1. The incidence of mycotic infections, especially by ___ fungi causing deep infection, is on the rise. The increase is related to more ___ individuals due to premature births, medicated elderly, graft recipients, and cancer patients.

A. opportunistic, susceptible
B. nonpathogenic, hosts

2. The effect of exfoliative toxin is called the scalded skin syndrome because of some semblance to:

A. an actual burn
B. molting skin

3. The virulence factor of S. aureus that accounts for pathogenicity:

A. coagulase
B. enterotoxin
C. exfoliative toxin
D. leukocidin
E. all of these

4. Extracellular enzymes that are also virulence factors include streptokinase that degrade the fibrin ___ , hyaluronidase that digests ground substance of ___ tissue, and streptodornase that liquefies ___ and pus.

A. scab, nerve, bone
B. clot, connective, DNA

5. Tick-borne relapsing fever is a borrelioses infection with the following traits. In which of the following events does the vector swap something for blood?

A. caused by Borrelia hermsii, a spirochete
B. transmitted by Ornithodoros, a soft tick; bloodsucking
C. bacteria colonize tick’s salivary glands and gut
D. infective salivation and regurgitation coincide with the tick’s bite
E. victim self inoculates by inadvertent scratching bite irritation

6. All of the following streptococci are human pathogens but the most virulent is:

A. S. agalactiae
B. Enterococcus faecalis
C. S. mutans
D. S. pneumoniae
E. S. pyogenes
7. The host cells that rickettsias target are the ____ cells.
   A. muscle
   B. endothelial
   C. osteocytes
   D. neurons
   E. fibroblasts

8. *Streptococcus agalactiae* is implicated in all of the following except:
   A. neoplastic growth
   B. neonatal infection, pneumonia
   C. endocarditis, sepsis
   D. impetigo, wound infection
   E. puerperal fever

9. *Streptococcal pharyngitis* is commonly known as ____ or ____. The inflammation makes swallowing difficult and painful.
   A. impetigo, erysipelas
   B. tonsillitis, strep throat

10. Chlamydias share several characteristics with rickettsias but not:
    A. elementary bodies
    B. intracellular growth
    C. pleomorphism
    D. obligate parasitism
    E. small & gram-negative

11. Blastomycosis is typically symptomatic. Cough, chest pain, fever, and hoarseness are some __ symptoms. Chronic lung disease forms cancer-like ____ and may disseminate to other organs. Cutaneous disease begins with a subcutaneous nodule that erupts at the skin surface, meanwhile yeasts disseminate. Skeletal involvement mimics arthritis, ____ invasion bring on motor and sensory aberration, and other organic dysfunction occur in kidney, liver, reproductive, and similar sites.
    A. pulmonary, tumors, CNS
    B. fatal, symptoms, synaptic

12. The distinguishing ____ rash of Rocky Mountain spotted fever appears in the wake of fever, chills, headache and muscular pain; about a week following an infectious tick bite. Starting ____ from the bite and affecting the skin of limbs, the rash ____ to converge upon the chest. Lesions mature from measles-like to maculopapular and even to necrotic. Cardiovascular and central nervous system complications can be fatal in untreated cases.
    A. erythema, proximally, retreats
    B. spotted, away, advances
13. A few fungi like *Candida* and some dermatophytes normally inhabit the body and thus are ___. Most fungi, however, are soil inhabitants, some of which are pathogenic and are ___. Infection by the latter is usually the result of fungal spores from the environment enter susceptible portals.
   A. noncommunicable, communicable
   B. communicable, noncommunicable

14. Which characteristic is not true of *Coccidioides immitis*, and of coccidiodomycosis:
   A. is adapted to salty, carbonaceous soil in hot, semiarid climates.
   B. endemic to Ohio River and Mississippi River basins
   C. seasonal cycle; dormant in moist winter-spring, and growth in dry summer-fall.
   D. bouts of heavy rains, ensuing drought and high winds ensure spore propagation
   E. typically involve occupational, recreational exposure to contaminated dust

15. The pneumonia caused by *Pneumocystis pneumonia* entered the limelight in the wake of the __ epidemic. It is harmlessly present in healthy respiratory tracts, and is normally held in check by lung __ and lymphocytes. In the immunocompromised, numerous *Pneumocystis* cling to pneumocytes causing exudative inflammation.
   A. AIDS, phagocytes
   B. organ transplant, epithelia

16. Most fungi are free-living saprobes while others are parasites. Infectious fungi are either __ or __ pathogens.
   A. opportunists, true
   B. yeast, mold

17. The Lancefield convention for streptococcal classification by alphabet is based upon:
   A. blood agar hemolysis
   B. serological differentiation

18. *Staphylococcus aureus* is an occasional member of __ that typically colonizes the anterior nares and __ without causing symptoms.
   A. normal flora, skin
   B. transient flora, endocardium

19. Mycetoma, a subcutaneous lesion, also known as Madura foot, usually afflicts the hand or foot and resembles ___. This infection is caused by the fungal genera *Pseudallescheria* or *Madurella*. Filamentous bacteria, such as Nocardia or other actinomycetes, are also suspected. All are __ of soil.
   A. a tumor, saprobes
   B. gangrene, transients
20. Typical routes for *S. pyogenes* dissemination are direct contact and __, food or fomites are secondarily involved. Broken skin and the pharyngeal __ are the most frequent portals of entry and children are most often afflicted.

A. droplet nuclei, mucosa
B. insect bites, cilia

21. Lyme borreliosis is suspected in a patient with a history of recreational or occupational activity in __ territory frequented by wild animals, especially in the summer and fall, and a subsequent finding of a red, __ rash. Early treatment calls for tetracycline and amoxicillin and later, with ceftriaxone and azithromycin. Wearing protective clothing, boots, applying insect __, and prompt detachment of ticks with forceps are effective preventative.

A. wooded, concentric, repellent
B. barren, oozing, poison

22. Syphilis transmission by __ contact is by far the most frequent but not exclusive mode. Instances of transfer by fomites, laboratory accidents, blood transfusion and even __, though rare, are known.

A. sexual, transplacental infection
B. vector, aerosol

23. Which of the following is inconsistent with this mycosis? Histoplasmosis is:

A. caused by *Histoplasma capsulatum*
B. endemic to the Colorado River basin
C. distributed where birds and bats lived for eons
D. associated with guano deposits
E. adapted to moist soils high in nitrogen

24. A common name for sporotrichosis is:

A. walking pneumonia
B. Ohio Valley fever
C. ringworm
D. rose gardener's disease
E. athlete's foot

25. Outbreaks of histoplasmosis coincide with inhalation of infective dust from __ broken ground as in cultivation and excavation, when disturbing long established bird roosts, or when working on old buildings. Apparently dislodged spores become __. People of all age groups are susceptible but the infection is more __ in individuals at either extreme of age.

A. newly, airborne, serious
B. previously, nonviable, benign
26. The drug of choice in syphilis treatment is:
   A. penicillin G
   B. erythromycin
   C. acyclovir
   D. tetracycline
   E. nystatin

27. The following is not a vector for rickettsioses:
   A. mosquitoes
   B. mites
   C. fleas
   D. lice
   E. ticks

28. Of the common human pathogens in the *Staphylococcus* genus, ___ is most virulent. Its name
    denotes gold, after the pigmented byproducts.
    A. *S. epidermidis*
    B. *S. capitis*
    C. *S. hominis*
    D. *S. saprophyticus*
    E. *S. aureus*

29. *S. aureus* is perhaps the most resistant nonsporeforming pathogen, a prevalent hospital
    troublemaker. It tolerates all but:
    A. dessication, salt
    B. ionizing radiation
    C. anaerobic conditions
    D. disinfectants, antibiotics
    E. temperature extremes

30. The streptococci are not:
    A. microflora, free-living
    B. catalase positive
    C. facultative anaerobes
    D. in chains or paired cocci
    E. nonsporeformer, nonmotile
31. Chronic infectious ___ by *Helicobacter pylori* is associated with stomach and duodenal ___, a condition that predisposes to adenocarcinoma. An adaptation that enables this bacterium to exploit the harsh acidic environment, is the ability to neutralize acid with alkaline byproducts like ammonium and bicarbonate from ___ conversion. In fact, the urease test is a basis for identification and breath analyzer diagnosis.

A. gastritis, ulcers, urea  
B. impetigo, blockage, nitrate

32. Epidemic cholera and its cause, *V. cholerae*, elude eradication efforts because of covertness associated with:

A. being endemic to warm, monsoon, alkaline, and saline estuaries  
B. the hardy El Tor biotype being prevalent worldwide, and among chronic carriers  
C. the recent outbreaks traced to cargo ships that dump water ballast in distant ports  
D. the spread by asymptomatic carriers who contaminate water and food  
E. sporadic outbreaks associated with shellfish consumption

33. Staphylococcal food poisoning can be avoided by ___ heating for at least ___ minutes since the enterotoxin is ___ to heat.

A. 100°C, 30, stable  
B. mild, 15, labile

34. All of the following are true pathogens except ___, which is a secondary (opportunistic) pathogen.

A. *Pneumocystis carinii*  
B. *Histoplasma capsulatum*  
C. *Blastomyces dermatitidis*  
D. *Paracoccidioides brasiliensis*  
E. *Coccidioides immitis*

35. As is true of the agent for gonorrhea, *T. pallidum* requires ___ conditions for survival outside the host. Being ___ to dessication, disinfectants, soap, oxygenation, pH, and temperature extremes, and being confined to one host, one might wonder why either pathogen has not been ___ like smallpox. Two events, at least, ensure survival; asymptomatic carriage and dependable intimate contact.

A. exacting, sensitive, eradicated  
B. few, adaptable, promoted
36. The mortal danger of cholera is circulatory failure from reduced blood __ and __ depletion. The antidote is replacement therapy. Oral rehydration is simpler if the patient is __; if not IV infusion may be called for. Either route is also suitable for administering antimicrobics such as tetracycline or trimethprim-sulfa.
   A. volume, electrolyte, conscious
   B. hematocrit, hemoglobin, old

37. Unlike the mortality pattern in __ in which children are more vulnerable, adults over fifty years of age perish __ readily from endemic typhus than the young. Chloramphenicol and tetracycline treatment is effective so long as liver or kidney functions remain. However, incomplete recovery can allow __ with the disease recurring.
   A. cholera, more, latency
   B. hypotension, just as, dormant

38. A true fungal pathogen has __ virulence mechanisms. The portal of entry is usually through the __ mucosa __ host resistance.
   A. poor, digestive, to avoid
   B. aggressive, respiratory, despite high

39. Fungi are adapted to low:
   A. temperature
   B. moisture
   C. O₂ level
   D. pH
   E. all of these

40. In coccidioidomycosis, the disease process is normally halted when:
   A. inhaled arthrospores forms lung endospore-forming spherules
   B. endospores disseminate to in lymph and blood
   C. disseminated spores establish spherules in various organs
   D. pulmonary tissue is susceptible to nodular growths called fangomas
   E. the lung cavitation, and organ failure

41. Mycoplasma traits do not include:
   A. pleomorphic
   B. nutritionally fastidious
   C. ability to bind skin receptors
   D. smallest bacteria
   E. sterol envelope
42. All of the following are subcutaneous mycosis except:
   A. coccidioidomycosis
   B. chromoblastomycosis
   C. mycetoma
   D. sporotrichosis
   E. phaeohyphomycosis

43. The stages in the development of dental caries begin with:
   A. sugar fermentation
   B. pellicle deposit
   C. plaque formation
   D. microbial colonization
   E. aerobic respiration

44. Recurrence and remission of fever in borrelioses suggests an immunologic hide-and-seek game. Which of the following is most likely to involve a genetic control mechanisms?
   A. spirochete antigens first appear, pyrogens liberated by inflammatory response
   B. temperature subsides as immune response eliminate early pyrogens and antigens
   C. pathogen switches surface antigen, eludes immunity, and regrows
   D. inflammatory response against new version of antigens, pyrogens again released
   E. the cycle repeats till the host and/or parasite wears out

45. Which of the following traits is not characteristic of *Chlamydia pneumoniae*?
   A. strictly human parasite
   B. survives in an extracellular habitat
   C. arteriosclerosis linked
   D. atypical of chlamydiases
   E. complicates asthma

46. *Candida albicans* is a member of normal flora that colonizes all sites except the:
   A. alveoli
   B. oral cavity
   C. genitalia
   D. skin
   E. intestinal lumen
47. The hallmark pathology of mycoplasma pneumonia is:
   A. invasiveness
   B. toxigenicity
   C. secretory diarrhea
   D. respiratory cilia destruction
   E. cardiac arrest

48. The major reservoir of *Streptococcus pyogenes* are __ and outbreaks usually originate with healthy or subclinical carriers, estimated to be about __ of the population.
   A. humans, 5-15%
   B. pets, 1-5%

49. Morphological switching in response to temperature changes has profound medical impact and is known as __ dimorphism.
   A. sexual
   B. mycotic
   C. infectious
   D. mycelial
   E. thermal

50. The bacterial secretion __ enlists host fibrinogen to coat staphylococcal cells with protective fibrin and thus elude recognition and phagocytosis.
   A. penicillinase
   B. hyaluronidase
   C. DNA-ase
   D. lipase
   E. coagulase