1. Which of the following is(are) a feature(s) of Simian retrovirus type D infection in macaques?
   A. The most significant viral agent of acquired immunodeficiency
   B. Seronegativity in viral-infected macaques is common
   C. Virus is tropic for B and T lymphocytes, macrophages, and epithelial cells
   D. Uniquely associated diseases include noma and retroperitoneal fibromatosis
   E. All of the above

2. __________ is the primary cause of bacterial meningitis in nonhuman primates.
   A. *Streptococcus pneumoniae*
   B. *Klebsiella pneumoniae*
   C. *Pasteurella multocida*
   D. *Neisseria meningitides*
   E. *Streptococcus pyogenes*

3. Common sites of cysts in hamsters include all of the following EXCEPT:
   A. Liver
   B. Kidney
   C. Pancreas
   D. Epididymis
   E. Seminal vesicles
4. Common lesions of Hamster Parvovirus include all of the following EXCEPT:
   A. Domed calvaria
   B. Testicular atrophy
   C. Cerebellar hypoplasia
   D. Enamel hypoplasia of the incisor teeth
   E. Incisor enamel hypoplasia

5. Gross and microscopic lesions in the adult form of rat virus disease include all of the following EXCEPT:
   A. Scrotal hemorrhage and peritesticular fibrinous exudation
   B. Hemorrhage and malacia in the cerebrum and cerebellum
   C. Cerebellar hypoplasia
   D. Intranuclear inclusions in hepatocytes, endothelial cells and biliary epithelium
   E. Abortion and fetal resorption

6. Gross and microscopic lesions of sialodacryoadenitis in the rat include all of the following EXCEPT:
   A. Necrosis of ductal and acinar epithelial cells of the parotid and submandibular salivary and lacrimal glands
   B. Nonkeratinizing squamous metaplasia of ductal and acinar structures of salivary and lacrimal glands
   C. Corneal ulceration
   D. Necrotizing rhinitis of both the respiratory and olfactory epithelium
   E. Transient tracheitis with bronchitis, bronchiolitis, and loss of respiratory epithelial cells
7. In the guinea pig, all of the following are true concerning rhabdomyomatosis, EXCEPT:
   A. The vacuoles contain glycogen
   B. Most frequently seen in left ventricle
   C. May be observed in guinea pigs of various ages
   D. Can be associated with compromised cardiac function
   E. Vacuolated myofibers may have “spider cell” appearance

8. All of the following are consistent with adenoviral pneumonitis in guinea pigs EXCEPT:
   A. Consolidation of the cranial lung lobes
   B. Scattered necrotic foci
   C. Lymphoplasmacytic bronchiolitis
   D. Epithelial intranuclear inclusion bodies
   E. Low morbidity rate but mortality rate up to 100%

9. All of the following are lesions associated with Tyzzer's Disease in gerbils EXCEPT:
   A. Necrotizing hepatitis
   B. Suppurative encephalitis
   C. Necrosis of enterocytes in the ileum and cecum
   D. Necrotizing myocarditis
   E. Suppurative pneumonia
10. The laboratory animal that is a useful sentinel animal for Tyzzer's Disease is:
   A. Rat
   B. Gerbil
   C. Hamster
   D. Mouse
   E. Rabbit

11. Concerning SCID in mice, all of the following statements are true, EXCEPT:
   A. Inherited as an autosomal recessive trait
   B. Affected mice are susceptible to fungal infections
   C. DNA-PK enzyme activity is normal
   D. Affected mice are highly susceptible to ionizing radiation
   E. The life span of affected mice is decreased

12. All are true about thymoma in the hamster EXCEPT:
   A. a viral pathogenesis is likely
   B. it largely resembles thymoma in humans
   C. most have been classified as B1 thymomas
   D. it is located in the anterior mediastinum
   E. areas of medullary and cortical differentiation are present in the tumors
13. All of the following are true regarding eosinophilic crystalline pneumonia in mice EXCEPT:

A. More common in males
B. Composed of Ym1 protein
C. Common in C57BL/6 mice
D. Common in 129S4/SvJae mice
E. Increased incidence in older mice

14. All of the following are true about Hamster Polyomavirus EXCEPT:

A. Caused hair follicle epitheliomas
B. Lymphomas do not contain infectious virus
C. Causes epizootics of lymphoma in young hamsters
D. Lymphomas primarily arise in the spleen, and axillary and cervical lymph nodes
E. Adult hamsters are susceptible to the oncogenic effects of Hamster polyomavirus

15. All of the following are true regarding atrial thrombosis in hamsters EXCEPT:

A. Involves right auricle and atrium
B. Often associated with amyloidosis
C. Results in a consumptive coagulopathy
D. Females are affected earlier than males
E. Causes bilateral ventricular hypertrophy
16. In the rat, intestinal villous attenuation, necrosis of enterocytes with epithelial syncytia are pathognomonic for which virus:
   A. Sendai virus
   B. Rotavirus
   C. Parker’s rat coronavirus
   D. Kilham’s rat virus
   E. Hantavirus

17. In the rat, *Mycoplasma pulmonis* has an affinity for epithelial cells of which of the following:
   1. Respiratory tract
   2. Middle ear
   3. Endometrium
   A. 1 and 2
   B. 1 and 3
   C. 2 and 3
   D. All of the above
   E. None of the above

18. Regarding myofascitis in the domestic ferret, all of the following are true EXCEPT:
   A. It is a disease of young ferrets
   B. There is atrophy of skeletal muscle, esophageal dilatation, and splenomegaly
   C. Myeloid hyperplasia of the spleen and bone marrow is a prominent feature
   D. There is eosinophilic inflammation of the skeletal muscle and fascia
   E. Striated muscle of the esophagus, heart, limbs, and head can be involved
19. The most likely cause of chronic, suppurative cervical lymphadenitis in guinea pigs is:
   A. *Streptococcus zooepidemicus*
   B. *Streptobacillus moniliformis*
   C. *Klebsiella pneumoniae*
   D. *Streptococcus pneumoniae*
   E. *Pasteurella multocida*

20. All of the following are lesions associated with hyperadrenocorticism in breeding gerbils EXCEPT:
   A. Fatty liver
   B. Thymic involution
   C. Atrophy of pancreatic islets
   D. Adrenal lipid depletion
   E. Adrenal hemorrhage

21. In the ferret, proliferative colitis is a feature of infection with:
   A. Coronavirus
   B. *Helicobacter mustelae*
   C. *Lawsonia intracellularare*
   D. *Clostridium piliformis*
   E. Canine morbillivirus
22. The most likely route of transmission of *Pasteurella multocida* in rabbits is:
   
   A. Direct nasal contact with a shedder animal
   B. Venereal spread
   C. Aerosol spread
   D. Contact with fomites
   E. Orphan kits nursing an infected doe

23. An immunohistochemical stain identified as a marker of anaplasia in ferret adrenocortical tumors is:
   
   A. GFAP
   B. MAP-2
   C. GATA-4
   D. desmin
   E. NFP

24. Regarding chronic progressive glomerulonephropathy in rats, all of the following are considered predisposing factors EXCEPT:
   
   A. Age, animals over 12 months of age
   B. High protein diets
   C. Prolactin levels
   D. Sex, disease is more common and more severe in males
   E. Mesangial deposition of IgG
25. In rats, polyarteritis nodosa may affect medium-sized arteries in all of the following EXCEPT:

A. Lung
B. Pancreas
C. Testis
D. Kidney
E. Mesentary