

STUDY GUIDE
for
Infectious Diseases and Environmental Emergencies

1. A small, unicellular organism that causes an infection that is treatable by antibiotics is a
 - A. bacteria
 - B. virus
 - C. fungus
 - D. parasite
2. A microscopic agent of infection that invades cells that is not treatable by antibiotics is a
 - A. bacteria
 - B. virus
 - C. fungus
 - D. parasite
3. Biological agents such as yeasts and molds are examples of
 - A. bacteria
 - B. viruses
 - C. fungi
 - D. parasites
4. A key organ in the lymphatic system that filters red blood cells and helps form antibodies is the
 - A. liver
 - B. spleen
 - C. pancreas
 - D. gallbladder
5. Examples of blood-borne diseases include all of the following **EXCEPT**
 - A. hepatitis A
 - B. hepatitis B
 - C. AIDS
 - D. syphilis

6. Examples of airborne diseases include all of the following **EXCEPT**
- A. meningitis
 - B. tuberculosis
 - C. measles
 - D. hepatitis A
7. Which of the following is true regarding infectious agents?
- A. Some organisms may remain infectious on a stretcher surface for weeks after contamination
 - B. Some agents die soon after exposure to light and air
 - C. Paramedics may play a major role in curbing infectious disease transmission
 - D. All of the above
8. In order to test a paramedic for immunity to hepatitis B, it is necessary to
- A. test for the presence of antigens
 - B. wait for symptoms to occur
 - C. test for the presence of antibodies
 - D. none of the above
9. The paramedic should be concerned about infection control procedures
- A. before the incident
 - B. during the incident
 - C. after the incident
 - D. all of the above
10. Appropriate universal precautions include
- A. never recapping needles
 - B. wearing gloves during all patient contact
 - C. isolating all body fluids
 - D. all of the above
11. Your patient who presents with general malaise, low grade fever, headache, and a stiff or sore neck may be suffering from
- A. hepatitis A
 - B. meningitis
 - C. tuberculosis
 - D. AIDS

12. Meningitis is spread primarily by which of the following methods?
- A. a needle stick
 - B. Eating contaminated food
 - C. Blood transfusion
 - D. A sneeze or cough
13. A yearly PPD test is necessary to monitor the presence of which disease
- A. Hepatitis B
 - B. Meningitis
 - C. Tuberculosis
 - D. AIDS
14. The childhood disease characterized by fever and salivary gland swelling is
- A. mumps
 - B. rubeola
 - C. varicella
 - D. chicken pox
15. Chicken pox, a childhood disease, may manifest itself later in life in a disease called
- A. varicella
 - B. shingles
 - C. rubeola
 - D. rubella
16. The type of hepatitis transmitted from restaurant workers who fail to wash their hands before handling food is
- A. A
 - B. B
 - C. C
 - D. D
17. The sexually transmitted disease characterized by lower abdominal pain, yellowish vaginal discharge, and pain with intercourse is
- A. syphilis
 - B. gonorrhea
 - C. AIDS
 - D. herpes

18. Cold sores are a form of
- A. chlamydia
 - B. gonorrhea
 - C. herpes
 - D. syphilis
19. Which of the following statements is true regarding AIDS?
- A. it is transmitted via most body fluids
 - B. paramedics are included in the high risk group for contracting this disease
 - C. The disease weakens the body's immune system by affecting "T" lymphocytes
 - D. all of the above
20. The most frequent source of AIDS infection in health care workers is
- A. airborne droplets
 - B. accidental needle stick
 - C. endotracheal intubation
 - D. mouth-to-mask ventilation
21. The body can generate heat by
- A. shivering
 - B. increasing cellular metabolism
 - C. strenuous exercise
 - D. all of the above
22. Which of the following affects the thermal gradient?
- A. Ambient air temperature
 - B. Infrared radiation
 - C. Relative humidity
 - D. All of the above
23. Heat loss in the form of infrared rays is known as
- A. radiation
 - B. convection
 - C. conduction
 - D. evaporation

24. Heat flows from the skin to inanimate objects because of
- A. radiation
 - B. convection
 - C. conduction
 - D. evaporation
25. Heat is carried away from the body in currents by a process known as
- A. radiation
 - B. convection
 - C. conduction
 - D. evaporation
26. The key heat regulation center is located in the
- A. thymus gland
 - B. thalamus
 - C. cerebral cortex
 - D. hypothalamus
27. When the body becomes too hot, which of the following happens?
- A. peripheral vasodilation
 - B. decreased cardiac output
 - C. decreased respiratory rate
 - D. increased thermogenesis
28. When the body becomes too cold, which of the following **DOES NOT** happen?
- A. sympathetic stimulation
 - B. piloerection
 - C. vasodilation
 - D. thermogenesis
29. Fever differs from hyperthermia in that it
- A. lowers body temperature
 - B. is a compensatory mechanism
 - C. does not involve the hypothalamus
 - D. cooling mechanisms are activated

30. Heat cramps are caused by
- A. a rapid change in extracellular osmolarity
 - B. potassium and water losses
 - C. increased thermogenesis (shivering)
 - D. decreased perfusion of abdominal muscles
31. Heat exhaustion is caused by
- A. increased sodium and water losses
 - B. rapid, dangerous elevation of body temperature
 - C. peripheral vasoconstriction
 - D. increased circulation blood volume
32. Prehospital management of the heat stroke patient includes all of the following **EXCEPT**
- A. rapid cooling
 - B. oxygen administration
 - C. dopamine IV
 - D. IV access
33. In which of the following conditions is prehospital cooling of the fever patient contraindicated?
- A. altered mental status
 - B. imminent febrile seizures
 - C. Fever > 105°F
 - D. Fever due to epiglottitis
34. Initial signs of hypothermia include
- A. cool, pale skin
 - B. tachycardia
 - C. tachypnea
 - D. all of the above
35. Prehospital management of the frostbite victim includes all of the following **EXCEPT**
- A. Immersion in 100°F-106°F water
 - B. gently massaging the frozen part
 - C. elevating the thawed part
 - D. covering the thawed part with loose sterile dressings

36. The primary cause of death from drowning is
- A. acid-base abnormality
 - B. asphyxia
 - C. pulmonary edema
 - D. hemodilution
37. Which of the following factors have an impact on drowning survival?
- A. cleanliness of water
 - B. length of submersion
 - C. age and health of victim
 - D. all of the above
38. Which of the following is a result of the mammalian diving reflex?
- A. tachypnea
 - B. bradycardia
 - C. vasodilation
 - D. all of the above
39. Prehospital management of the drowning victim includes all of the following **EXCEPT**
- A. C-Spine management and oxygenation
 - B. Heimlich maneuver
 - C. Defibrillation as indicated
 - D. CPR as indicated
40. Which of the following is an effect of long term radiation exposure?
- A. Decreasing leukocytes
 - B. Bone marrow damage
 - C. Birth defects
 - D. All of the above
41. Which of the following factors will have a major effect on the amount of radiation a person absorbs?
- A. length of time exposed
 - B. shielding
 - C. distance from the source
 - D. All of the above

42. According to Boyle's Law, one liter of air at sea level will be compressed to _____ at a depth of 33 feet of water.
- A. 1000ml
 - B. 500ml
 - C. 333ml
 - D. 250ml
43. According to Henry's Law, at 33 feet below the surface the quantity of nitrogen and oxygen dissolved in the tissues will be _____ that at sea level.
- A. one-half
 - B. three times
 - C. twice
 - D. four times
44. A person experiencing sinus headache pain, dizziness, and hearing loss after diving too fast may be suffering from
- A. barotrauma
 - B. eustachian tube rupture
 - C. middle ear infection
 - D. all of the above
45. A diver who appears to be intoxicated and takes unnecessary risks may be experiencing
- A. carbon monoxide poisoning
 - B. barotrauma
 - C. the bends
 - D. nitrogen narcosis
46. A diver who holds his or her breath during ascent may experience
- A. air embolism
 - B. pneumothorax
 - C. alveoli rupture
 - D. all of the above
47. A diver who ascends without allowing time for gradual recompression may experience
- A. air embolism
 - B. pneumomediastinum
 - C. eustachian tube rupture
 - D. the bends

Scenario

Your patient is a 23-year old construction worker who collapsed on the job. The temperature is 88EF with 78% humidity. He presents on the ground, skin hot, wet, and red. He has no medical history according to his co-workers and there is no Medic-Alert identification. His BP is 90/40, pulse is 120, shallow respirations of 30, lungs clear, chemstrip is 100, axillary temperature is 107EF.

48. This patient is most likely suffering from
- A. heat cramps
 - B. heat exhaustion
 - C. heat stroke
 - D. heat prostration
49. Immediate prehospital management of this patient includes all of the following except
- A. rapid cooling
 - B. oxygenation
 - C. IV fluids
 - D. vasopressors
50. Glass thermometers are not recommended for prehospital use because
- A. they are easily broken
 - B. they do not measure as high or low as necessary
 - C. they are difficult to calibrate during long transport times
 - D. none of the above

Scenario

Your patient is a 38 year old female who got lost in the woods on a hiking trip. She spent the night in a small cave with overnight temperatures dropping to the mid twenties. It had rained earlier in the day and she had no time to dry off before settling in the cave. She was found by searchers at around 10 am the next day. She presents awake, but confused and disoriented. She appears very stiff and her movements are uncoordinated. Her BP is 100/60, pulse is 80, respirations are slow and shallow, skin is cool and pale, chemstrip is 120, axillary temperature is 86EF.

51. This person is suffering from
- A. mild hypothermia
 - B. mild to moderate hypothermia
 - C. moderate to severe hypothermia
 - D. hyperpyrexia

52. In severe hypothermia, the patient's ECG may show the presence of
- A. delta waves
 - B. J waves
 - C. coving
 - D. ST segment depression
53. Since the nearest hospital is one hour by car, which of the following statements is true regarding the prehospital management of this patient?
- A. Rewarming should not be attempted
 - B. Heated oxygen should not be administered
 - C. External heat should never be applied
 - D. The patient must be handled gently
54. If the patient loses consciousness and arrests, prehospital management should include all of the following **EXCEPT**
- A. CPR
 - B. defibrillation
 - C. medication administration
 - D. heated and humidified oxygen
55. The immune system is the body's defense against disease. All of the following are major components of the immune system, except
- A. leukocytes
 - B. lymphocytes
 - C. antigens
 - D. antibodies
 - E. macrophages
56. Interstitial fluid is defined as
- A. a clear, watery fluid found in lymphatic vessels
 - B. the fluid that surrounds each cell
 - C. Both answers a and b
 - D. Both answers a and c
57. Lymph is defined as
- A. a clear, watery fluid found in lymphatic vessels
 - B. the fluid that fills each cell
 - C. the fluid that fills the space between cells
 - D. both answers a and b
 - E. both answers a and c

58. The primary organ of the lymphatic system is
- A. the kidney
 - B. the liver
 - C. the spleen
 - D. the thyroid
 - E. the pancreas
59. Pneumonia is an infectious respiratory disease that is caused by
- A. by bacteria
 - B. by a virus
 - C. by either bacteria or a virus
 - D. by bacteria, viruses or fungi
60. Meningitis is an infectious nervous system disease that is caused by
- A. by bacteria
 - B. by a virus
 - C. by either bacteria or a virus
 - D. by bacteria, viruses or fungi
61. Tuberculosis is an infectious respiratory disease that is caused
- A. by bacteria
 - B. by a virus
 - C. by either bacteria or a virus
 - D. by bacteria, viruses or fungi
62. The most common form of viral hepatitis is
- A. hepatitis C
 - B. hepatitis B
 - C. hepatitis A
 - D. All of the above
 - E. None of the above
63. An infectious form of viral hepatitis is
- A. hepatitis C
 - B. hepatitis B
 - C. hepatitis A
 - D. All of the above
 - E. None of the above

64. Serum hepatitis is transmitted via infected blood or urine and is also called
- A. hepatitis C
 - B. hepatitis B
 - C. hepatitis A
 - D. All of the above
 - E. None of the above
65. A patient who complains of fever, nausea/vomiting, headaches, and a stiff neck should be considered to be suffering from
- A. tuberculosis
 - B. AIDS
 - C. meningitis
 - D. Either answer a or b
 - E. Either answer b or c
66. A patient who complains of fever, night sweats, and recent weight loss should be considered to be suffering from
- A. tuberculosis
 - B. AIDS
 - C. meningitis
 - D. Either answer a or b
67. AIDS is transmitted via
- A. blood contact
 - B. semen or vaginal secretions contact
 - C. skin surface contact
 - D. answers a and b only
 - E. answers a, b, and c
68. Many AIDS patients develop Kaposi's sarcoma, which is
- A. evidenced by jaundiced skin lesions
 - B. evidenced by red-or purple-colored skin lesions
 - C. a severe form of leukemia
 - D. a severe form of pneumonia
 - E. none of the above
69. Many AIDS patients develop Pnuemocystis carinii, which is
- A. evidenced by jaundiced skin lesions
 - B. evidenced by red-or purple-colored skin lesions
 - C. a severe form of leukemia
 - D. a severe form of pneumonia
 - E. none of the above

70. Common forms of sexually transmitted diseases (STDs) include all of the following, except
- A. syphilis
 - B. gonorrhea
 - C. chlamydia
 - D. herpes
 - E. varicella