

ANSWER KEY

**TSRI Annual Comparative Medicine Review
ACLAM Mock Practical Examination
10 June 2005**

All of the following multiple choice and short answer questions have only *one* correct answer. *Do not* use acronyms as part of your answer unless specifically directed to do so.

- **Etiology, etiologic agent, cause or causative agent:** Indicate only the agent (Mycobacterium tuberculosis or trauma).
- **Etiologic diagnosis:** Indicate the causative agent *and* the site of the lesion (esophageal candidiasis).
- **Morphological diagnosis:** Indicate the organ, the process and the distribution, if indicated (diffuse ulcerative colitis or uterine adenocarcinoma).
- **Disease:** Indicate the common name for the condition (measles or slobbers).

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Question 1: What is the name of the piece of equipment shown in this slide?

- a) Radial arm maze
- b) Rodent algesiometry tank
- c) Morris water maze
- d) Acoustic startle tank
- e) Operant Conditioning maze

Answer: C

Reference: CT 42(2): 49-50 March 2003

Question 2: What does this piece of equipment measure?

- a) Learning and memory
- b) Learning only
- c) Memory only
- d) Motor coordination
- e) Anxiety

Answer: A

Reference: CT 42(2): 49-50 March 2003

Question 3: What is the *Genus* and *species* name of the non-traditional laboratory rodent shown in this slide?

- a) Sigmodon hispidus
- b) Oryzomys palustris
- c) Cynomys ludovicianus
- d) Octodon degus
- e) Dipodomys spectabilis

Answer: D

Reference: CT 42(2): 43-45 March 2003

Question 4: To what Family does this animal belong?

- a) Rodentia
- b) Octodontidae
- c) Lagomorpha
- d) Muridae
- e) Sciuridae

Answer: B

Reference: LAM pg. 250

Question 5: This slide depicts a commonly used tool that was recently reported for canine health assessment. What is the name of this tool?

- a) Tumor condition scoring
- b) Body condition scoring
- c) Body weight management scoring
- d) Total surface area scoring
- e) Obesity scoring system

Answer: B

Reference: CT 43(3): 34-37

Question 6: According to a recent article, what percentage of blood volume taken once a week for four consecutive weeks was found to be acceptable in this species?

- a) 2%
- b) 2.5%
- c) 5%
- d) 10%
- e) 15%

Answer: E

Reference: CT 43(3): 38-42

Question 7: What is the disease condition being depicted in this slide?

- a) Ocular melanoma
- b) Ocular hemangiosarcoma
- c) Ocular abcess
- d) Ocular epithilioma
- e) Ocularleiomyosarcoma

Answer: A

Reference: CT 43(1): 44-49 Jan 2004

Question 8: What is the name of the piece of equipment shown in this slide?

- a) Tail suspension aparatus
- b) Rodent algESIometry box
- c) Morris water maze
- d) Acoustic startle box
- e) Operant Conditioning box

Answer: D

Reference: CT 43(1): 54-55 Jan 2004

Question 9: What does this piece of equipment measure?

- a) Learning and memory
- b) Sensorimotor learning
- c) Memory only
- d) Motor coordination
- e) Anxiety

Answer: B

Reference: CT 43(1): 54-55 Jan 2004

Question 10: What is the Genus and species of this NHP?

- a) Macaca fascicularis
- b) Macaca mulata
- c) Erythrocebus patas
- d) Chlorocebus patas
- e) Cercocebus patas

Answer: C

Reference: LAM page 679

Question 11: To what taxonomical *sub order* does this animal belong?

- a) Catarrhini
- b) Anthroipoidea
- c) Cercopithecoidea
- d) Cercopithecidae
- e) Cercopithecinae

Answer: B

Reference: LAM page 679

Question 12: According to the *AVMA Panel on Euthanasia (2000)*, which of the following is listed as a *conditionally acceptable* method for euthanasia of this species?

- a) Barbiturates
- b) CO₂
- c) Penetrating captive bolt
- d) Thoracic compression
- e) Gunshot

Answer: E

Reference: AVMA Panel on Euthanasia, 2000

Question 13: According to the *Guide for the Care and Use of Laboratory Animals*, what must the interior height of the primary enclosure for this species be?

- a) 4 inches
- b) 5 inches
- c) 6 inches
- d) 7 inches
- e) 8 inches

Answer: D

Reference: The Guide for the Care and Use of Laboratory Animals, 1996

Question 14: According to the Animal Welfare Act, what must the interior height of the primary enclosure for this species be?

- a) 4 inches
- b) 5 inches
- c) 6 inches
- d) 7 inches
- e) No requirement

Answer: D

Reference: The AWAR

Question 15: A recent journal article suggests utilizing this piece of equipment in rodent procedures. What is this piece of equipment called?

- a) Circulating water blanket
- b) Infra- red heat emitter
- c) Forced-air warming system
- d) Inhalant anesthetic scavenging unit
- e) Ice cooling unit

Answer: C

Reference: Laboratory Animals 38(1): 55-63 Jan 2004

Question 16: According to the *Occupational Health and Safety in the Care and Use of Research Animals*, exceeding what bBA level requires employees to participate in a hearing-conservation program?

- a) 80 dBA
- b) 85 dBA
- c) 90 dBA
- d) 95 dBA
- e) no requirement

Answer: B

Reference: The Occupational Health and Safety in the Care and Use of Research Animals, 1997

Question 17: What is the average daily water intake for the animal shown here?

- a) 5 gm/day
- b) 10 gm/day
- c) 12 mls/day
- d) 10 mls/day
- e) 6-7 mls/day

Answer: E

Reference: LAM, page 43

Question 18: According to a recent journal article, which of the following agents should be considered in a spontaneous outbreak of septicemia in immunodeficient mice?

- a) *Aerococcus viridans*
- b) *Pseudomonas gladioli*
- c) *Aerococcus pneumonia*
- d) *Pneumocystis carinii*
- e) *Escherichia coli*

Answer: A

Reference: Laboratory Animals 38(3): 321-325 July 2004

Question 19: What is the name of the piece of equipment shown in this slide?

- a) Tail Suspension apparatus
- b) Rodent algesiometry tank
- c) Morris water maze
- d) Acoustic startle tank
- e) Operant Conditioning maze

Answer: A

Reference: CT 43(6): 52-54 Nov 2004

Question 20: What is this piece of equipment used to study?

- a) Tail suspension
- b) Operant conditioning
- c) Forced swimming
- d) Acoustic startle
- e) Analgesiometry

Answer: C

Reference: CT 43(6): 52-54 Nov 2004

Question 21: What is the Genus and species of this NHP?

- a) *Macaca fascicularis*
- b) *Macaca mulata*
- c) *Erythrocebus patas*
- d) *Chlorocebus patas*
- e) *Cercocebus patas*

Answer: B

Reference: CT 43(6): 32-34 Nov 2004

Question 22: Which of the following statements is *true* regarding the human/animal condition that is being depicted in the dog in this slide?

- a) Males are affected more than females
- b) Females are affected more than males
- c) There is no variation with ethnicity
- d) The inheritance pattern is autosomal dominant
- e) German Shepard dogs are at a high risk

Answer: B

Reference: CT 43(6): 17-21 Nov 2004

Question 23: This slide further depicts the dog shown in question 22. What diagnostic modality is being represented here?

- a) Radiography
- b) Xeroradiography
- c) Computed tomography
- d) Positive Emission Tomography
- e) Magnetic resonance imaging

Answer: E

Reference: CT 43(6): 17-21 Nov 2004

Question 24: What is the name of this organ found in a ball python?

- a) Liver
- b) Lung
- c) Kidney
- d) Spleen
- e) Heart

Answer: E

Reference: CT 43(6): 35-38 Nov 2004

Question 25: These two slides were taken from a wild-caught northern leopard frog. What is the most likely etiologic agent?

- a) Haematoloechus sp.
- b) Hemobartenella sp.
- c) Hymanolepus sp.
- d) Helicobacter sp.
- e) Histoplasmosis sp.

Answer: A

Reference: CT 43(6): 14-16 Nov 2004

Question 26: What is the genus and species name of the wild-caught northern leopard frog?

- a) Rana rana
- b) Xenopus laevis
- c) Bufo Bufo
- d) Bufo Marinus
- e) Rana pipiens

Answer: E

Reference: CT 43(6): 14-16 Nov 2004

Question 27: What anesthetic agent is responsible for the condition of this rat's liver?

- a) Telazol
- b) Isoflurane
- c) Tribromoethanol
- d) Xylazine
- e) Atipamazole

Answer: C

Reference: CT 44(1): 7-10 Jan 2005

Question 28: A recent journal article presented this entire piece of equipment for use in rodent procedures. What is the name of this entire piece of equipment?

- a) Activity monitor
- b) Infra- red heat emitter
- c) Forced-air warming system
- d) Inhalant anesthetic scavenging unit
- e) Ventilator

Answer: E

Reference: CT 44(1): 41-45 Jan 2005

Question 29: In what year did this organization form?

- a) 1965
- b) 1966
- c) 1967
- d) 1957
- e) 1950

Answer: A

Reference: LAM, page 14

Question 30: In what year did this organization form?

- a) 1965
- b) 1966
- c) 1967
- d) 1957
- e) 1950

Answer: D

Reference: LAM, page 14

Question 31: What is the name of the piece of equipment shown in this slide?

Answer: Vertical pipette puller

Reference: Equipment slide set

Question 32: Describe the coat color being demonstrated in the mouse in this slide?

Answer: Chimeric
Reference: NIEHS Slide Set

Question 33: What is the full name of the acronym shown in this slide?

Answer: Laboratory Animal Technician
Reference: www.aalas.org

Question 34: What is the name of the parent organization that provides this certification?

Answer: American Association for Laboratory Animal Science
Reference: www.aalas.org

Question 35: Name the device that is being demonstrated by the arrow in this slide?

Answer: Laryngeal Mask Airway
Reference: CT 43(4): 22-25 July 2004

Question 36: In what species has the use of this device been recently reported?

Answer: Rabbit
Reference: CT 43(4): 22-25 July 2004

Question 37: Describe the piece of equipment shown in the center of this slide?

Answer: Inverted microscope
Reference: Equipment slide set

Question 38: What is this piece of equipment commonly been used for?

Answer: Microinjection of embryos and blastocysts
Reference: Equipment slide set

Question 39: What test is being performed with this piece of equipment?

Answer: Tail flick
Reference: CT 43(3): 54-55 May 2004

Question 40: What this picture is demonstrating?

Answer: Von Frey hair measurement of mechanical stimulation
Reference: CT 43(3): 54-55 May 2004

Question 41: The following slide was taken from the liver of an A/J mouse. The inset picture depicts the same tissue stained with Warthin-Starry stain. What is the morphological diagnosis?

Answer: **Chronic active hepatitis**

Reference: **CM 54(2): 128-158 April 2004**

Question 42: Upon further investigation of the same A/J mouse from question 41, this was found. What is the etiologic agent?

Answer: *Helicobacter hepaticus*

Reference: **CM 54(2): 128-158 April 2004**

Question 43: This electronic tool was presented in a recent journal article. What is this called?

Answer: **Mouse maps (showing the mean severity of barbering)**

Reference: **CM 54(2): 216-224 April 2004**

Question 44: What is the human disease that this electronic tool was created to study?

Answer: **Trichotillomania**

Reference: **CM 54(2): 216-224 April 2004**

Question 45: This slide was taken of a Lewis rat. Name the disease?

Answer: **urolithiasis of the urinary bladder**

Reference: **CM 54(3): 318-323 June 2004**

Question 46: What rodent virus was recently reported to be associated with this disease condition?

Answer: **Lymphocytic choriomeningitis virus**

Reference: **CM 54(3): 318-323 June 2004**

Question 47a & b: These slides were taken from an African green monkey following an acute episode of weakness, depression, and anorexia. What is the morphologic diagnosis?

Answer: **Cecal volvulus**

Reference: **CM 54(3): 324-326 June 2004**

Question 48: This slide is showing hepatomegaly of the common marmoset. What is the most common cause of this condition in older marmosets?

Answer: Systemic amyloidosis

Reference: CM 53(4): 369-382 Aug 2003

Question 49: This slide depicts a common condition found in marmosets. What is the morphologic diagnosis?

Answer: Femoral artery hematoma

Reference: CM 53(4): 369-382 Aug 2003

Question 50: This slide depicts a positive tuberculosis reaction. What is the grade?

Answer: Grade 4

Reference: CM 53(4): 369-382 Aug 2003

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YOU DID IT!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!