1. In FMD, which host is considered the indicator host because of its clear clinical manifestations?
   A) Pigs
   B) Sheep
   C) **Cattle**
   D) Goats
2. The rapid inactivation of the FMD virus at high temperatures is primarily due to:
   A) Its RNA instability
   B) **Protein denaturation**
   C) Lipid envelope disruption
   D) High mutation rate
3. Which environmental factor most effectively inactivates the FMD virus?
   A) UV radiation
   B) **Desiccation**
   C) Cold temperatures
   D) Low pH
4. FMD virus can remain viable in urine for approximately:
   A) 7 days
   B) 14 days
   C) 30 days
   D) **39 days**
5. Ring vaccination in FMD control is implemented to:
   A) Eliminate carrier animals
   B) Test vaccine potency
   C) **Create an immunological barrier around an outbreak area**
   D) Diagnose subclinical infections
6. In FMD, pigs are classified as an amplifier host because they:
   A) Show minimal clinical signs
   B) **Excrete significantly higher amounts of the virus**
   C) Develop immunity faster
   D) Are less susceptible to infection
7. Bacillus anthracis is best described as a:
   A) Gram-negative rod
   B) Acid-fast bacillus
   C) Non-spore-forming coccus
   D) **Gram-positive, aerobic, spore-forming bacillus**
8. The anthrax capsule is composed primarily of:
   A) Polysaccharide
   B) Proteins
   C) **Poly–D–glutamic acid**
   D) Lipopolysaccharide
9. Bacillus anthracis produces a tripartite toxin consisting of edema factor, lethal factor, and:
   A) **Protective antigen**
   B) Exotoxin A
   C) Tetanolysin
   D) Superantigen
10. In inhalational anthrax, infection occurs primarily by:
    A) Ingestion of contaminated water
    B) **Inhalation of aerosolized spores**

C) Direct skin inoculation
D) Vector transmission

11. A hallmark necropsy finding in anthrax is:
A) Vesicular skin eruptions
B) Chronic wasting
C) Neurological deficits
D) **Dark, unclotted blood oozing from natural orifices**
12. The persistence of anthrax spores in soil for decades necessitates:
A) Routine antibiotic therapy
B) **Strict carcass disposal and decontamination practices**
C) Regular herd vaccination only
D) Immediate quarantine of affected areas
13. Hemorrhagic septicemia in cattle is primarily caused by:
A) Mannheimia haemolytica
B) Escherichia coli
C) Clostridium perfringens
D) **Pasteurella multocida type 1**
14. In hemorrhagic septicemia, the bacteria initially proliferate in the:
A) Lungs
B) Liver
C) **Tonsillar region**
D) Kidneys
15. A common precipitating factor for hemorrhagic septicemia is:
A) Overfeeding
B) Genetic defects
C) **Stress due to transportation and heavy worm burden**
D) Excessive milking
16. Early treatment of hemorrhagic septicemia relies on the administration of penicillin because it:
A) Enhances immune response
B) **Eliminates the bacteria before extensive toxin release**
C) Neutralizes bacterial toxins directly
D) Prevents carrier formation
17. In small ruminants, pneumonic pasteurellosis is most commonly associated with:
A) Pasteurella multocida
B) Bibersteinia trehalosi
C) Streptococcus agalactiae
D) **Mannheimia haemolytica A2**
18. In pigs, respiratory pasteurellosis is typically linked to:
A) **Pasteurella multocida colonizing the upper respiratory tract**
B) Mannheimia haemolytica infection
C) Mycoplasma pneumonia
D) Staphylococcus aureus infection
19. The leukotoxin produced in pasteurellosis primarily damages:
A) Epithelial cells
B) Red blood cells
C) Platelets
D) **Ruminant leukocytes (neutrophils and macrophages)**
20. Listeriosis in ruminants most commonly presents as:
A) Severe mastitis

B) Diarrhea
C) **Encephalitis with unilateral neurological deficits**
D) Abortion

21. The cold enrichment method in listeriosis diagnosis takes advantage of Listeria monocytogenes' ability to grow at:
A) 0°C
B) 2°C
C) **4°C**
D) 10°C

22. In cases of listerial encephalitis, brain tissue is the specimen of choice because it:
A) Contains high antibody levels
B) **Is the primary site of infection in encephalitic cases**
C) Is less contaminated
D) Enhances culture growth

23. Mycobacterium bovis is the main cause of tuberculosis in:
A) Swine
B) Birds
C) Dogs
D) **Cattle**

24. For culturing Mycobacterium tuberculosis complex organisms, the most appropriate medium is:
A) Blood agar
B) MacConkey agar
C) **Lowenstein–Jensen medium**
D) Chocolate agar

25. In bovine tuberculosis, the "primary complex" is most commonly located in the:
A) Lymph nodes
B) **Lungs**
C) Liver
D) Spleen

26. The single intradermal tuberculin test is widely used in cattle because it:
A) Is highly specific
B) Requires no equipment
C) **Detects cell-mediated hypersensitivity to mycobacterial antigens**
D) Differentiates between Mycobacterium species

27. "Pearl's disease" in tuberculosis is characterized by:
A) Diffuse lung consolidation
B) **Grape-like clusters of nodular lesions on serosal surfaces**
C) Calcification of lymph nodes
D) Hepatic abscesses

28. A false-negative tuberculin test in cattle may result from:
A) Recent vaccination
B) **Advanced disease with anergic response**
C) High ambient temperatures
D) Overdosing tuberculin

29. Johne's disease is caused by:
A) Mycobacterium tuberculosis
B) Mycobacterium bovis
C) **Mycobacterium avium subspecies paratuberculosis**
D) Mycobacterium leprae

30. The characteristic lesion in Johne's disease is:
    A) Ulcerative colitis
    B) Granulomatous hepatitis
    C) **Thickened, corrugated intestinal mucosa resembling brain convolutions**
    D) Nodular splenomegaly
31. Transmission of Johne's disease most commonly occurs via:
    A) Aerosol inhalation
    B) **Ingestion of contaminated feed or water**
    C) Direct skin contact
    D) Vertical transmission
32. The rectal pinch technique in Johne's disease is used for:
    A) Therapeutic intervention
    B) **Obtaining diagnostic intestinal tissue samples**
    C) Administering vaccines
    D) Monitoring treatment response
33. The incubation period of Johne's disease is typically:
    A) Days
    B) Weeks
    C) Months
    D) **Years**
34. In Johne's disease, the Complement Fixation Test (CFT) is used to:
    A) Isolate the organism
    B) Quantify bacterial load
    C) **Detect antibodies in infected animals**
    D) Differentiate Mycobacterium species
35. Brucella abortus is most commonly associated with:
    A) Pigs
    B) **Cattle and buffaloes**
    C) Sheep
    D) Dogs
36. In small ruminants, the most zoonotic Brucella species is:
    A) B. abortus
    B) **B. melitensis**
    C) B. suis
    D) B. canis
37. The growth of Brucella in fetal tissues is enhanced by:
    A) Glucose
    B) Sucrose
    C) Fructose
    D) **Erythritol**
38. Brucellosis is most commonly transmitted to humans through:
    A) Inhalation of aerosols
    B) Direct contact with blood
    C) **Consumption of unpasteurized dairy products**
    D) Vector bites
39. The Rose Bengal Plate Test in brucellosis is primarily used for:
    A) Confirmatory diagnosis
    B) **Screening for antibodies in serum**
    C) Bacterial culture
    D) Drug sensitivity testing

40. Live Brucella vaccines are generally contraindicated in:
    A) Calves
    B) Heifers
    C) Pregnant cows
    D) **Bulls**
    (Because vaccination in bulls may lead to testicular localization of the organism.)
41. Rinderpest is classified under which virus family?
    A) Picornaviridae
    B) Orthomyxoviridae
    C) **Paramyxoviridae**
    D) Reoviridae
42. Peste des petits ruminants (PPR) predominantly affects:
    A) Cattle
    B) Buffaloes
    C) **Sheep and goats**
    D) Pigs
43. PPR in goats is associated with:
    A) Low mortality rates
    B) **High mortality rates and severe clinical signs**
    C) Mild respiratory signs only
    D) Asymptomatic infections
44. The PPR virus is a member of the:
    A) **Morbillivirus genus**
    B) Pestivirus genus
    C) Coronavirus family
    D) Reovirus group
45. “Zebra marking” in the intestinal tract is most characteristic of:
    A) FMD
    B) Johne’s disease
    C) **Rinderpest**
    D) PPR
46. Black Quarter (Blackleg) in cattle is primarily caused by:
    A) Clostridium septicum
    B) Clostridium novyi
    C) **Clostridium chauvoei**
    D) Clostridium perfringens
47. Pulpy kidney disease in lambs is due to infection by:
    A) Clostridium perfringens type A
    B) **Clostridium perfringens type D**
    C) Clostridium tetani
    D) Clostridium botulinum
48. Tetanus is characterized clinically by:
    A) Flaccid paralysis
    B) **Spastic paralysis with lockjaw and muscle rigidity**
    C) Hemorrhagic diarrhea
    D) Vesicular skin lesions
49. Tetanospasmin, the neurotoxin in tetanus, travels to the central nervous system via:
    A) Blood circulation
    B) Lymphatic drainage

C) **Retrograde axonal transport from the motor end plate**
D) Direct diffusion across tissues

50. Botulism in animals results from:
A) Direct bacterial invasion of nerves
B) **Ingestion of preformed botulinum toxin that blocks acetylcholine release**
C) Immune-mediated nerve damage
D) Excessive acetylcholine breakdown

51. The “saw horse” stance observed in affected animals is most typical of:
A) Botulism
B) **Tetanus**
C) Black Quarter
D) Anthrax

52. Mastitis in dairy animals is defined as inflammation of the:
A) Liver
B) Kidney
C) **Mammary gland (udder)**
D) Lymph nodes

53. The most common contagious pathogen in mastitis is:
A) Escherichia coli
B) Streptococcus uberis
C) Mycoplasma spp.
D) **Staphylococcus aureus**

54. The California Mastitis Test (CMT) is used to detect:
A) Changes in milk fat
B) **Elevated somatic cell counts due to inflammation**
C) Bacterial DNA
D) Protein denaturation

55. In mastitic milk, the pH typically increases to values:
A) 6.4–6.8
B) Exactly 7.0
C) **Above 7.4**
D) Below 6.0

56. Dry cow therapy is primarily employed to:
A) Treat acute mastitis
B) Increase immediate milk production
C) **Prevent new intramammary infections during the dry period**
D) Enhance colostrum quality

57. The milk ring test in brucellosis screening is used to detect:
A) Milk fat content
B) **Antibodies against Brucella in milk**
C) Somatic cell counts
D) Bacterial endotoxins

58. Neonatal diseases in livestock typically occur within:
A) 1–7 days after birth
B) 7–14 days after birth
C) **Birth to 14 days**
D) 14–30 days after birth

59. In early neonatal calves, noninfectious disease is most often due to:
A) Bacterial sepsis
B) Viral infections

C) **Metabolic factors such as hypoglycemia and hypothermia**
D) Parasitic infestations

60. Failure of passive transfer in neonates is most commonly due to:
A) Genetic abnormalities
B) Overfeeding
C) **Inadequate colostrum intake**
D) Excessive exercise

61. In neonatal colibacillosis, the primary causative organism is:
A) Salmonella spp.
B) Rotavirus
C) Clostridium perfringens
D) **Enteropathogenic Escherichia coli**

62. A serum total protein level of ≥5.2 g/dL in neonatal calves indicates:
A) Dehydration
B) Liver dysfunction
C) **Adequate passive transfer of immunity**
D) Renal insufficiency

63. Elevated serum gamma-glutamyl transferase (GGT) in neonates signifies:
A) Renal damage
B) **Successful colostral antibody absorption**
C) Muscle injury
D) Overhydration

64. Twin-born calves have a higher mortality rate primarily due to:
A) Genetic defects
B) Overnutrition
C) **Failure of passive transfer of immunoglobulins**
D) Increased birth weight

65. “Navel ill” in neonatal calves is best described as:
A) Umbilical hernia
B) **Infection of the umbilical cord leading to systemic sepsis**
C) Congenital malformation
D) Nutritional deficiency

66. In neonatal diarrhea, the enterotoxemic form is characterized by:
A) Prolonged watery diarrhea and gradual recovery
B) **Rapid collapse and death with minimal diarrheal output**
C) Chronic intermittent illness
D) Persistent coughing

67. In parasitic diseases of calves, coccidiosis is most commonly caused by:
A) Cryptosporidium parvum
B) **Eimeria bovis and Eimeria zuernii**
C) Toxoplasma gondii
D) Sarcocystis spp.

68. In poultry, coccidiosis is primarily associated with infection by:
A) Plasmodium spp.
B) **Eimeria spp.**
C) Cryptosporidium spp.
D) Histomonas meleagridis

69. Cryptosporidiosis in neonatal calves typically presents with:
A) Neurological signs
B) Respiratory distress

C) **Watery diarrhea and dehydration**
D) Skin lesions

70. The primary mode of transmission for coccidiosis in poultry is:
A) Direct skin contact
B) Aerosol spread
C) **Fecal–oral route**
D) Vector-borne transmission

71. In parasitology, the term “oocyst” refers to:
A) Bacterial endospores
B) Viral particles
C) **The infective stage of Eimeria species**
D) Fungal spores

72. A key control measure for coccidiosis in poultry is:
A) Routine antibiotic use
B) **Administration of anticoccidial drugs combined with strict sanitation**
C) Vaccination against bacteria
D) Hormonal therapy

73. The characteristic lesion in intestinal coccidiosis is:
A) Fibrotic strictures
B) **Erosions and hemorrhagic ulcers**
C) Granulomatous nodules
D) Hyperplastic polyps

74. In cryptosporidiosis, diagnosis is commonly confirmed by:
A) Bacterial culture
B) **Acid-fast staining of oocysts in fecal samples**
C) PCR for viral RNA
D) Serological assays only

75. Poor sanitation and overcrowding most significantly contribute to:
A) Enhanced milk production
B) **Increased transmission of parasitic diseases**
C) Improved immune responses
D) Reduced parasite life cycles

76. Which protozoan parasite is a frequent cause of neonatal diarrhea in calves, aside from Eimeria?
A) Toxoplasma gondii
B) Giardia lamblia
C) **Cryptosporidium parvum**
D) Trypanosoma evansi

77. In parasitology, “sporulation” refers to:
A) Active replication of trophozoites
B) **Development of spores or oocysts from the parasite**
C) Formation of cysts in tissues
D) Parasite death due to immune attack

78. An effective anticoccidial drug used in poultry is:
A) Tetracycline
B) Penicillin
C) Ivermectin
D) **Amprolium**

79. The detection of oocysts in fecal samples indicates:
A) Bacterial infection

B) **Active coccidial infection**
C) Viral gastroenteritis
D) Parasitic helminthiasis

80. Integrated parasite management in livestock typically includes:
A) Exclusive reliance on anthelmintics
B) **Combining pasture management, regular monitoring, and strategic deworming**
C) Continuous high-dose drug administration
D) Ignoring subclinical infections

81. In ruminants, heavy gastrointestinal parasite burdens most commonly result in:
A) Improved weight gain
B) **Reduced feed conversion efficiency and weight loss**
C) Enhanced fertility
D) Increased wool production

82. The most common method to quantify parasite load in fecal samples is:
A) PCR analysis
B) Blood smear examination
C) **Fecal egg count (FEC)**
D) ELISA

83. Rotational grazing helps control parasitic infections by:
A) Increasing parasite exposure
B) **Interrupting the life cycle of many gastrointestinal parasites**
C) Encouraging parasite mutation
D) Eliminating the need for deworming

84. Fasciolosis in cattle is primarily caused by:
A) A nematode
B) A protozoan
C) A virus
D) **Fasciola hepatica (liver fluke)**

85. The life cycle of Fasciola hepatica requires an intermediate host, which is typically a:
A) Insect
B) Fish
C) **Freshwater snail**
D) Bird

86. Fasciolosis in ruminants typically leads to:
A) Neurological deficits
B) **Liver damage and anemia**
C) Skin lesions
D) Respiratory distress

87. An anthelmintic drug commonly used to treat liver fluke infections is:
A) Ivermectin
B) Albendazole
C) **Triclabendazole**
D) Praziquantel

88. In small ruminants, the economic impact of parasitic diseases is primarily due to:
A) Increased market value
B) **Reduced weight gain and milk production**
C) Enhanced immune responses
D) Lower feed costs

89. “Anthelmintic resistance” refers to:
    A) Hosts developing immunity to parasites
    B) **Parasites developing resistance to deworming drugs**
    C) Vaccines failing to protect against parasites
    D) Drugs enhancing parasite reproduction
90. Regular fecal egg count monitoring in a herd is useful for:
    A) Diagnosing viral infections
    B) **Assessing parasite burden and monitoring deworming efficacy**
    C) Evaluating milk quality
    D) Identifying bacterial pathogens
91. Which management practice helps reduce gastrointestinal parasite burdens in grazing animals?
    A) Continuous grazing on the same pasture
    B) **Pasture rotation and rest periods**
    C) High-density stocking
    D) Exclusive indoor housing
92. Cryptosporidium parvum oocysts are notably resistant to:
    A) Freezing temperatures
    B) **Chlorination of water supplies**
    C) UV light exposure
    D) High temperatures
93. In poultry, histomoniasis (blackhead disease) is caused by:
    A) Eimeria tenella
    B) Cryptosporidium spp.
    C) **Histomonas meleagridis**
    D) Toxoplasma gondii
94. Histomoniasis in turkeys is most commonly transmitted through:
    A) Airborne droplets
    B) **Ingestion of infected earthworms**
    C) Direct contact with infected birds
    D) Vertical transmission from hen to chick
95. In ruminants, which parasite is commonly linked to “bottle jaw” due to protein loss?
    A) Fasciola hepatica
    B) **Ostertagia ostertagi (a gastrointestinal nematode)**
    C) Eimeria spp.
    D) Cryptosporidium spp.
96. In parasitic infections, the term “encysted” describes parasites that are:
    A) Actively replicating in the bloodstream
    B) **Surrounded by a protective cyst wall in tissues**
    C) In the process of hatching
    D) Excreted in the feces
97. A key factor in the transmission of gastrointestinal parasites in grazing animals is:
    A) **Pasture contamination with infective larvae or oocysts**
    B) Vertical transmission through milk
    C) Airborne spread
    D) Direct skin contact
98. Economic losses due to parasitic infections in livestock are primarily caused by:
    A) Increased veterinary bills only
    B) **Reduced productivity, poor weight gain, and lower milk yields**

C) Higher feed costs
D) Enhanced immune stimulation

99. An integrated parasite management program in livestock should include:
A) **Pasture management, regular fecal monitoring, and strategic deworming**
B) Sole reliance on anthelmintics
C) Continuous high-dose drug administration
D) Ignoring subclinical infections

100. The most effective method for reducing the risk of parasitic infections in neonates is:
A) Immediate weaning
B) High-calorie diets
C) **Maintaining strict hygiene and providing appropriate colostrum management**
D) Isolation of all neonates