

INFECTION

1. **growth replication determined by environment**
 - a. bacteria
 - b. fungi
 - c. viruses
 - d. protozoa
2. **tend to mutate or change during replication making it very difficult for a host to develop adequate immunity**
 - a. bacteria
 - b. fungi
 - c. viruses
 - d. protozoa
3. **touching infectious lesion or sexual intercourse**
 - a. direct contact
 - b. indirect contact
 - c. droplet transmission
 - d. vectorborne
 - e. noscomial
4. **released after cell death and may cause fever, weakness, or may have serious effects on the circulatory dysfunction**
 - a. endotoxins
 - b. exotoxins
5. **the reservoir is the source of infection (person,animal, water, food)**
 - a. true
 - b. Fals
6. **pathogens are:**
 - a. disease causing microbes germs or bugs
 - b. non disease causing and are beneficial
7. **occurring when respiratory of salivary secretions containing pathogens such as influenza or tb are expelled from the body**
 - a. direct contact
 - b. indirect contact
 - c. droplet transmission
 - d. vectorborne
 - e. nosocomial
8. **diffuse through bodily fluid and they stimulate antibodies or antitoxin production**
 - a. endotoxins
 - b. exotoxins
9. **common signs and symptoms include cysts, abdominal pain, appetite loss, ulcers, anemia**
 - a. bacteria
 - b. fungi
 - c. viruses
 - d. protozoa
10. **some have an external capsule or slime layer offering additional protection against human defenses**
 - a. bacteria
 - b. fungi
 - c. viruses
 - d. protazoa
11. **single individuals or localized groups**
 - a. epidemic
 - b. pandemic
 - c. endemic
12. **live and grow EVERYWHERE (animals, plants, humans, food, medical equipment)**
 - a. bacteria
 - b. fungi
 - c. viruses
 - d. protozoa
13. **worms, not microorganisms but are parasites and cause infection in humans. they destroy living cells and are common in intestines, heart, worms, hookworms, whipworms, and round worms**
 - a. influenza
 - b. amebic dysentery
 - c. helminths
14. **drugs derived from organisms such as penicillin from mold. now many drugs are synthetic**
 - a. anitmicrobials
 - b. anitibiotics
 - c. bactericidal
15. **causes skin infections**
 - a. staphylococci
 - b. streptoccia
 - c. diplococci
16. **not causing disease and may be beneficial**
 - a. pathogenic
 - b. nonpathogenic
17. **ends when the host reisitance becomes effective**
 - a. incubation period
 - b. prodromal period
 - c. acute period
18. **genetic material takes over control of the host cell, using the host's capacity for cell metabolism for replication**
 - a. bacteria
 - b. fungi
 - c. viruses
 - d. protozoa
20. **protozoa that causes a sexually transmitted infection of the reproductive tracts of men and women, attaching to the mucous membranes and causing inflammation**
 - a. amebic dysentery
 - b. helminths
 - c. trichomonasvaginalis
21. **worldwide infection**
 - a. epidemic
 - b. pandemic
 - c. endemic

22. **AIDS is caused by**
- the herpes virus
 - poor personal hygiene
 - the HIV virus
 - contaminated food
23. **infection to a certain area consistently occurring in that population**
- epidemic
 - pandemic
 - endemic
24. **spread through spores which are resistant to temp changes and chemicals**
- bacteria
 - fungi
 - viruses
 - protozoa
25. **Bacteria and viruses can enter the body through:**
- oily skin
 - dry skin
 - broken skin
 - moist skin
26. **the time between entry of the organism into the body and appearance of clinical signs symptoms of the disease**
- incubation period
 - prodromal period
 - acute period
27. **cultures, blood tests, and radiology (x rays) are used to diagnose infection**
- true
 - false
28. **growth promoted by warmth and moisture**
- bacteria
 - fungi
 - viruses
 - protozoa
29. **infection occur in health care facilities including hospitals by any method (MRSA, VRE).**
- direct contact
 - indirect contact
 - droplet transmission
 - vectorborne
 - nosocomial
30. **involving intermediary such as a contaminated hand or food or inanimate objects**
- direct contact
 - indirect contact
 - droplet transmission
 - vectorborne
 - nosocomial
31. **causes pneumonia**
- staphylococci
 - streptococci
 - diplococci
32. **causes respiratory infections**
- staphylococci
 - streptococci
 - diplococci
33. **require oxygen, carbs, a specific pH, temp**
- bacteria
 - fungi
 - viruses
 - protozoa
34. **very few are pathogenic, most are considered beneficial since they are important in the production of yogurt, beer, and other foods, as well as serving as a source of antibiotic drugs**
- bacteria
 - fungi
 - viruses
 - protozoa
35. **amebic dysentery of large intestines creating severe diarrhea and liver abscesses, is caused by a parasite in the large intestines, vietnam vets, bananas**
- STD
 - amebic dysentery
 - helminths
36. **may cause infection in the oral cavity (thrush in infants) or vaginal infection**
- trichomonas
 - candida
37. **transmitted by oral fecal route, sex, water, shellfish,**
- hep a
 - hep b
 - hep c
 - hep d
38. **can live independently, some live on dead organic matter, and others are parasites living on or in another living host**
- bacteria
 - fungi
 - viruses
 - protozoa
39. **Which are specific to target antifungal, antiviral, antibacterial, these drugs are unique to the type of organism and are NOT interchangeable**
- antibiotics
 - antimicrobials
 - broad spectrum
40. **unicellular microorganisms that do NOT require living tissue to survive. they are very simple in structure with a very complex cell wall and they reproduce**
- viruses
 - bacteria
 - fungi
 - protozoa
41. **Which exist in many similar forms or strains**
- bacteria
 - fungi
 - viruses
 - protozoa

1206 42. when an insect or animal serves as an intermediary in a disease such as malaria

- a. direct contact
- b. indirect contact
- c. droplet transmission
- d. vectorborne
- e. nosocomial

43. more complex organism, unicellular, mobile, lack a cell wall, and may change shapes

- a. bacteria
- b. fungi
- c. viruses
- d. protozoa

44. hepatitis is a viral infection from liver

- a. true
- b. false

45. hard to control, they can hide inside the human cell; they can alter the host cell chromosomes, thus leading to the development of malignant cells or cancer

- a. bacteria
- b. fungi
- c. viruses
- d. protozoa

46. a very small parasite that requires a LIVING host cell for replication

- a. bacteria
- b. fungi
- c. viruses
- d. protozoa

47. Ultrasonic bath cleaners are an effective way to clean tiny crevices in implements only when used with:

- a. 70% isopropyl alcohol
- b. sodium hypochlorite
- c. an effective disinfectant
- d. an effective astringent

48. most common nosocomial infection in the world, anaerobic bacterium infection, acquired in hospitals, develop colitis following antibiotic intake, 1/3 infected don't have symptoms

- a. Staph
- b. VRE
- c. clostridium difficile

50. some remain latent after invasion; they enter the host cells and replicate very slowly or not at all until some later time

- a. bacteria
- b. fungi
- c. viruses
- d. protozoa

51. A 26-year-old previously healthy woman has the sudden onset of mental confusion. She has a seizure and is brought to the hospital. Her vital signs show blood pressure 100/60 mm Hg, temperature 37°C, pulse 89, and respirations 22. A lumbar puncture reveals a normal opening pressure, and clear, colorless cerebrospinal fluid is obtained with 1 RBC and 20 WBC's (all lymphocytes), with normal glucose and protein. An MRI scan reveals swelling of the right temporal lobe with hemorrhagic areas. Which of the following infectious agents is the most likely cause for these findings?

- a. Haemophilus influenzae

- b. Herpes simplex virus
- c. Influenza virus
- d. Mycobacterium tuberculosis
- e. Neisseria meningitidis

52. A 45-year-old woman was diagnosed with bacterial endocarditis. What is the characteristic fundoscopic feature of this disease?

- a. Cherry red macula
- b. Janeway lesions
- c. Macular star
- d. Retinal artery aneurysms
- e. Roth's spots

53. A 40-year-old single man returned from holiday in Europe with mild bloody diarrhoea which had lasted for two weeks. He had lost 2.5 kg in weight, had occasional lower abdominal cramping discomfort and a painful swelling of his left knee. What is the most likely diagnosis?

- a. amoebiasis
- b. campylobacter infection
- c. Crohn's disease
- d. gonococcal septicemia
- e. ulcerative colitis

54. The morphological appearance of Pneumocystis carinii infection in the lung is best characterised as which one of the following?

- a. A bronchopneumonia with abscess formation
- b. A haemorrhagic and necrotizing pneumonia
- c. An acute respiratory distress syndrome (ARDS) with widespread hyaline membrane formation
- d. An interstitial pneumonitis with foamy intraalveolar exudate
- e. An organizing bronchopneumonia

55. A 70-year-old man presented to his GP with a two-day history of increasing confusion. He also complained of a headache. He was febrile on examination; nuchal rigidity was noted. A lumbar puncture was performed and CSF microscopy revealed: WBC 800 cells/mL (<5) 90% neutrophils. A few Gram-positive diplococci were also noted. What is the cause of his meningitis?

- a. Cryptococcus neoformans
- b. Haemophilus influenzae
- c. Listeria monocytogenes
- d. Neisseria meningitidis
- e. Streptococcus pneumoniae

56. A 19-year-old man returned to the UK two weeks after working in a refugee camp in sub-Saharan Africa. On examination he was febrile, dyspnoeic and widespread inspiratory crackles were present. He had an extensive maculopapular rash, conjunctivitis, generalized stomatitis and some bluish-grey spots on the buccal mucosa. What is the most likely diagnosis?

- a. Epidemic typhus
- b. Epstein Barr virus infection
- c. Leptospirosis
- d. Measles
- e. Parvovirus infection

57. Twenty of thirty patients in an adult ward develop colicky abdominal pain and diarrhoea without vomiting between 21:00 and 01:00 hrs. Meat stew was served for lunch at noon. Which of the following is the likely diagnosis?

- a. Bacillus Cereus
- b. Clostridium perfringens

- c. Enterotoxigenic E. coli
 d. Enterovirus
 e. Staphylococcus aureus
58. Which of the following is true of tetanus?
 a. failure to culture Clostridium tetani from the wound would make the diagnosis doubtful
 b. infection confers lifelong immunity
 c. there is a characteristic EEG
 d. Clostridium specific intravenous immunoglobulin is of no benefit once spasm has started
 e. cephalic tetanus causes severe dysphagia
59. A 19-year-old male student attends casualty complaining of an urethral discharge. Gram stain shows numerous neutrophils, some of which contain gram-negative intracellular diplococci. The patient is treated with Ceftriaxone, 250 mg as an intramuscular injection. Five days later, the patient reattends with persisting discharge. Which of the following is the most likely cause of this discharge?
 a. Chlamydia trachomatis
 b. Penicillin-resistant Neisseria gonorrhoeae
 c. Reinfection with Neisseria gonorrhoeae
 d. Ureaplasma urealyticum
 e. Urethral stricture
60. A 20-year-old woman presented with a solitary, crusted, thickened lesion on her face one month after returning from a holiday in Central America. What is the most likely diagnosis?
 a. Cutaneous anthrax
 b. Cutaneous leishmaniasis
 c. Impetigo
 d. Leprosy
 e. Onchocerciasis
61. A 35-year-old man presented with cellulitis of his right leg. On examination he was mildly confused and febrile (40.1°C) with a pulse was 120 / minute and BP 80/55 mmHg. He was treated with intravenous benzylpenicillin and flucloxacillin. Group A Streptococcus was isolated from two sets of blood cultures. There was no significant clinical improvement after 24 hours. What antibiotic should be added?
 a. Ciprofloxacin
 b. Clindamycin
 c. Gentamicin
 d. Rifampicin
 e. Vancomycin
62. Regarding the epidemiology of infections, which of the following statements is true?
 a. Resistant vivax malaria is a major problem in Kenya.
 b. Diphtheria has been eradicated in most parts of the world.
 c. Polio has been eradicated in most parts of the world.
 d. Tetanus has been eradicated in most parts of the world.
 e. The AIDS epidemic seems to be declining worldwide.
63. A 22-year-old male presents with generalised pruritus of six weeks duration. Examination reveals little except for erythematous papules between the fingers. Which of the following therapies would be most appropriate for this patient?
 a. Astemizole
 b. Calamine lotion
 c. Chlorpromazine
 d. Ciprofloxacin
 e. Permethrin cream
64. In HIV disease, patients first become susceptible to infection with Pneumocystis carinii when the CD4 cell count falls to:
 a. <1000 cells/mm³
 b. <500 cells/mm³
 c. <350 cells/mm³
 d. <200 cells/mm³
 e. <50 cells/mm³
65. Which of the following is true concerning a hepatitis E infection?
 a. It can be transmitted with hepatitis B.
 b. It is a recognised cause of chronic liver disease.
 c. CT scan of the liver with contrast shows diagnostic appearances.
 d. The incidence of chronic liver disease is reduced by administration of alpha interferon.
 e. It does not result in a carrier state.
66. Which statement regarding tineacapitis is correct?
 a. It is most commonly caused by the fungus Microsporum canis.
 b. Its presence should suggest immunological deficiency.
 c. It often results in permanent alopecia.
 d. It causes patches that fluoresce dull green under Wood's lamp.
 e. It is effectively treated with topical Nystatin ointment.
67. What is the most likely diagnosis?
 a. HIV infection
 b. Infectious mononucleosis
 c. Malaria
 d. Miliary tuberculosis
 e. Visceral leishmaniasis
68. A 22-year-old female student attended Casualty complaining of fever and rigors for two days. She had returned from a sabbatical in Africa six weeks previously. She was febrile (39.9°C) and a mild petechial rash was also noted. Laboratory investigations showed:
 Hb 10.1 g/dL (11.5-16.5)
 WBC 3.0 x 10⁹/L (4-11)
 Platelets 115 x 10⁹/L (150-400)
 Prothrombin time Normal
 What is the most likely diagnosis?
 a. Acute HIV infection (seroconversion illness)
 b. Cytomegalovirus infection
 c. Dengue fever
 d. Plasmodium falciparum malaria
 e. Typhoid fever
69. A 20-year-old Caucasian student returns from Ghana with a spiking temperature and nocturnal sweats. She has 0.5% of red blood cells infected with Plasmodium falciparum. Select one of the following answers relating to quinine therapy in this case:
 a. quinine contraindicated in those taking mefloquine prophylactically
 b. quinine must always be given parenterally initially
 c. pregnancy is a contraindication for quinine
 d. glucose level should be monitored in those on treatment with quinine
 e. dose of quinine should be reduced in liver impairment

1208 70. Which of the following statements is true about immunological reactions?

- a. Serum sickness is caused by a type II reaction.
- b. Grave's Disease is caused by a type IV reaction.
- c. Angioneurotic oedema is the most severe form of type I reaction.
- d. Urticaria usually responds to Cimetidine.
- e. Deficiencies in the terminal components of complement increase the risk of meningococcal disease.

71. A 41 year old African man has a history of multiple episodes of sudden onset of severe abdominal pain and back pain lasting for hours. Each time this happens, his peripheral blood smear demonstrates numerous sickled erythrocytes. A haemoglobin electrophoresis shows 94% Hgb S, 5% Hgb F, and 1% Hgb A2. He now has increasing pain in his right groin radiating to the anterior aspect of the thigh and to the knee. His temperature was 38°C and examination of his hip revealed pain on internal rotation. A radiograph reveals irregular bony destruction of the femoral head. The most likely organism to be responsible for these findings is?

- a. *Candida albicans*
- b. *Clostridium perfringens*
- c. Group B streptococcus
- d. *Salmonella* species
- e. *Yersinia pestis*

72. A 35 year old woman with alcoholic cirrhosis is admitted with deteriorating encephalopathy and abdominal discomfort. An ascitic tap revealed a polymorphonuclear cell count of 350 cells per mm³. Which of the following is the most appropriate therapy?

- a. Intravenous amoxicillin
- b. Intravenous cefotaxime
- c. Intravenous metronidazole
- d. Oral neomycin
- e. Oral norfloxacin

73. A 36 year old woman presents with dyspnoea, cough and fever. Crackles are heard on auscultation of the lungs. Circulating precipitans to *Micropolyspora faeni* are positive. Which of the following is the most likely diagnosis?

- a. Malt workers' lung
- b. Pigeon fanciers' lung
- c. Allergic Bronchopulmonary Aspergillosis
- d. Brucellosis
- e. Farmers' lung

74. Which of the following would be indicated in the treatment of a 30 year old HIV positive male with pneumocystis carinii pneumonia? Blood gases reveal a P_{O2} of 55 mmHg whilst breathing 28% oxygen.

- a. Atovaquone
- b. Clindamycin
- c. Leucovirin
- d. Pentamidine
- e. Trimethoprim sulphamethoxazole

75. Two strains of *Escherichia coli* are isolated and both are resistant to ampicillin. Strain A retains its resistance to ampicillin when grown from multiple generations in the absence of ampicillin. However strain B loses its resistance when grown in the absence of ampicillin. Which of the following best explains the loss of antibiotic resistance in strain B?

- a. Changes in the bacterial DNA gyrase
- b. Downregulation of the resistance gene

- c. Loss of a plasmid containing the resistance gene
- d. Mutations in the resistance gene
- e. Transposition of another sequence into the resistance gene

76. A 63 year old patient with known alcohol related cirrhosis presented with ascites, abdominal tenderness and peripheral oedema. A diagnostic tap revealed a neutrophil count of 400/mm³ (normal <250/mm³). Which of the following would be of most immediate benefit?

- a. fluid restriction and a no added salt diet
- b. intravenous antibiotics
- c. oral spironolactone
- d. therapeutic paracentesis
- e. transjugular intrahepatic portosystemic shunt

77. Which of the following is correct regarding infection with *Salmonella typhi*

- a. children are particularly likely to become carriers
- b. most carriers are female
- c. faecal culture is almost always positive during the first week of illness
- d. relapse does not occur if antibiotics are taken for 2 weeks
- e. vaccinated individuals who develop the disease will have a mild illness

78. Which of the following is a true of cutaneous anthrax?

- a. causes a black eschar which overlies pus
- b. lesions are usually painful and tender
- c. lesions are associated with marked oedema
- d. Mortality is approximately 20% despite antibiotic therapy
- e. Is very likely to occur in subjects exposed to anthrax spores

79. Toxoplasmosis

- a. can cause fits in AIDS
- b. infection in the first trimester of pregnancy is seldom harmful to fetus
- c. undercooked meat is an important cause of infection
- d. infection usually by respiration
- e. prophylactic immunoglobulins should be given to pregnant women if their IgM anti-toxoplasma antibodies detected.

80. A 26 year old man with a history of alcohol and drug abuse was admitted with a 14 day history of fever, cough and fatigue. He was emaciated. His temperature was 39.4°C. Cervical and axillary lymphadenopathy were present. Chest Xray revealed bilateral areas of pulmonary shadowing. Which of the following is the most likely diagnosis?

- a. alcoholic cardiomyopathy
- b. pneumococcal pneumonia
- c. pneumocystis pneumonia
- d. pulmonary tuberculosis
- e. tricuspid endocarditis

81. Which of the following is true of Spontaneous bacterial peritonitis?

- a. A survival rate of over 50% is expected at one year
- b. Gentamicin is the treatment of choice
- c. is characteristically caused by aerobic bacteria.
- d. is diagnosed by culture of ascitic fluid.
- e. is due to intestinal perforation

82. You are an occupational health physician and have been asked by an anxious employee about contraindications to pertussis immunisation. Which of the following is a contraindication?

- a. Eczema

- b. Cow's milk protein intolerance.
 c. Fever to 39.5°C following the first dose.
 d. Redness of >2.5cm at the injection site after the first dose.
 e. Hydrocephalus
83. **The antibiotic combination Quinipristin and Dalfopristin are**
 a. effective against resistant mycobacterium TB.
 b. indicated in subjects with chronic renal impairment.
 c. particularly effective in the treatment of pseudomonas infection in Cystic fibrosis.
 d. administered orally.
 e. Effective against multiresistant Staph Aureus
84. **Which of the following is the commonest cause of traveller's diarrhoea?**
 a. E. Coli
 b. EntamoebaHistolytica
 c. Giardia Lamblia
 d. ShigellaFlexneri
 e. Yersinia enterocolitica
85. **Which of the following is true concerning Whooping cough (pertussis)?**
 a. is a greater threat to children during the second 6 months of life, after maternal antibody has declined, than during the first 6 months
 b. may lead to hemiplegia
 c. is characteristically associated with a polymorph leucocytosis
 d. is associated with convulsions less frequently than is the case with other febrile conditions
 e. rapidly resolves with antibiotic treatment
86. **A 30 year old renal transplant recipient presented with nonHodgkin's lymphoma. Which virus is most likely to be of aetiological significance?**
 a. Adenovirus
 b. Cytomegalovirus
 c. Epstein Barr virus
 d. Herpes simplex type 1
 e. Varicellazoster
87. **A 49yearold man with a long history of alcoholism presents with cough, haemoptysis and pleuritic chestpain. He has had night sweats and 10 kg weight loss in the last three months. On chest Xraythere is a subtle nodular pattern throughout the lung. He underwent a transbronchial biopsy which showed multinucleated giant cells, epithelioid cells and necrotic debris. Which of the following is the most likely diagnosis?**
 a. Aspergillosis
 b. Pneumocystis carinii pneumonia
 c. Small cell carcinoma
 d. Squamous cell carcinoma
 e. Tuberculosis
88. **Which of the following concerning IgG is correct?**
 a. It has a molecular weight of 50,000 kd.
 b. It is monovalent.
 c. It comprises the majority of circulating antibody in serum.
 d. It differs from other isotypes in not being able to cross the placental barrier.
 e. It is the major antibody produced during the primary response.
89. **Four members of a football team develop diarrhoea due to Salmonella enteritidis. Eating which food was the most likely source of the infection?**
 a. chicken at a fast food outlet 20 hours earlier
 b. fried rice at a takeaway 4 hours earlier
 c. raw eggs in milk 6 hours earlier
 d. raw oysters at a hotel 24 hours earlier
 e. soft cheeses 48 hours earlier
90. **A 68yearold man has been very ill for months following the onset of chronic liver disease with hepatitisC infection. He experiences a sudden loss of consciousness and then exhibits paraplegia on the right. A cerebral angiogram reveals lack of perfusion in the left middle cerebral artery distribution. The most likelycardiac lesion to be associated with this finding is?**
 a. Acute rheumatic fever
 b. Left atrial myxoma
 c. LibmanSacks endocarditis
 d. Nonbacterial thrombotic endocarditis
 e. Paradoxical thromboembolus
91. **Which of the following is a feature of Vancomycinresistant enterococci?**
 a. cause resistant infective diarrhoea
 b. produce an enzyme that inactivates vancomycin
 c. may be found in healthy community volunteers not recently hospitalized
 d. high dose ampicillin is the treatment of choice
 e. are commonly vancomycindependent
92. **An 85 year old patient from an elderly care home, experiences sudden onset of dyspnea and palpitations. A pulmonary ventilationperfusion scan is performed and indicates a high probability for a perfusion defectinvolving a pulmonary arterial branch. Which of the following findings or conditions is the one that is the most important factor favouring development of her complaint?**
 a. A neutrophilia
 b. An increased platelet count
 c. Cirrhosis of the liver
 d. Generalized atherosclerosis
 e. Poor nutrition
93. **A young man from India presents with fever of 4 months duration and splenomegaly. What is the mostlikely diagnosis?**
 a. Coccidiomycosis
 b. Giardiasis
 c. Tropical sprue
 d. Typhoid
 e. Visceral leishmaniasis
94. **A 35yearold man returned from a twoweek holiday complaining of pain in the loins and painful swollenknees. On examination he was afebrile and had significant bilateral knee effusions. Mild penile erythema wasalso noted. Laboratory investigations showed.**
 Hb 15.6 g/dL
 WBC 16.2 x 10⁹/l
 Neutrophils 14.1 x 10⁹/l
 ESR 65 mm/h
 Rheumatoid factor 10 IU/L
 Urinalysis No cells, casts or bacteria seen

What is the most likely diagnosis?

- a. Arthritis due to *Neisseria gonorrhoeae* infection
 b. Lymphogranulomavenereum
 c. Reactive arthritis
 d. Reiter's syndrome
 e. Rheumatoid arthritis
95. **A 40-year-old man has had decreased mentation with confusion as well as increasing incoordination and loss of movement in his right arm over the past 6 weeks. An MRI scan shows 0.5 to 1.5 cm lesions in cerebral hemispheres in white matter and at the grey-white junction that suggest demyelination. A stereotactic biopsy is performed, and immunohistochemical staining of the tissue reveals JC papovavirus in oligodendrocytes. Which of the following laboratory test findings is most likely to be associated with these findings?**
 a. CD4 lymphocyte count of 90/microliter
 b. Haemoglobin A1c of 9.8%
 c. HDL cholesterol of 0.7 mmol/L
 d. Oligoclonal bands in CSF
 e. Serum sodium of 110 mmol/L
96. **Which one of the following statements concerning T lymphocytes is correct?**
 a. Are the primary host response in bacterial infection
 b. Compose the majority of lymphocytes in plasma
 c. Are infected by Epstein-Barr virus in infectious mononucleosis
 d. produce IgG
 e. T cell lymphoma has a better prognosis
97. **You are considering starting a patient on Griseofulvin. Which of the following statements concerning its pharmacology is true?**
 a. It is active against *Candida albicans*.
 b. It is active against *Aspergillus*.
 c. It should not be used in renal failure.
 d. It is used for a maximum of 2 weeks.
 e. It is associated with drug-induced Stevens Johnson syndrome.
98. **A 14-year-old boy presents with fever. Which of the following might contribute to a diagnosis of rheumatic fever?**
 a. The finding of target lesions on the hands.
 b. The finding of tender nodules in the fingertips.
 c. A prolonged PR interval on ECG.
 d. A CRP of 10.
 e. Positive Romberg's sign.
99. **A 75-year-old man has a history of Chronic Lymphocytic Leukaemia. He has had treatment with several courses of chemotherapy and has now been admitted to hospital with pneumonia. His past medical history revealed that he had suffered several previous upper respiratory tract infections over the previous six months. Which of the following components of his immune system is likely to be deficient?**
 a. Complement
 b. Immunoglobulin G
 c. Macrophages
 d. Mast cells
 e. T lymphocytes
100. **Which of the following is true of the T cell response to antigen?**
 a. A process of affinity maturation of the T cell receptor occurs.
 b. Intact antigen is presented in association with self MHC molecules.
 c. Cooperation with other cell types is required for T cell recognition of antigen.
 d. γ/δ + T cells respond to antigen presented in association with MHC class II molecules.
 e. Interactions of the TcR with an appropriate Ag/MHC complex activates a resting T cell.
101. **A 40-year-old man presented with pityriasis versicolor. What is the most appropriate treatment?**
 a. methotrexate
 b. orlistat
 c. psoralen with ultraviolet light (PUVA) therapy
 d. topical selenium sulphide
 e. phototherapy with ultraviolet light (UVB)
102. **Which of the following suggests a diagnosis of molluscum contagiosum rather than chickenpox?**
 a. Presence of macules and papules
 b. Absence of erythema surrounding lesions
 c. Lesions disappearing within a month
 d. Presence of pruritus
 e. Positive contact history
103. **Ten individuals are admitted to casualty with profuse vomiting after attending a retirement dinner in a Chinese restaurant. They all ate at roughly 7 pm and became ill at roughly midnight. Nine ate a mixture of dishes except one female who ate vegetarian dishes with her rice. What is the most likely infective organism?**
 a. *Salmonella enteritidis*
 b. *Staphylococcus aureus*
 c. *E. coli*
 d. *Clostridium perfringens*
 e. *Bacillus cereus*
104. **A 27-year-old man presents with fever, urethritis and arthralgia. He is found to have a swollen ankle with a pustular rash on the dorsal aspect of his foot. What is the most likely diagnosis?**
 a. Gonococcal sepsis
 b. Lyme disease
 c. Reiter's syndrome
 d. Staphylococcal arthritis
 e. Tuberculous arthritis
105. **A 63-year-old female presents with a one-day history of confusion with headaches. On examination she is confused, with a Glasgow Coma Scale of 13 and a temperature of 39.5. She has nuchal rigidity and photophobia. CSF examination reveals a glucose of 0.5 mmol/L, a white cell count of 2500 per mm and Gram positive Cocci in pairs. Which of the following is correct?**
 a. The most likely infective organism is *Staphylococcus aureus*
 b. The organism is likely to be penicillin resistant.
 c. Rifampicin should be given to close contacts.
 d. Nerve deafness would be a common complication in this case.
 e. A characteristic rash would be expected.
106. **A young teenager presents with fever and headache. He has received oral Amoxicillin for 3 days. Which of the following CSF findings would exclude a partially treated meningitis?**
 a. Negative gram stain
 b. A CSF glucose of 45% of blood glucose
 c. A white cell count of 50

- d. A negative CSF culture
e. Negative Kernig's Sign
107. Which of the following statements is characteristic of acute hepatitis B infection?
a. Most patients present with splenomegaly.
b. It confers immunity to hepatitis A.
c. It commonly presents with distal joint arthritis.
d. There is increased infectivity in the presence of the e antigen.
e. Pruritis is an important early symptom.
108. *Giardia lamblia* infection
a. is often symptomatic
b. is usually spread faecorally
c. is eradicated by mebendazole
d. causes steatorrhea
e. diagnosed by stool culture
109. Which of the following statements is true of psittacosis (ornithosis):
a. It is only a risk from contact with psittacines (parrots), not other birds
b. It usually causes many polymorphs to be present in the sputum
c. It is more of a risk to children than to adults who are exposed to birds
d. It does spread from person to person
e. Infection responds rapidly to penicillin therapy
110. Which of the following is true of Koplik's spots?
a. Are diagnostic of Measles
b. Located opposite the incisor teeth.
c. Only appear when fever is over 39°C
d. They appear as red papules on the palmar surface of the hands
e. Typically appear two days after the rash.
111. Which of the following statement is true of infections with *Mycobacterium tuberculosis*:
a. nonsputum producing patients are noninfectious
b. a positive tuberculin test indicates active disease
c. lymph node positive disease requires longer treatment than pulmonary disease
d. in pregnant women treatment should not be given until after delivery
e. pyrazinamide has high activity against active extracellular organisms
112. Which of the following statements concerning zoonotic diseases is true?
a. Brucellosis is characterised by neutrophil leucocytosis.
b. Brucellosis is a recognised cause of spondylitis.
c. Toxoplasmosis causes visceral larva migrans.
d. Toxoplasmosis causes posterior uveitis.
e. Serological evidence of toxoplasmosis is rare in adults.
113. A 42-year-old man with advanced HIV disease presented with a tonic-clonic seizure. He had been diagnosed with HIV 10 years previously, but had elected not to take antiretroviral therapy. A CT scan of his brain showed a 2 cm ring-enhancing lesion in the right parietal lobe. What is the probable causative agent?
a. *Cryptococcus neoformans*
b. *Mycobacterium avium* intracellulare
c. *Mycobacterium tuberculosis*
d. *Pneumocystis carinii*
e. *Toxoplasma gondii*
114. In herpes simplex encephalitis which of the following statements is correct?
a. brain MRI is characteristically normal
b. temporal lobe involvement is common
c. fits are uncommon
d. cold sores or genital herpes are usually present
e. viral identification by PCR on cerebrospinal fluid is nonspecific
115. A 52-year-old woman was admitted with malaise and leg weakness. Her illness started with a sore throat while travelling in Eastern Europe. On examination she was febrile (39.1°C) with several areas of exudates on her pharynx and extensive cervical lymphadenopathy. There was weakness of the legs with absent tendon reflexes. What is the most likely diagnosis?
a. Acute myeloid leukaemia
b. Cytomegalovirus infection
c. Diphtheria
d. Glandular fever
e. Streptococcal tonsillitis
116. Which of the following concerning *Corynebacterium diphtheriae* is correct?
a. Causes skin infection
b. Infection is often complicated by myocardial fibrosis after recovery from severe infection
c. Is most unlikely to cause infection in an individual with a positive Schick test
d. Mitis strain is generally more virulent than the intermedium strain
e. Toxin is better absorbed through the nasal than the pharyngeal mucosa
117. A 43-year-old woman develops a progressive, ascending motor weakness over several days. She is hospitalized and requires intubation with mechanical ventilation. She is afebrile. A lumbar puncture is performed with normal opening pressure and yields clear, colorless CSF with normal glucose, increased protein, and cell count of 5/microliter, all lymphocytes. She gradually recovers over the next month. Which of the following conditions most likely preceded the onset of her illness?
a. Ketoacidosis
b. *Staphylococcus aureus* septicemia
c. Systemic lupus erythematosus
d. Viral pneumonia
e. Vitamin B12 deficiency
118. Which of the following is true of anthrax?
a. It is caused by an aerobic, gram negative rod.
b. It causes trivial disease in the host herbivore population.
c. Gastrointestinal anthrax is the most usual form of disease in humans.
d. Eshars are usually painless.
e. Sputum culture has a high yield in inhalational anthrax.
119. Which of the following forms of encephalitis is caused by a neuroimmunological response?
a. Herpes simplex
b. Measles
c. HIV infection

- d. Enteral viruses
- e. Cytomegalovirus

120. A 40-year-old man with a long history of alcohol abuse is admitted with a subacute illness, comprising headache, fever, meningism and ataxia. MRI brain showed patchy high signal abnormality of the brain stem. CSF analysis showed polymorphonuclear pleocytosis and low glucose. He had failed to improve after 3 days of intravenous cefotaxime treatment. The most likely diagnosis of the meningitis is:

- a. Mycobacterium tuberculosis
- b. Cryptococcus neoformans
- c. Nocardia asteroides
- d. Staphylococcus aureus
- e. Listeria monocytogenes

121. Which of the following is correct regarding human varicella zoster immunoglobulin (VZIG)?

- a. Is used to treat severe chicken pox infection
- b. Is recommended for all patients with eczema exposed to chicken pox.
- c. Is invariably protective against severe varicella.
- d. Should be given to a 14-day-old whose mother has developed chicken pox
- e. Should be given to a 20-week pregnant non-immune female who has been exposed to a case of chicken pox.

122. Which of the following is a contraindication to immunisation?

- a. Infantile eczema requiring topical steroids.
- b. Oral poliomyelitis vaccine to a child on oral steroids.
- c. A history of prolonged jaundice.
- d. A child with congenital adrenal hyperplasia on oral cortisone.
- e. A child with cerebral palsy.

123. Which of the following statements is correct of hepatitis C virus infection?

- a. Cell cultures of virus are routinely used to assess response to drug therapy
- b. High antibody titres are an indication for therapy
- c. Less than 5% of cases lead to chronic infection
- d. More likely to be transmitted by the sexual route than hepatitis B virus
- e. Treatment with ribavirin and interferon alpha is more effective than interferon alpha alone

124. In the diarrhoea associated with cholera toxin, there is activation of which of the following enzyme systems?

- a. Adenylate cyclase.
- b. ATP.
- c. Guanylate cyclase.
- d. Na⁺/K⁺ ATPase pump.
- e. Na⁺/K⁺ ATPase pump.

125. Regarding diphtheria which of the following statements is correct?

- a. It is predominantly spread from cutaneous lesions.
- b. It is characterised by an inflammatory exudate forming a greyish membrane on the buccal mucosa.
- c. It produces a toxin which affects the myocardium, nervous and adrenal tissues.
- d. 3 doses of toxoid provides 75% protection.
- e. About 50 cases per year are seen in the UK.

126. Which of the following is true of BCG vaccination?

- a. is contraindicated in neonates

- b. is a killed polysaccharide antigen vaccine
- c. should be given to all children who have a strongly positive tuberculin test
- d. is presently routinely offered in the UK at age 16 years
- e. Provides protection against leprosy

127. Which of the following microorganisms is generally sensitive to Benzylpenicillin?

- a. Bordetella pertussis
- b. Cryptococcus neoformans
- c. Mycoplasma pneumoniae
- d. Streptococcus Pneumoniae
- e. Streptococcus Viridans

128. A 30-year-old man developed a febrile illness three days after returning from a holiday in Thailand. He was admitted complaining of severe myalgia. On examination he was febrile (39°C) with a diffuse macular rash on the trunk. There was no lymphadenopathy.

Serum total bilirubin 18 µmol/L (122)

Serum alanine aminotransferase 120 U/L (535)

What is the most likely diagnosis?

- a. Acute HIV infection (seroconversion illness)
- b. Dengue fever
- c. Hepatitis E
- d. Secondary syphilis
- e. Typhoid

129. Primary Pulmonary tuberculosis:

- a. Leads to pleural effusion
- b. Is highly infective
- c. Commonly leads to military TB
- d. May be totally asymptomatic
- e. Usually produces cavitation

130. A 54-year-old woman was admitted with acute breathlessness. On examination she had a temperature of 37.9°C, a respiratory rate of 32 breaths per minute, a pulse of 120 beats per minute, a blood pressure of 100/60 mmHg, and a peak expiratory flow rate of 250 litres per minute.

Auscultation of the heart and chest was normal.

The Chest X-ray was normal and blood gases on air showed:

pH 7.35 (7.36-7.44)

PaO₂ 6.0

kPa (11.3-12.6)

PaCO₂ 3.9

kPa (4.7-6.0)

Serum bicarbonate 20 mmol/l (20-28)

She was started on high flow oxygen. What is the most important next treatment?

- a. amoxicillin intravenously
- b. aminophylline intravenously
- c. intravenous fluids
- d. low molecular weight heparin
- e. nebulised salbutamol

131. A 30 year old intravenous drug abuser develops acute aortic regurgitation due to infective endocarditis. Which of the following is least likely to be found on clinical examination?
- decreased cardiac output
 - decreased diastolic murmur
 - hypotension
 - mitral valve preclosure
 - peripheral vasodilatation
132. Which of the following is correct regarding Herpes simplex encephalitis?
- shows a peak incidence in the Autumn
 - is associated with a polymorphonuclear pleocytosis in the CSF
 - produces a diffuse, evenly distributed inflammation of cerebral tissues
 - produces a typical EEG pattern with lateralised periodic discharges at 2 Hz
 - should be treated with acyclovir as soon as the diagnosis is confirmed by urgent CSF viral antibody titres
133. Herpes zoster infection :
- Gamma Interferon is an effective treatment.
 - produces latent infection within the anterior horn cells
 - causes urinary incontinence
 - causes congenital limb deformity
 - associated pneumonitis is equally common in smokers and nonsmokers
134. A 25 year old male homosexual is admitted with dyspnoea and weight loss of 2 months duration. He is diagnosed with Pneumocystis pneumoniae due to AIDS. Which of the following concerning Pneumocystis pneumoniae is true?
- May have an extra pulmonary presentation
 - is always associated with X-ray changes
 - is caused by a bacterium
 - elevated serum antibodies to P. carinii helpful diagnostically
 - is best treated with intravenous pentamidine
135. A 45 year old man returned from a two week trip in Zimbabwe. Fourteen days later he presented with fever, headaches and a widespread rash. On examination there was generalised lymphadenopathy and a widespread maculopapular rash. What is the most likely diagnosis?
- acute HIV infection
 - schistosomiasis
 - strongyloidiasis
 - tick typhus
 - typhoid fever
136. A 50 year old man presented to hospital feeling generally unwell for 3 days. He had returned from a business trip to Thailand six weeks previously and had taken mefloquine as prophylaxis against malaria. On examination he was afebrile, temperature 36.5°C, Pulse was 100/minute and regular, his BP was 85/60 mm Hg.

Investigations showed:

Hb 14.2 g/dL (13.018.0)

WBC 19.0 × 10⁹/L (411)

Neutrophils 18.0 × 10⁹/L (1.57.0)

AST 72 IU/L (131)

Alkaline phosphatase 255 (45105)

What is the most likely diagnosis?

- Acute HIV infection (seroconversion illness)
 - Dengue fever
 - Gram negative bacteraemia
 - Hepatitis B
 - Mefloquine induced hepatitis
137. A 70 year old woman developed herpes zoster ophthalmicus. Which one of the following is most likely to be a complication of this condition?
- Hyphaema
 - Keratitis
 - Keratoconus
 - Posterior subcapsular cataract
 - Scleromalacia
138. Which is true regarding Eczema Herpeticum?
- Is invariably fatal if untreated.
 - Usually has an indolent onset.
 - Only a single crop of vesicles usually appear.
 - Is typically associated with a high fever for over a week.
 - Is more severe in reactivation disease.
139. A 28 year old male presents with a four day history of profuse bloody diarrhoea after returning from a holiday in the Far East. Which of the following regarding his illness is true?
- a negative amoebic fluorescent antibody test excludes a diagnosis of acute amoebic dysentery
 - Cysts to E. histolytica in the stools confirms a diagnosis of acute amoebic dysentery
 - cholera is a likely diagnosis
 - Giardiasis is a likely diagnosis
 - shigellosis is a likely diagnosis
140. Which of the following infections is least likely to cause myocarditis?
- Coxsackie virus
 - Diphtheria
 - Chagas Disease
 - Syphilis
 - Toxoplasmosis
141. Chronic Liver disease is NOT a complication of
- Haemosiderosis
 - Hepatitis C
 - alpha1 antitrypsin deficiency
 - cystic fibrosis
 - haemochromatosis
142. A 25 year old previously healthy woman has worsening fatigue with dyspnoea, palpitations, and fever over the past one week. Her vital signs on admission to the hospital show Temperature 38.9°C Respiratory rate 30/min Pulse 105 bpm and BP 95/65 mmHg. Her heart rate is irregular. An ECG shows diffuse ST segment changes. A Chest X-ray shows mild cardiomegaly. An echocardiogram shows slight mitral and tricuspid regurgitation but no valvular vegetations. Her troponin I is 12 ng/mL. She recovers over the next two weeks with no apparent sequelae. Which of the following laboratory test findings best explains the underlying etiology for these events?
- ANCA titer of 1:80
 - Antistreptolysin O titer of 1:512
 - Blood culture positive for Streptococcus, viridans group

- d. Coxsackie B serologic titer of 1:160
e. Total serum cholesterol of 9.6 mmol/l
143. A 18 year old homosexual male developed progressive pneumonia not responding to antibiotics. Methenamine silver staining of the sputum showed small circular cyst and Giemsa staining demonstrated the small, punctate nuclei of the trophozoites and intracystic sporozoite. Which is the most likely organism?
- Toxoplasma gondii
 - Trypanosoma cruzi
 - Cryptococcus neoformans
 - Leishmania donovani
 - Pneumocystis carinii
144. Which is true of herpes simplex encephalitis?
- brain MRI is characteristically normal
 - fits are uncommon
 - genital herpes is usually present
 - temporal lobe involvement is common
 - viral identification using polymerase chain reaction on CSF is nonspecific
145. A 38 year old female presents with red target lesions confined to the hands and is diagnosed with erythema multiforme. Which of the following could be the cause?
- Cytomegalovirus infection
 - Ureaplasma urealyticum
 - Group B Streptococci
 - Langerhan's cells histiocytosis
 - Penicillin V
146. In the diagnosis of rheumatic fever, which of the following may be helpful?
- A generalised macular papular rash.
 - ASO titre of less than 1:200.
 - Polyarthritis.
 - Staphylococcus aureus grown on throat culture.
 - Splinter haemorrhages.
147. A 56 year old man from Thailand presented with abdominal pain and a mass in the right upper quadrant. He reported that he had been diagnosed with viral hepatitis several years previously. Investigations showed:
- Serum alpha fetoprotein 13,500 IU/L (< 10)
- What is the most likely underlying viral infection?
- Hepatitis A virus
 - Hepatitis B virus
 - Hepatitis C virus
 - Hepatitis D virus
 - Hepatitis E virus
148. Regarding pneumonia caused by Legionella pneumophila, which of the following is true?
- is associated with hyponatremia
 - is best treated with intravenous amoxicillin and clavulanic acid
 - is common in AIDS patients
 - is readily diagnosed by standard aerobic culture of sputum
 - should be managed on the ward in a respiratory isolation cubicle
149. A 19 year old male student attends casualty complaining of an urethral discharge. Gram stain shows numerous neutrophils, some of which contain gram negative intracellular diplococci. The patient is treated with Ceftriaxone, 250 mg as an injection. Five days later, the patient reattends with persisting discharge. Which of the following is the most likely cause of this discharge?
- Chlamydia trachomatis
 - Penicillin resistant Neisseria gonorrhoeae
 - Reinfection with Neisseria gonorrhoeae
 - Ureaplasma urealyticum
 - Urethral stricture
150. A 27 year old man presents with fever, urethritis and arthralgia. He is found to have a swollen ankle with a pustular rash on the dorsal aspect of his foot. What is the most likely diagnosis?
- Gonococcal sepsis
 - Lyme disease
 - Reiter's syndrome
 - Staphylococcal arthritis
 - Tuberculous arthritis
151. A 22 year old male presents with generalised pruritus of six weeks duration. Examination reveals little except for erythematous papules between the fingers. Which of the following therapies would be most appropriate for this patient?
- Astemizole
 - Calamine lotion
 - Chlorpromazine
 - Ciprofloxacin
 - Permethrin cream
152. A 38 year old male with a diagnosis of HIV presents with lethargy, confusion, personality change and a seizure. CT shows multiple uniformly enhancing mass lesions in both cerebral hemispheres. What treatment is indicated?
- ketoconazole
 - pyrimethamine and sulfonamide
 - rifampicin and pyrazinimide
 - broad spectrum antibiotics
 - corticosteroids
153. Which RBC antigen is involved in the entry of P. vivax into red blood cells?
- AntiD
 - AntiS
 - Duffy
 - Kell
 - Kidd
154. A 27-year-old woman, who has recently returned from holiday in Africa, presents with a 7-day history of fevers, sweats, headache, malaise and lethargy. On examination, her temperature is 39°C. Cardio respiratory and gastrointestinal examinations are unremarkable. What is the most likely differential diagnosis?
- Malaria
 - Tuberculosis
 - Influenza
 - Typhoid
 - Dengue fever

155. A 25-year-old woman, who has recently returned from holiday in Africa, presents with a 7-day history of fevers, sweats, headache, malaise and lethargy. On examination, her temperature is 39°C. A diagnosis of malaria is suspected. What is the investigation of choice to confirm the diagnosis?
- Blood cultures
 - Full blood count
 - Thick and thin blood films
 - Ziehl–Nelson stain
 - Paul–Bunnell test
156. A 30-year-old man, who has recently returned from holiday in Africa, presents with a 7-day history of fever, sweats, malaise and lethargy. Thick and thin blood films detect *Plasmodium falciparum*. What is the most appropriate treatment?
- Conservative management
 - Acyclovir
 - Omeprazole
 - Chloroquine
 - Quinine
157. A 40-year-old Indian man presents with a one-month history of haemoptysis. He is a non-smoker. On further questioning, he mentions that he has also been having fevers and night sweats. Chest x-ray shows nodular shadowing in the right upper zone. What is the most likely diagnosis?
- Sarcoidosis
 - Small cell carcinoma of the lung
 - Primary tuberculosis
 - Post-primary tuberculosis
 - Pneumocystis pneumonia
158. A 54-year-old investment banker presents with a 5-day history of productive cough of green sputum, fevers and feeling generally unwell. On examination, there is bronchial breathing in the left lower zone. Chest x-ray demonstrates left lower zone consolidation. What is the most likely causative organism?
- Mycoplasma pneumoniae*
 - Klebsiellapneumoniae*
 - Staphylococcus aureus*
 - Haemophilus influenzae*
 - Streptococcus pneumoniae*
159. A 74-year-old woman patient, who is being treated for chest infection following an elective gastrectomy, develops profuse diarrhoea. A stool sample is collected and microscopy, culture and sensitivity reveal *Clostridium difficile* toxin. What is the most appropriate treatment?
- Intravenous co-amoxiclav
 - Oral metronidazole
 - Isolate the patient and treat conservatively with intravenous fluids
 - Isolate the patient and treat conservatively with oral rehydration solution
 - Prednisolone
160. A 23-year-old woman medical student, who has returned home from a trip to India 1 day ago, presents with profuse watery diarrhoea. This started suddenly and she describes her stool as being profuse and colourless. She is unable to quantify the number of times she has opened her bowels prior to presentation. On examination her pulse is 110 bpm. Cardiorespiratory and gastrointestinal examination are unremarkable. What is the most likely diagnosis?
- Cholera
 - Typhoid
 - Pseudomembranous colitis
 - Shigella
 - Enterotoxigenic *Escherichia coli* diarrhoea
161. A 30-year-old woman aid worker, who has returned from a trip to Haiti 1 day ago, presents with profuse watery diarrhoea. This started suddenly and she describes her stool as being profuse and colourless. On examination her pulse is 120 bpm. What is the most appropriate treatment?
- Rehydration with oral rehydration solutions
 - Rehydration with intravenous fluids
 - Rehydration with oral rehydration fluids plus metronidazole
 - Codeine phosphate
 - Oral azithromycin
162. A three-year-old boy presents, with his mother, to his GP with a 2-day history of fevers, vomiting and diarrhoea. His mother mentions that several other children at the nursery have been off sick this week with the same problem. What is the most likely cause?
- Enterotoxigenic *E. coli*
 - Salmonella
 - Rotavirus
 - Influenza
 - Shigella
163. A nine-year-old boy presents to his GP with a 2-day history of sudden onset itchy rash over his face, scalp, neck and trunk. On examination, his temperature is 38°C and there is a widespread vesicular rash. What is the most likely infective organism?
- Epstein–Barr virus
 - Cytomegalovirus
 - Varicella zoster virus (VZV)
 - Staphylococcus aureus*
 - Herpes-simplex type 1
164. A 70-year-old man presents with a 1-day history of a painful rash across his trunk. He has a past medical history of hypertension and hypercholesterolaemia. On examination, there is a well-demarcated blistering rash on the right side of his trunk. What is the most appropriate treatment?
- Oral acyclovir
 - High dose intravenous acyclovir
 - Topical steroids
 - Paracetamol
 - Amitriptyline
165. A 27-year-old investment banker presents with a 4-day history of painful rash on his penis and testicles. He also reports feeling generally run down with a fever and myalgia. He returned from a trip to New York a week ago. On examination, there is a painful vesicular rash over his penis and testicles. What is the most appropriate treatment?
- Oral acyclovir
 - High-dose intravenous acyclovir
 - Oral flucloxacillin
 - Paracetamol
 - Glyceryltrinitrate cream
166. A 22-year-old medical student presents to the GUM clinic with large amounts of yellow-coloured penile discharge and discomfort on urinating. He has just arrived home from his summer holiday in Ibiza. What is the most likely diagnosis?
- Chlamydia
 - Genital herpes

- c. Cystitis
- d. Gonorrhoea
- e. Syphilis

167. A 30-year-old man presents to his GP with a lesion on his penis, which appeared a week ago. On further questioning, he reports a change in sexual partner 4 weeks ago. He has otherwise been well. On examination, there is a painless hard ulcer on the shaft of the penis. What is the most likely diagnosis?
- a. Chancroid
 - b. Genital herpes
 - c. Chlamydia
 - d. Primary syphilis
 - e. Secondary syphilis
168. A 34-year-old man presents to his GP with a painless hard penile ulcer. Venereal Disease Research Laboratory tests and Treponemapallidumhaemagglutination assay confirm the diagnosis of primary syphilis. What is the most appropriate treatment for this patient?
- a. Co-amoxiclav
 - b. Acyclovir
 - c. Azithromycin
 - d. Ciprofloxacin
 - e. Procaine penicillin
169. A 45-year-old man presents to accident and emergency, having returned from a holiday to India a week ago. He has subsequently been unwell with nausea and reduced appetite. Over the past 2 days he has become jaundiced. He mentions that his two brothers with whom he went on holiday have also become jaundiced in the last 2 days. On examination, he is apyrexial and there is a palpable liver edge. Liver function tests reveal a raised ALT, AST and bilirubin. All other blood tests are normal. What is the most likely diagnosis?
- a. Hepatitis A
 - b. Hepatitis B
 - c. Hepatitis C
 - d. Gilbert's syndrome
 - e. Malaria
170. A 40-year-old man presents having returned from a holiday to India a week ago. He has subsequently been unwell with nausea and reduced appetite. Over the past 2 days he has become jaundiced. On examination, he is apyrexial and there is a palpable liver edge. Liver function tests reveal a raised ALT, AST and bilirubin. A diagnosis of hepatitis A is suspected. What is the most appropriate treatment?
- a. Intravenous hydrocortisone
 - b. Pegylated interferon alpha plus ribavirin
 - c. Conservative management
 - d. Acyclovir
 - e. Chloroquine
171. A 19-year-old medical student presents with a 1-week history of fever, anorexia and a sore throat. On examination, she is pyrexial at 39°C and cervical, axillary and inguinal lymph nodes are palpable. Palatal petechiae are visible within the mouth and her tonsils appear inflamed. A full blood count reveals a lymphocytosis and a blood film reveals the presence of atypical lymphocytes. What is the most likely diagnosis?
- a. Toxoplasmosis
 - b. Cytomegalovirus infection
 - c. Infectious mononucleosis
 - d. Streptococcal sore throat
 - e. Influenza
172. A 19-year-old medical student presents to his GP during fresher's fortnight. He is complaining of neck stiffness, headache and sensitivity to light. On examination, a non-blanching, petechial rash is observed on the trunk. What is the most appropriate immediate management?
- a. Send the patient immediately
 - b. Send him home with advice to rest and return if the symptoms worsen
 - c. Administer 1.2 g of intramuscular benzylpenicillin
 - d. Give 500 mg of ciprofloxacin
 - e. Take a full set of blood tests
173. A 19-year-old man presents to his GP with a 4-day history of painful facial swelling, fevers and lethargy. On examination, there is bilateral swelling of his parotid glands. What is the most likely diagnosis?
- a. Measles
 - b. Mumps
 - c. Influenza
 - d. Infectious mononucleosis
 - e. Pertussis
174. A 41-year-old teacher presents to her GP with a 5-day history of fevers, headaches, lethargy and muscle aches. She also mentions that she is developing an expanding red rash on her left thigh. On further questioning, she mentions that she has been on a school camping trip the previous week. She is otherwise fit and well. What is the most likely diagnosis?
- a. Lyme disease
 - b. Sarcoidosis
 - c. Brucellosis
 - d. Syphilis
 - e. Erythema abigne
175. A 39-year-old Indian man presents to his GP with a 5-week history of haemoptysis, night sweats and weight loss. Which of the following investigations can be used to confirm the diagnosis of tuberculosis?
- a. Tuberculin skin testing
 - b. Blood cultures
 - c. Chest x-ray
 - d. Ziehl-Nielsen sputum staining
 - e. Computed tomography pulmonary angiogram (CTPA)
176. A 23-year-old man presents with a 1-day history of severe headache, discomfort when looking at the lights and neck stiffness. There is a non-blanching rash observed on his trunk. He has recently recovered from chicken pox. On examination he is pyrexial at 39°C. The most likely causative organism is:
- a. *Streptococcus pneumoniae*
 - b. *Listeria monocytogenes*
 - c. *Neisseria gonorrhoeae*
 - d. VZV
 - e. *Neisseria meningitidis*
177. A 51-year-old man presents with a lesion on his forearm. He mentions that he has spent the past three months travelling around South America and only returned home 3 days ago. While his lesion has been present for a few weeks he was reluctant to see a doctor in South America. On examination, there is a 33 cm erythematous ulcer on the left forearm with a raised edge. What is the most likely diagnosis?
- a. Leishmaniasis
 - b. African trypanosomiasis
 - c. Herpes zoster

- d. Schistosomiasis
e. Cryptosporidiosis
178. Which of the following statements is most accurate regarding leishmaniasis?
- It is transmitted by the anopheles mosquito
 - Leishmania are bacteria
 - Leishmaniasis is usually a self-limiting condition
 - It is transmitted by the tsetse fly
 - The presence of Leishman–Donovan bodies confirms the disease
179. A 24-year-old man presents with fevers, lethargy, myalgia and a cough. He has also developed an itchy rash on his feet. He returned home from a charity trip to Malawi last month and is worried he might have malaria. On examination, a papular rash is noted around his feet and there is a palpable liver edge. Initial blood tests show a raised white cell count with an eosinophilia. What is the most likely diagnosis?
- Leishmaniasis
 - Schistosomiasis
 - African trypanosomiasis
 - Malaria
 - Influenza
180. A 35-year-old man presents to his GP with diarrhoea, abdominal pain and nausea. He says he his stools have been pale and he has felt persistently bloated. His symptoms started 6 weeks ago while on a surfing holiday in Peru. What is the most likely diagnosis?
- Coeliac disease
 - Enterotoxigenic *E. coli* gastroenteritis
 - Salmonella
 - Giardia
 - Cryptosporidiosis
181. A 26-year-old Bangladeshi man presents with a 1-week history of fever, headache, malaise and dry cough. He returned to the UK 2 weeks ago, having spent his summer in Bangladesh. On examination, his temperature is 39°C and a patchy maculopapular rash is seen over his trunk. On examination of the abdomen, there is splenomegaly. Blood tests reveal a low white cell count. What is the most likely diagnosis?
- Tetanus
 - Malaria
 - Typhoid
 - Cholera
 - Primary syphilis
182. A 32-year-old man presents with the inability to open his jaw, starting a few hours earlier. His wife mentions that he has ‘had the flu’ since returning from a weekend camping trip. What is the most likely diagnosis?
- Tetanus
 - Dislocation of the temporomandibular joint
 - Clostridium perfringens* infection
 - Influenza
 - Clostridium difficile* infection
183. Following a colonic resection, a 72-year-old woman becomes unwell with acute confusion, pyrexia, tachycardia and hypotension. The patient has had a difficult postoperative period, which has included an admission to ITU for the management of a chest infection. Blood cultures are sent and grow methicillin-resistant *Staphylococcus aureus* (MRSA). The patient is placed in isolation and barrier nursing is implemented. What is the most appropriate management of this patient?
- Manage conservatively
 - Start intravenous vancomycin
 - Start intravenous co-amoxiclav
 - Start intravenous co-amoxiclav and gentamicin
 - Start oral metronidazole
184. A 90-year-old man presents with a 2-week history of fevers, lethargy and night sweats. He has recently had crowns fitted at the dentist. He has a past medical history of hypertension, gout and type 2 diabetes mellitus. On examination his temperature is 39°C, his pulse is 120 bpm and splinter haemorrhages are seen in the nails. On auscultation of the heart a pansystolic murmur is audible. A diagnosis of endocarditis is suspected and blood cultures are taken. What organism is most likely to be grown?
- Staphylococcus aureus*
 - Staphylococcus epidermidis*
 - Actinobacillus*
 - Enterococcus faecalis*
 - Streptococcus viridans*
185. A 45-year-old man who lives in a homeless shelter presents with an itchy rash. The itching is particularly bad at night. On examination, there is a papular rash between the web spaces of the fingers and toes, the palms of the hands and soles of the feet, the axilla and on the genitalia. What is the most likely diagnosis?
- Scabies
 - Shingles
 - Chicken pox
 - Molluscum contagiosum*
 - Tinea cruris*
186. A 20-year-old man presents with extreme pain in the right knee. On examination, his temperature is 38.5°C and the knee is hot and swollen. He is unable to move his knee due to pain. The joint is aspirated and blood cultures are taken. The patient is admitted and started on intravenous antibiotics. Gram staining of the joint aspirate shows gram-negative diplococci. What is the most likely responsible organism?
- Chlamydia trachomatis*
 - Neisseria gonorrhoeae*
 - Haemophilus influenzae*
 - Streptococcus pneumoniae*
 - Streptococcus viridians*
187. A 74-year-old man presents with extreme pain in the left knee. On examination, his temperature is 39°C and the knee is swollen and hot. He is unable to move the joint due to pain. The joint is aspirated and the patient is admitted and started on intravenous antibiotics. What is the most likely causative organism?
- Neisseria gonorrhoeae*
 - Mycobacterium tuberculosis*
 - Neisseria meningitidis*
 - Staphylococcus aureus*
 - Haemophilus influenzae*
188. A 42-year-old man presents with a 3-week history of shortness of breath, dry cough, fevers and malaise. He has presented as his exercise tolerance has deteriorated. He mentions that he has been HIV positive for ten years. On examination, there are fine crackles throughout both lung fields. Chest x-ray demonstrates bilateral perihilar interstitial shadowing. What is the most likely causative organism?
- Pneumocystis jiroveci*
 - Herpes simplex virus type 1

- c. Herpes simplex virus type 2
- d. *Streptococcus pneumoniae*
- e. *Mycoplasma pneumoniae*

189. A 42-year-old man presents with a 3-week history of retrosternal discomfort after swallowing. He mentions that he has been unable to keep any food down at all. He has been HIV positive for ten years. He is admitted and endoscopy shows areas of ulceration throughout the oesophagus. What is the most likely causative organism?

- a. *Staphylococcus aureus*
- b. *Cryptosporidium parvum*
- c. *Candida albicans*
- d. *Pneumocystis jirovecii*
- e. *Cryptococcus neoformans*

190. A 42-year-old man presents to his GP with 'blotches' over his legs. He has been HIV positive for ten years. On examination, there are multiple purple and brown papules over his legs and his gums. What is the most likely diagnosis?

- a. Malignant melanoma
- b. Squamous cell carcinoma
- c. Basal cell carcinoma
- d. Kaposi's sarcoma
- e. Toxoplasmosis

191. A 42-year-old man presents to his GP with 'blotches' over his legs. He has been HIV positive for ten years. On examination, there are multiple purple and brown papules over his legs and his gums. A diagnosis of Kaposi's sarcoma is suspected. What is the most likely causative organism?

- a. Herpes simplex virus type 1
- b. Herpes simplex virus type 2
- c. Human herpes virus type 3
- d. Human herpes virus type 8
- e. *Pneumocystis jirovecii*

192. A 42-year-old man presents to his GP complaining of deterioration in his vision in the right eye and the presence of floaters. The change in his vision has been causing him to suffer from headaches. He has been HIV positive for ten years. Fundoscopy reveals haemorrhages and exudates on the retina. What is the most likely diagnosis?

- a. Retinal detachment
- b. CMV retinitis
- c. Kaposi's sarcoma
- d. Optic atrophy
- e. Diabetic retinopathy

193. A 42-year-old man presents with a 1-day history of headache and fevers. He presents with his partner who says he has been becoming increasingly confused and disorientated. On examination, his temperature is 38.5°C. On cranial nerve examination there is a right-sided superior quadrantanopia. An urgent CT scan of the head is organized which shows multiple ring enhancing lesions. What is the most likely diagnosis?

- a. Toxoplasmosis
- b. Meningitis
- c. Cryptosporidiosis
- d. CMV encephalitis
- e. Histoplasmosis

194. In toxic shock syndrome all of the following can be seen except

- a. Shock
- b. Fever

- c. Hypercalcaemia
- d. Rash

195. Aschoff nodules are seen in

- a. Rheumatoid arthritis
- b. Rheumatic fever
- c. SLE
- d. Sjogren's syndrome

196. The antibiotic which can be safely used in pregnancy is

- a. Tetracycline
- b. Ampicillin
- c. Streptomycin
- d. Sulphonamides

197. Ototoxicity is seen in all of the following except

- a. Ampicillin
- b. Streptomycin
- c. Kanamycin
- d. Gentamycin

198. In the life cycle of anophelid mosquito the humans are

- a. Accidental hosts
- b. Intermediate host
- c. Definitive host
- d. Obligatory hosts

199. TB cases can be detected in mass populations by which of the following

- a. Sputum AFB
- b. Tuberculin
- c. Sputum culture
- d. MMR

200. Disc collapse 1st change in TB spine is

- a. Erosion of pedicle
- b. Narrowing of disc space
- c. Abscess with soft tissue swelling
- d. Disc collapse

201. A 25-year-old man has had type 1 diabetes mellitus for 5 years. His physician is concerned about the possibility of permanent renal damage. Which of the following is the best early indicator for diabetic nephropathy?

- a. Albuminuria
- b. Hypertension
- c. Rising blood urea nitrogen
- d. Rising creatinine
- e. Urinary tract infection

202. Biphase saddle back fever is suggestive of:

- a. Lyme disease
- b. Relapsing fever
- c. Typhoid fever
- d. Dengue fever

203. Epidemic Dropsy is due to

- a. Sanguinarine
- b. Aflatoxin
- c. Pyrrolizidine alkaloids
- d. Ergotamine

204. **Snowman configuration of Heart in Chest X-ray is seen in:**
- TAPVC
 - TGA
 - Ebstein's Anomaly
 - TOF
205. **DOC for cholera in pregnant women:**
- Doxycycline
 - Furazolidone
 - Rifampicin
 - Cotrimoxazole
206. **Meleny's Ulcer is caused by:**
- Microaerophilic Non-hemolytic streptococci
 - Hemolytic staph. Aureus
 - Both a+b
 - B- hemolytic streptococci
207. **WHO has set priority for emerging disease research to prevent 1219 severe outbreaks of these diseases.**
- Crimean Congo Haemorrhagic Fever
 - H1N3 Influenza
 - Ebola
 - All of the above
208. **What is the international quarantine period also approved by Government of India for yellow fever ?**
- 2 weeks
 - 10 days
 - 6 days
 - 2 days
209. **The discovery of the small pox vaccination is credited to**
- Pasteur
 - Jenner
 - Lister
 - Koch

Infection - Answers

1. a	39. b	77. b	114. 2	151. 5
2. c	40. b	78. c	115. 3	152. 2
3. a	41. c	79. a	116. 1	153. 3
4. a	42. d	80. c	117. 4	154. a
5. a	43. d	81. c	118. 4	155. c
6. a	44. a	82. c	119. 2	156. e
7. c	45. c	83. e	120. 5	157. d
8. b	46. c	84. a	121. 5	158. e
9. d	47. c	85. b	122. 2	159. b
10. a	48. c	86. c	123. 5	160. a
11. a	50. c	87. e	124. 1	161. b
12. b	51. b	88. c	125. 3	162. c
13. c	52. e	89. a	126. 5	163. c
14. b	53. b	90. d	127. 4	164. a
15. a	54. d	91. c	128. 2	165. a
16. b	55. e	92. b	129. 4	166. d
17. c	56. d	93. e	130. 5	167. d
18. c	57. b	94. a	131. 5	168. e
20. c	58. e	95. a	132. 4	169. a
21. b	59. a	96. b	133. 4	170. c
22. c	60. b	97. e	134. 1	171. c
23. c	61. b	98. c	135. 1	172. c
24. b	62. c	99. b	136. 3	173. b
25. c	63. e	100. c	137. 2	174. a
26. a	64. d	101. b	138. 4	175. d
27. a	65. e	102. b	139. 1	176. e
28. b	66. d	103. e	140. 4	177. a
29. e	67. e	104. a	141. 1	178. e
30. b	68. a	105. d	142. 4	179. b
31. c	69. d	106. c	143. 5	180. d
32. b	70. e	107. 4	144. 4	181. c
33. a	71. d	108. 4	145. 5	182. a
34. b	72. b	109. 4	146. 3	183. b
35. b	73. e	110. 1	147. 2	184. e
36. b	74. e	111. 1	148. 1	185. a
37. a	75. c	112. 2	149. 1	186. b
38. d	76. b	113. 5	150. 1	187. d

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|--------|--------|--------|--------|--------|-------------|
| 188. a | 193. a | 198. b | 203. a | 208. c | 1221 |
| 189. c | 194. c | 199. a | 204. a | 209. b | |
| 190. d | 195. b | 200. b | 205. b | | |
| 191. d | 196. b | 201. a | 206. c | | |
| 192. b | 197. a | 202. b | 207. d | | |