and the need for treatment, and the client has agreed to follow the veterinarian's instructions.
C. The veterinarian has sufficient knowledge of the animal(s) to issue a diagnosis. The veterinarian must have recently seen the animal and must be acquainted with its husbandry.
D. The veterinarian must be available for follow-up evaluation of the patient.

71. Epinephrine is considered a nonselective agonist. What implication does this have for its mechanism of action and potential side effects?
A. It binds to a single receptor type, leading to targeted effects with minimal side effects.
B. It binds to multiple receptor types, potentially causing widespread effects and side effects.
C. It cannot produce a pharmacological response due to its nonselectivity.
D. It selectively inhibits certain receptors, minimizing unwanted effects.

72. All of the following are Schedule II Controlled Substances, EXCEPT
A. pentobarbital
B. etorphine
C. hydrocodone
D. fentanyl

73. A veterinarian prescribes a drug that undergoes enterohepatic recirculation. After a dose is given, the animal shows prolonged therapeutic effects. What might be the explanation for this?
A. The drug is reabsorbed in the intestines and sent back to the liver for further circulation.
B. The drug is not absorbed properly and thus remains in the intestines.
C. The drug binds tightly to plasma proteins, preventing it from leaving the liver.
D. The drug is primarily eliminated by the lungs, which prolongs its presence in the bloodstream.

74. A calf is given a medication that is eliminated by the kidneys through tubular secretion. However, the calf is severely dehydrated. Which of the following factors will likely be most affected in this scenario?
A. Tubular reabsorption rate of the drug.
B. Tubular secretion of the drug into the nephron.
C. Glomerular filtration rate and overall renal elimination.
D. Hepatic elimination of the drug.

75. The pH of the drug and the pH of the environment where the drug is administered both play a role in drug absorption. Which of the following statements is FALSE?
A. Acid drugs in an alkaline environment tend to be charged.
B. Alkaline drugs in an acid environment tend to be charged.
C. Alkaline drugs become more hydrophilic at a pH more acidic than its pKa.
D. Alkaline drugs become more hydrophilic at a pH more alkaline than its pKa.

76. All of the following are Schedule V Controlled Substances, EXCEPT
A. thiamylal
B. buprenophrine
C. diphenoxylate
D. cough syrups

77. What is the primary focus of Stage IV in drug development?
A. Testing drug efficacy and safety on animals.
B. Establishing the initial dosage range in healthy volunteers.
C. Confirming drug efficacy in a large population.
D. Monitoring long-term drug effects after the drug is on the market.

78. It is the body's ability to change a drug chemically from the form in which it was administered into a form that can be eliminated from the body.
A. Half-life
B. Metabolism
C. Pharmacokinetics
D. Residue

79. The following information was provided for a prescription written by a veterinarian: Canine patient, Amoxicillin 100 mg tablets, Sig: 1 tab q8h po prn 2 refills. Date: 1/5/96. How many times a day is this medication to be given?
A. Once
B. Twice
C. Three times
D. Four times

80. A weakly acidic drug with a pKa of 3 is administered to a ruminant, where the environment of the rumen is slightly acidic (pH 5.5). Predict the predominant form of the drug and its potential absorption efficiency.
A. The drug will be predominantly nonionized, and absorption will be high.
B. The drug will be predominantly ionized, and absorption will be low.
C. The drug will remain equally ionized and nonionized, with moderate absorption.
D. The drug will fully ionize, leading to rapid absorption.

81. The following statements are true about drug absorption, EXCEPT
A. Lipophilic drugs tend to pass through phospholipid cell membranes readily.
B. Hydrophilic drugs have difficulty passing through phospholipid cell membranes.
C. Intramuscular drugs should ideally be in a hydrophilic form to slow the rate of absorption.
D. Hydrophilic drugs are usually ionized; lipophilic drugs are usually nonionized

82. All of the following statements are true about the distribution of a drug, EXCEPT
A. Distribution will be rapid to well-perfused tissues like the brain, heart, liver, and kidneys
B. As the protein- binding increases, there is less free drug available to tissue.
C. As the protein-binding decreases, more free drugs are available to tissue.
D. As the volume of distribution increases, the concentration of drug in all of the animal's body compartments also increases
E. B and C

83. It represents the dosage interval, dosage, administration route, and duration of treatment altogether.
A. dose
B. dosage
C. dosage regimen
D. dosage interval

84. It represents the drug's degree to which a drug produces its desired response in a patient.
A. pharmacodynamics
B. pharmacokinetics
C. efficacy
D. affinity

85. When a drug is said to have a narrow therapeutic range, it means that
A. Its effective and toxic doses are close to each other.
B. It may be used for treatment of a few disorders only.
C. It must be dosed frequently.
D. It must be given in greater concentrations to be effective.

86. Which of the following statement/s is/are FALSE?
A. Young animals have decreased metabolic pathways
B. Increase in plasma protein-binding allows excretion of drug
C. The liver is the primary organ of biotransformation.
D. The goal of biotransformation is to make drugs more water soluble so that they can be more easily excreted from the body.
E. Both A and B

87. Why might a depot preparation be contraindicated in an animal requiring emergency treatment?
A. Depot preparations are absorbed too slowly
B. They provide inconsistent drug levels
C. They require too much volume for injection
D. They are more likely to cause side effects

88. Cimetidine is an antagonist that blocks the H2 receptor in stomach cells. If cimetidine is classified as a competitive antagonist, how would increasing the dose of an H2 agonist affect the response?
A. The H2 agonist would completely bypass the antagonistic effect, restoring full receptor activity.
B. The antagonistic effect would be permanent, and the agonist would have no impact.
C. The H2 agonist would overcome the antagonist's effect, restoring stomach acid secretion.
D. The agonist would bind to a different receptor, leading to alternative effects.

89. The diagnostic method of choosing a drug is based on all of the following EXCEPT _____.
A. practical experience
B. assessment of the patient
C. obtaining a history
D. performing laboratory tests

90. An adverse drug reaction is always life threatening.
A. True
B. False

91. A weakly basic drug with a pKa of 8.5 is administered intravenously and rapidly moves into the stomach (pH 2). How will the drug behave in the stomach, and what impact will this have on absorption if it is reabsorbed through the gastrointestinal tract?
A. The drug will ionize completely, reducing its reabsorption through the gastrointestinal tract.
B. The drug will become nonionized and be rapidly absorbed in the stomach.
C. The drug will remain nonionized, improving its solubility in the stomach's acidic environment.
D. The drug will alternate between ionized and nonionized forms, leading to unpredictable absorption.

92. What effect does renal failure or compromised liver function have on the pharmacokinetics of many drugs?
A. Decreased absorption of drugs given orally
B. Increased elimination rate of drugs from the body
C. Decreased volume of distribution of drugs
D. Increased half-life of drugs

93. This type of syringe is constructed in such a way that the needle screws onto the tip of the syringe.
A. Slip tip
B. Eccentric tip
C. Catheter tip
D. Luer-Lok tip

94. All the following are sites for IV administration in small animals, EXCEPT _____.
A. Jugular vein
B. Carotid artery
C. Lateral saphenous vein
D. Cephalic vein

95. When an intramuscular injection is given in the pelvic limb of a dog or cat, the area near the _____ nerve should be AVOIDED.
A. Radial
B. Sciatic
C. Median
D. Both B and C
E. None of the above

96. Which route of administration is preferred for delivering a large volume of fluids in an emergency?
A. Intramuscular
B. Subcutaneous
C. Intravenous
D. Intradermal

97. All of the following statements are TRUE about the pH of the drug and the pH of the environment where the drug is administered, EXCEPT _____.
A. Acid drugs in an alkaline environment tend to be charged.
B. Alkaline drugs in an acid environment tend to be charged.
C. Acid drugs become more hydrophilic at a pH more acidic than its pKa.
D. Alkaline drugs become more lipophilic at a pH more alkaline than its pKa.

98. Factors that affect drug distribution include the following, EXCEPT
A. Ionization of the drug
B. Membrane permeability
C. Tissue perfusion
D. Protein binding

99. Drugs that can be purchased without a prescription.
A. OTC drugs
B. Extra-label drugs
C. Prescription drugs
D. Controlled substances

100. An abnormal response to a drug that is peculiar to an individual animal.
A. Allergy
B. Irritation
C. Defense mechanism
D. Idiosyncratic reaction

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TABLE OF SPECIFICATIONS

VT 08 (BASIC PHARMACOLOGY AND THERAPEUTICS)

MIDTERM EXAMINATION
1st Semester, 2024 – 2025

Contents from the Syllabus	Number of Hours	Percentage of Items	Number of Test Items	Number of LowerLevel Items (Remembering)	Number of Lower Level Items (Understanding)	Number of Higher Level Items (Applying, Analyzing and Evaluating)
Class Orientation						
I. General Pharmacology A. Introduction B. Drug Sources C. Inactive Ingredients D. Pharmacotherapeutics Pharmacodynamics	2	14.3%	14	6	6	6
E. Drug Interactions F. Drug Names Drug Labels	2	14.3%	14	4	6	4
G. Development and Approval of New Drug H. Federal Laws Related to Drug Development I. Dispensing Versus Prescribing Drugs J. Marketing of Drugs	2	14.3%	14	4	6	4