Name_____

DODVPR 2016-2017

Mock Exam- Interpretive

1. **Write your name above and on each page of the exam packet.**
2. **For each question, select the ONE best answer and mark it on the answer sheet.**
3. **Use capital letters on your answer sheet.**
4. **Credit will be given only for correct answers recorded on the answer sheet.**
5. **All questions for which more than one answer is marked will be recorded as incorrect.**
6. **No credit will be awarded or deducted for incorrect answers.**

2017 Mock Exam Interpretive- Blank

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1. Tissue from a pig. Which of the following is true of the toxin that causes this disease?
    a. Affected vessels show no pathologic signs of damage.
    b. Causes apoptosis of endothelial and smooth muscle cells in blood vessels.
    c. Lesion distribution is directly proportional to the presence of receptors on endothelium in various portions of the body.
    d. Induces production of IL-6, which attracts neutrophils to disseminate toxin throughout the body.

2. Tissue from a dog. Which is the most likely morphologic diagnosis?
    a. Cutaneous histiocytosis
    b. Mast cell tumor
    c. T-cell epitheliotrophic lymphoma
    d. Erythema multiforme

3. Tissue from a trout. Name the cause.
    a. Yersinia ruckeri
    b. Aeromonas salmonicida
    c. Koi herpesvirus-1
    d. Aeromonas hydrophila

4. Tissue from a rat. Which of the following is true about this neoplasm?
    a. It is usually associated with pituitary tumors
    b. Metastasis occurs readily, often to the lungs.
    c. Sprague-Dawley rats commonly develop these neoplasms.
    d. Food restriction increases their frequency in the rat.

5. Tissue from a rabbit. Name the cause.
    a. Primary goniodysgenesis
    b. Duchenne muscular dystophy
    c. Retroorbital lymphoma
    d. Thymoma

6. Tissue from a rat. Which of the following glands are usually NOT affected in this disease?
    a. Harderian glands
    b. Sublingual
    c. Parotid
    d. Submandibular

7. Tissue from a cat. Which of the following does NOT describe this cat?
    a. Old

b. Male
c. Overweight
d. Likely a Siamese

8. Tissue from an ox. Name the agent.
   a. Dicrocoelium dendriticum
   b. Heterobilarzia americanum
   c. Fasciola hepatica
   d. Fascioloides magna

9. Tissue from a pig. Which of the following is not a plausible cause of this lesion?
   a. Vitamin E – selenum imbalance
   b. Porcine asfarvirus
   c. Enterotoxigenic *E. coli*
   d. Fumonisin B1

10. Tissue from a pig. Name the agent.
    a. Brachyspira hyodysenteriae
    b. Brachyspira hampsonii
    c. Either *Brachyspira hyodysenteriae* or *Brachyspira hampsonii*
    d. Neither *Brachyspira hyodysenteriae* nor *Brachyspira hampsonii*

11. Tissue from an ox. While of the following is not an appropriate differential diagnosis?
    a. *Babesia bovis*
    b. *Amaranthus retroflexus* toxicity
    c. Leptospirosis
    d. Copper toxicosis

12. Tissue from a calf. Which of the following is most likely not true in this case?
    a. This lesion is an acute infection.
    b. This lesion represents chronic infection.
    c. Multiple joints are affected in this individual.
    d. An infected umbilicus is the most likely portal of entry.

13. Tissue from a calf. Which of the following has not been identified in this disease?
    a. Clostridium septicum
    b. Clostridium sordelli
    c. *Clostridium perfringens* type A
    d. *Clostridium perfringens* type C

14. Tissue from a naked mole rat. Give the most appropriate morphologic diagnosis.

a. Cutaneous lymphoma
b. Calcinosis cutis
c. Dermal histiocytosis
d. Calcinosis circumscripta

15. Tissue from an ox. The most likely cause of these lesions is:
    a. Clostridium septicum
    b. Clostridium perfringens
    c. Clostridium novyi
    d. Clostridium haemolyticum

16. Tissue from a cheetah. What is the most likely morphologic diagnosis?
    a. Renal amyloidosis
    b. Chronic interstitial nephritis
    c. NSAID toxicity
    d. Bilateral renal cortical atrophy

17. Tissue from a horse. The most appropriate etiologic diagnosis is:
    a. Enteric strongyliasis
    b. Colonic strongyliasis
    c. Enteric cyathostomiasis
    d. Colonic cyathostomiasis

18. Tissue from a horse. Which of the following is not true concerning this condition?
    a. Glaucoma is an uncommon finding in affected horses.
    b. Cross reaction between *Listeria* antigens and corneal antigens is thought to play a key role in the development of this condition.
    c. Cataracts are commonly seen.
    d. This condition cannot be diagnosed after a single incident of intraocular inflammation.

19. Tissue from a Boxer puppy. Give the most appropriate morphologic diagnosis and cause.
    a. Pyogranulomatous myocarditis due to *Bartonella henselae*
    b. Pyogranulomatous myocarditis due to *Borrelia burgdorferi*
    c. Myocardial fibrosis and loss due to Vitamin E deficiency
    d. Suppurative myocarditis due to *Pseudomonas fluorescens*

20. Tissue from a seal. Which of the following is the most likely cause?
    a. Aphthovirus
    b. Parapoxvirus
    c. Mycobacterium marinum
    d. Lachazia loboi

21. Tissue from a sheep. Which of the following clinicopathologic findings is not seen in this disease?
    a. Achlorhydria
    b. Hypoproteinamia
    c. Hypergastrinemia
    d. Hypopepsinogenemia

22. Tissue from a marmoset. While of the following is the most likely agent?
    a. Streptococcus pneumoniae
    b. Klebsiella pneumonia
    c. Callitrichid arenavirus
    d. Yersinia enterocolitica

23. Tissue from a sheep. Name the most likely cause.
    a. Staphylococcus aureus
    b. Streptococcus uberis
    c. E. coli
    d. Mannheimia hemolytica

24. Tissue from a dog. Name a likely breed.
    a. Yorkshire Terrier
    b. Cavalier King Charles Spaniel
    c. Maltese
    d. Pug

25. Tissue from an ox. Which of the following is not TRUE concerning this disease in ruminants?
    a. Liver biopsies were found to be as effective as ileal biopsies in affected sheep.
    b. The reaction to this agent in the ox is generally considered to be a lepromatous reaction, whereas either lepromatous or tuberculoid responses may be seen in sheep and goats.
    c. Overt diarrhea is rarely seen in sheep and goats.
    d. Resistance to Johne's disease in small ruminants, unlike cattle, is primarily mediated through cell-mediated immunity.

26. Tissue from a pet rabbit. Which form of lymphoma was the most common?
    a. T cell-rich B cell
    b. Diffuse B-cell, centroblastic/centrocytic subtype
    c. T-cell epitheliotrophic
    d. Plasmacytic

27. Tissue from a juvenile American alligator. Name the most likely agent.
    a. *Salmonella enterica v. typhimurium*
    b. *Brachyspira pilosicoli*
    c. *Samonella enterica v. pomona*
    d. *Salmonella enterica v. hardjo*

28. Tissue from a duck. Name the disease.
    a. Visceral velogenic Newcastle disease
    b. Duck plague – anatid herpesvirus-1
    c. Fowl cholera
    d. Highly pathogenic avian influenza

29. Tissue from a gorilla. Which of the following is not described in this condition in aging apes?
    a. Arteriosclerosis
    b. Atherosclerosis
    c. Cardiomyocyte polypoidy
    d. Left ventricular hypertrophy

30. Tissue from a western fox snake. Which of the following stains is most appropriate for the diagnosis of this pigmented neoplasm?
    a. Melan A and HMB-45
    b. S-100 and Melan A
    c. S-100 and PNL-2
    d. PNL-2 and Melan A

31. Tissue from a goat. Which of the following is the most likely etiologic agent?
    a. Attaching and effacing *E.coli*
    b. Yersinia pseudotuberculosis
    c. Mycobacterium avium paratuberculosis
    d. Eimeria ninakohlayakimovae

32. Tissue from a dog. Give the most likely morphologic diagnosis?
    a. Renal cell carcinoma
    b. Adrenocortical carcinoma
    c. Pheochromocytoma
    d. Hepatocellular carcinoma

33. Tissue from a cat. Which of the following is most likely diagnosis?
    a. Chronic renal failure
    b. Hyperadrenocorticism
    c. Arsenic toxicity
    d. *Ollanus tricuspis* infection

34. Tissue from a cat. Tissue from a dog. What is the most likely cause?
    a. *Amanita* toxicosis
    b. Xylitol toxicosis
    c. Aflatoxin toxicosis
    d. Sago palm toxicosis

35. Tissue from a sheep. Which of the following is not true about this condition?
    a. Bronchopneumonia and mastitis may be seen in affected animals.
    b. Lamellations are rarely seen in goats.
    c. A toxic cell wall lipid, corynomycolic acids, results in lysis of erythrocyte membranes.
    d. The organism is a gram-positive, facultative intracellular coccobacillus that can survive for long periods in the soil.

36. Tissue from a horse. Name the most likely etiology.
    a. Rhinosporidium seeberi
    b. Aspergillus fumigatus
    c. Candida albicans
    d. Pythium insidiosum

37. Tissue from a koala. Microscopic examination of this kidney will disclose what?
    a. Granulomatous pyelonephritis due to *Chlamydia pecorum*
    b. Gamonts of *Sarcocystis phascolarctos*
    c. Sulfa crystals in distal tubules
    d. Oxalate crystals in distal tubules and collecting ducts

38. Tissue from a dog. What is the likely cause of this lesion?
    a. Chronic renal failure
    b. Gram-negative sepsis
    c. NSAID toxicity
    d. Electrocution

39. Tissue from a turkey. Which of the following is not true concerning this agent?
    a. The agent is passed by the intermediate host, *Ascaridia galli*.
    b. The agent achieves its full pathogenic potential with co-infection by *E.coli.*
    c. The agent may be spread by retrograde peristalsis of contaminated feces from the vent into the bursa and ceca.
    d. The agent is easier to identify in tissue section in acute infections.

40. Tissue from a dog. Give two appropriate morphologic diagnoses.
    a. Hepatocelluar carcinoma and marked cystic mucinous gallbladder hyperplasia
    b. Macronodular hepatocellular regeneration and gallbladder adenoma
    c. Post-necrotic hepatic fibrosis and gallbladder mucocele
    d. Macronodular hepatocellular regeneration and marked cystic mucinous gallbladder hyperplasia

41. Tissue from a rat. Which of the following types of collagen are present in developing in these lesions as they develop?
    a. I and III
    b. I and IV
    c. 1 and II
    d. II and III

42. Tissue from an ox. Which is the following is not true concerning this condition?
    a. Areas of granulomatous inflammation contain few bacilli.
    b. The environmental and antimicrobial resistance of this agent is generally conferred by a hydrophobic cell wall.
    c. Organisms stain strongly gram-positive in tissue section.
    d. Gross and histologic lesions are absent in the majority of animals that are positive on skin tests.

43. Tissue from a macaque. Name the most likely cause.
    a. Mycobacterium tuberculosis
    b. Streptococcus pneumoniae
    c. Hypermucoviscous *Klebsiella pneumoniae*
    d. Burkholderia pseudomallei

44. Tissue from an African Grey Parrot. Name the condition.
    a. Arteriosclerosis
    b. Dilatative cardiomyopathy
    c. Vascular mineralization
    d. Atherosclerosis

45. Tissue from a cat. Which of the following is not true concerning this lesion?
    a. Metastasis is more common than in the dog.
    b. These tumors arise from melanocytes adjacent to the ciliary body.
    c. Often results in glaucoma.
    d. Predictors of metastasis include invasion of the sclera and posterior iris, as well as overall tumor size.

46. Tissue from an ox. Name the cause.
    a. Bovine papillomavirus-4
    b. Bovine papillomavirus-5
    c. Bovine papillomavirus-9
    d. Bovine papilomavirus-2

47. Tissue from a calf. Which of the following is the most likely cause?
    a. Bovine pestivirus
    b. Pithomyces chartarum
    c. Salmonella dublin
    d. Bracken fern ingestion

48. Tissue from a dog. Which of the following is the most likely cause?
    a. Chronic passive congestion
    b. Portal vein hypoplasia
    c. Familial amyloidosis
    d. Hyperadrenocorticism

49. Tissue from an ox. Which of the following is not a potential cause for this lesion?
    a. Bacterial sepsis
    b. Dehorning
    c. Nose ringing
    d. Otitis interna

50. Tissue from a calf. What is the most likely etiologic agent?
    a. Aspergillus flavus
    b. Moraxella bovis
    c. *E. coli* sepsis
    d. Bovine herpesvirus-1

51. Tissue from a cat. What is the most likely cause?
    a. Hypophosphatemia
    b. FeLV
    c. Hypervitaminosis D
    d. Hypervitaminosis A

e. Lead toxicity

52. Tissue from an aging rat. What is a commonly associated lesion?
    a. Polyarteritis nodosa
    b. Renal Papillary hyperplasia
    c. Degenerative osteoarthritis
    d. Auricular chondropathy
    e. Radiculoneuropathy

53. Concentrated pleural fluid from a mare. How could you confirm the diagnosis?
    a. Culture/sensitivity
    b. PNL-2 immunocytochemistry
    c. Biopsy the thyroid gland
    d. Prussian blue stain

54. Rectal scrape from a dog. A virulence factor for this organism is?
    a. BAD-1
    b. glucuronoxylomannin in capsule
    c. lipophosphoglycan
    d. Gal/GalNAC-specific lectin

55. Tissue from an ox. What is an associated clinical pathology finding?
    a. myoglobinuria
    b. waxy urinary casts
    c. decreased MCHC
    d. hemoglobinuria

56. Fine needle aspirate from a dog. What is the stain used in panel C?
    a. Fontana Masson
    b. Grimelius
    c. Alkaline phosphatase
    d. Chloracetate esterase

57. Canine liver aspirate. Name an associated clinical pathology finding:
    a. Eosinophilia
    b. Hemoglobinemia
    c. Hypercalcemia
    d. Pancytopenia

58. Concentrated coelomic fluid from a bird. What is the diagnosis?
    a. Egg yolk peritonitis
    b. Alphaviral serositis

c. Polyomavirus infection
d. Large granular lymphoma
e. Carboxymethylcellulose ("jelly belly")

59. Impression smear from a snake spleen, taken at necropsy. Which of the following is the *LEAST* likely cause?
    a. Low protein diet
    b. Dehydration
    c. Renal insufficiency
    d. Tissue ischemia/necrosis

60. Blood smear from an Alaskan malamute. What is an associated abnormality?
    a. Chondrodysplasia
    b. Vogt-Koyanagi-Harada-like syndrome
    c. Cone dysplasia
    d. Factor VII deficiency
    e. Necrotizing meningoencephalitis

61. Blood smear from a capybara. What is the arrow pointing to?
    a. Kurloff body
    b. Alpha granule
    c. A large morula
    d. Russell body

62. Skin scrape from a white catfish with numerous 1-2 mm white nodules from gill to caudal fin. Which of the following is a pathognomonic ultrastructural feature?
    a. Polar capsule
    b. Thalli with injection papillae
    c. Conoid with rhoptries
    d. Stichosome with bacillary bands
    e. Flagella and undulating membrane

63. Tissue from a horse, including fine needle aspirate and histology. The pathogenesis of this lesion involves:
    a. Antibodies against laminin
    b. Antibodies against type XVII collagen
    c. Antibodies against desmocollin-1
    d. Antibodies against desmoglein-3
    e. UV-induced mutations of the p53

64. Tissue from a cat. Which is the most likely stain in image 5?
    a. Desmin

b. GFAP
c. Sheathlin
d. CK10

65. Tissue from a pig. This condition is associated with all of the following *EXCEPT*?
    a. Hoof malformation
    b. Giant cell pneumonia
    c. Hepatic necrosis

66. Tissue from an ox. What is the most likely diagnosis?
    a. Melanosis
    b. Hemangioma
    c. Melanoma
    d. Neuromelanosis due to *Phalaris* spp. toxicity

67. Tissue from a pig. What is the most likely cause?
    a. Aphthovirus
    b. Selenium toxicosis
    c. Vitamin E deficiency
    d. Ergot toxicity

68. Tissue from a foal. Which of the following is a major virulence factor produced by the etiologic agent?
    a. Lkt
    b. Apx1
    c. PnxIIIa
    d. Aqx

69. Tissue from a "shaggy, lame" Pribilof arctic fox. What is a likely concurrent finding?
    a. Follicular dysplasia
    b. Otitis externa
    c. Leukocytoclastic vasculitis
    d. Cardiac myxomatous valvular degeneration

70. Tissue from a fish with impression smear of lesion. What stain will help with diagnosis?
    a. PAS
    b. Ziehl-Neelsen
    c. Sudan black B
    d. GMS