



قائمة الاسئلة

الميكروبيولوجي - المستوى الأول - قسم جميع التخصصات - كلية الطب والعلوم الصحية - برامج العلوم الطبية التطبيقية - الفترة الثانية - درجة الامتحان  
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- 1) 1- One virulence factor of bacteria related to presence of attachment pili.
  - 1)  true.
  - 2)  false.
- 2) 2- Sh.flexinri type 1, which produces protein exotoxins, causes the most severe illness, 'shiga dysentery.
  - 1)  true.
  - 2)  false.
- 3) 3- Yersinia enterocolitica is gram positive bacilli and important cause of gastritis among children.
  - 1)  true.
  - 2)  false.
- 4) 4- Staphylococcus and micrococcus genera are gram-positive cocci, which are arranged in grape-like clusters.
  - 1)  true.
  - 2)  false.
- 5) 5- Gram negative bacilli, which belong to the Enterobacteria often, called coliforms.
  - 1)  true.
  - 2)  false.
- 6) 6- In developing countries including Yemen, infection is still common: at least 50% of all illnesses for which patients consult their doctors are infective illnesses.
  - 1)  true.
  - 2)  false.
- 7) 7- Patients skin at operation can be disinfecting by iodine in alcohol.
  - 1)  true.
  - 2)  false.
- 8) 8- Bacteria have a rigid wall which determines their shape.
  - 1)  true.
  - 2)  false.
- 9) 9- Tetanus treatment include only antibiotics to eliminate Cl. teteni from the wound site.
  - 1)  true.
  - 2)  false.
- 10) 10- Female preponderance of UTI is probably due to the shortness of the female urethra.
  - 1)  true.
  - 2)  false.
- 11) 11- Tetracyclines; Formerly amongst the most widely used antibiotics, although there are few specific indications for their use as brucellosis.
  - 1)  true.
  - 2)  false.
- 12) 12- Reiter's syndrome the patients suffering from arthritis , urethritis and conjunctivitis.
  - 1)  true.
  - 2)  false.
- 13) 13- Zoonoses are infections between non-vertebrate animals and man.
  - 1)  true.
  - 2)  false.
- 14) 14- Sterilization: Destruction of microbes that cause disease; may not be effective in killing spores.
  - 1)  true.
  - 2)  false.
- 15) 15- Disinfection: Destruction of all forms of microbial life including spores.





- 1) - true.  
2)  + false.
- 16) 16- Antisepsis: destruction or inhibition of microorganisms in living tissue there by limiting or preventing the harmful effect of infection.  
1) - true.  
2)  + false.
- 17) 17- Staphylococcus aureus is the main pathogenic species of staphylococcus genera.  
1)  + true.  
2) - false.
- 18) 18- MRSA is a strain of S.aureus resistant to methicillin, cloxacillin and flucloxacillin.  
1)  + true.  
2) - false.
- 19) 19- Bacteria have two types of DNA that contain their genes. These are : . Chromosome . Extra chromosome: Plasmid.  
1)  + true.  
2) - false.
- 20) 20- There are many types of plasmid types. R factors: Plasmids which contain genes that code for extracellular toxin.  
1) - true.  
2)  + false.
- 21) 21- Several infectious diseases are transmitted predominantly or entirely by sexual intercourse. Often, the causal organisms are delicate and do not remain viable for long outside the body.  
1)  + true.  
2) - false.
- 22) 22- Sexually transmitted diseases naturally tend to produce genital lesions, but several give rise to systemic, sometimes severe, disease.  
1)  + true.  
2) - false.
- 23) 23- Selective toxicity is the ability to kill or inhibit the growth of a microorganism without harming the cells of the host: an essential requirement for any successful antibiotic.  
1)  + true.  
2) - false.
- 24) 24- Antimicrobial drugs are often classified as bactericidal when they kill the infecting bacteria or bacteriostatic when they prevent multiplication but do not kill the bacteria.  
1)  + true.  
2) - false.
- 25) 25- In penicillin, the mode of action: bactericidal: inhibit cell wall synthesis by combining with the transpeptidase responsible for cross-linking of the peptidoglycan; activity depends on an intact  $\beta$ -lactam ring.  
1)  + true.  
2) - false.
- 26) 26- Toxicity: virtually non-toxic; very large doses can therefore be given if required.  
1)  + true.  
2) - false.
- 27) 27- Infection is the invasion of tissues by pathogens, their multiplication, and the interaction of the host tissue with the infectious agent and the toxins it produces.  
1)  + true.  
2) - false.
- 28) 28-An infectious disease, also known as a contagious disease or contagious disease, is a disease caused by an infection.



- 1)  true.  
2)  false.
- 29) 29- Infection can be caused by a wide range of pathogens, most notably bacteria and viruses.  
1)  true.  
2)  false.
- 30) 30- Hosts can fight infections using their immune systems. Mammalian hosts react to infection with an innate response, often involving inflammation, followed by an adaptive response.  
1)  true.  
2)  false.
- 31) 1- Which of the following are not Enterobacteria:  
1)  a- E. coli  
2)  b- Proteus species  
3)  c- Campylobacter species  
4)  d- Salmonella species
- 32) 2- The most common cause of sub-acute bacterial endocarditis is  
1)  a- Staph epidermis  
2)  b- Strept viridans  
3)  c- S. aureus  
4)  d- All of the above
- 33) 3- Prions are infectious agents causing  
1)  a bovine spongiform encephalopathy (BSE) in human.  
2)  b- Scrapie in cattle  
3)  c- Creutzfeldt Jacob disease (CJD) in goats.  
4)  d- Modified protein found on the outer surface of brain cells.
- 34) 4- Staphylococcal food poisoning is caused by \_\_\_\_\_ (circle best answer)  
1)  a-an enterotoxin  
2)  b-a neurotoxin  
3)  c-a cytotoxin  
4)  d-Staphylococcus aureus infection
- 35) 5- Shigellosis is common in travelers to developing countries. Infection is commonly acquired through the  
1)  a. Skin  
2)  b. Gastrointestinal tract  
3)  c. Respiratory tract  
4)  d. Genital tract
- 36) 6- In order to cause disease, three steps of pathogen infection must occur, usually in a well defined order. Which of the following is not one of those steps? (choose best answer)  
1)  a-entry into host  
2)  b-adherence  
3)  c-damage to the host  
4)  d- none of the above
- 37) 7- The following is true. about MRSA  
1)  a- It means Methicillin Resistant Staph. aureus.  
2)  b- It is resistant to methicillin, cloxacillin and flucloxacillin.  
3)  c- It appeared in hospitals world-wide including Yemen.  
4)  d- All of the above.
- 38) 8- Streptococcus pyogenes  
1)  a- The most pathogenic member of the genus: produces a large number of powerful enzymes and toxins.  
2)  b- present as a Commensal in the nasopharynx of a variable proportion of healthy adults and, more





- commonly, children.
- 3) - c- The carriage rate in children is about 10%.
- 4) + d- All of the above
- 39) 9- The following are usually Streptococcus pyogenes infections except one:
- 1) - a- Tonsillitis and pharyngitis
- 2) - b- Peritonsillar abscess (quinsy)
- 3) + c- Vincent angina
- 4) - d- Otitis media
- 40) 10- The following are true. about Pneumococci except one:
- 1) - a- cause lobar pneumonia
- 2) - b- cause acute exacerbation of chronic bronchitis.
- 3) - c- Gram positive cocci.
- 4) + d- In the DEVELOPED COUNTRIES almost all strains are resistant to penicillin and erythromycin.
- 41) 1- Viruses are unicellular organisms with genetic material:
- 1) - a- DNA or RNA, that are surrounded by a coat made of protein.
- 2) - b- A viral infection is the proliferation of a harmful virus within the body.
- 3) - c- Symptoms of the viral illness are due to tissue damage and the associated immune response of the host.
- 4) + d- All of the above
- 42) 2- Respiratory viral infections (all true. except one)
- 1) - a- Respiratory viral infections affect the nose, lungs and airway.
- 2) - b- They spread by inhalation of droplets containing virus particles.
- 3) - c- Frequent hand-washing, covering nose and mouth while coughing or sneezing, and avoiding contact with infected people helps prevent the spread of respiratory infections.
- 4) + d- Avoiding touching nose, mouth or eyes and disinfecting hard surfaces are not recommended for prevent spread of viral infection.
- 43) 3- Seasonal influenza:
- 1) - a- This affects a significant percentage of the population world over.
- 2) - b- The symptoms are more severe than the common cold and include body aches and severe fatigue.
- 3) + c- All of the above.
- 4) - d- Non of the above.
- 44) 4- Most viruses cause gastritis
- 1) - a- The symptoms are referred to as viral gastroenteritis.
- 2) - b- Food-borne viral infections are transmitted through the fecal-oral route.
- 3) - c- Fecal oral route means the virus infects people when they ingest viral particles that were shed through the feces of an infected person.
- 4) + d- All of the above.
- 45) 5- Rotavirus:
- 1) + a- Rotavirus causes severe watery diarrhoea which can lead to dehydration.
- 2) - b- This most commonly infects adults.
- 3) - c- It can be sexually transmitted spread through contact with body fluids or blood.
- 4) - d- The risk of spreading these infections can be reduced by abstaining from sex, or having a monogamous sexual relationship or having intercourse with someone who does not have a sexually transmitted infection.
- 46) 1- Autoimmune hepatitis is a chronic disease caused by an abnormal immune response against liver cells.. The disease is thought to have a genetic predisposition as it is associated with certain human leukocyte antigens involved in the immune response.
- 1) + true.
- 2) - false.





- 47) 2- The WHO not recommends the routine vaccination of all children under the age of 19 with the hepatitis B vaccine. They recommend it for those who desire it or are at high risk as medical workers.
- 1) - true.
  - 2)  false.
- 48) 3- Influenza, commonly known as “the flu” or just “the flu,” is an infectious disease caused by influenza viruses.
- 1)  true.
  - 2) - false.
- 49) 4- Flu symptoms range from mild to severe and often include fever, runny nose, sore throat, muscle aches, headache, cough, and fatigue.
- 1)  true.
  - 2) - false.
- 50) 5- There are only 2 types of influenza viruses: types A, and B,. Waterfowl are the primary source of influenza A virus (IAV), which also circulates widely in various mammals, including humans and pigs.
- 1) - true.
  - 2)  false.
- 51) 6- People infected with influenza can transmit influenza viruses through breathing, talking, coughing, and sneezing, spreading respiratory droplets and aerosols containing virus particles into the air. Anyone who is susceptible to infection can contract influenza by coming into contact with these particles.
- 1)  true.
  - 2) - false.
- 52) 7- Annual vaccination is the primary and most effective way to prevent influenza and its associated complications, especially for at-risk groups such as the elderly.
- 1)  true.
  - 2) - false.
- 53) 8- Coronavirus disease 2019 (COVID-19) is an infectious disease caused by the coronavirus SARS-CoV-2.
- 1)  true.
  - 2) - false.
- 54) 9- Symptoms of Covid-19 are variable but often include fever, fatigue, cough, breathing difficulties, loss of sense of smell, and loss of taste. Symptoms may begin one to fourteen days after exposure to the virus. At least a third of infected people have no noticeable symptoms.
- 1)  true.
  - 2) - false.
- 55) 10- Transmission of COVID-19 occurs when infectious particles are inhaled or come into contact with the eyes, nose, or mouth.
- 1)  true.
  - 2) - false.
- 56) 11- COVID-19 testing methods for detecting viral nucleic acid include ELISA .
- 1) - true.
  - 2)  false.
- 57) 12- Several COVID-19 vaccines have been approved and distributed in several countries, and many have initiated mass vaccination campaigns and prevented infection completely.
- 1) - true.
  - 2)  false.
- 58) 13- For COVID-19, although drugs have been developed to inhibit the virus, primary treatment remains symptomatic, managing the disease through supportive care, isolation and empirical measures.
- 1)  true.
  - 2) - false.
- 59) 14- Complications of COVID-19 may include pneumonia, acute respiratory distress syndrome (ARDS),





- multiple organ failure, septic shock, and death.
- 1)  true.  
2)  false.
- 60) 15-A virus that invades a cell compels it to produce thousands of more viruses. By causing the cell to replicate the virus's DNA or RNA and produce viral proteins, which then come together to form new virus particles, the virus does this.
- 1)  true.  
2)  false.
- 61) 16-A virus with "viral envelope" - with specific receptors - uses it to enter a new host cell.
- 1)  true.  
2)  false.
- 62) 17-Aciclovir for herpes virus infections and lamivudine for HIV and hepatitis B virus infections are two examples of nucleoside analogues for viral treatment.
- 1)  true.  
2)  false.
- 63) 18- All viruses include genes contain the biological information encoded for the virus and are built from both DNA and RNA in the same virus.
- 1)  true.  
2)  false.
- 64) 19-Antiviral medication development has expanded significantly since the middle of the 2020s, mostly due to the AIDS pandemic.
- 1)  true.  
2)  false.
- 65) 20- Chikungunya virus is important viral infection in Yemen.
- 1)  true.  
2)  false.
- 66) 1-Entamoeba histolytica is
- 1)  a-an anaerobic parasitic amoebozoan, part of the genus Entamoeba.  
2)  b- Predominantly infecting humans and other primates causing amoebiasis.  
3)  c- E. histolytica is estimated to be very common in Yemen.  
4)  d-All of the above.
- 67) 2-Diagnosis of Entamoeba histolytica (All of this is true. except for one):
- 1)  a-Infection can not confirmed by microscopic examination for trophozoites or cysts.  
2)  b- smears of aspirates or scrapings obtained by proctoscopy, and aspirates of abscesses.  
3)  c- blood test may not be helpful in diagnosing current illness, because the test can be positive if the patient has had amebiasis in the past, even if they are not infected at the time of the test.  
4)  d- Stool antigen detection and PCR are available for diagnosis, and are more sensitive and specific than microscopy.
- 68) 3- Entamoeba histolytica (All of this is true. except for one):
- 1)  a-There is only one effective medications.  
2)  b-For Intestinal infection; Usually nitroimidazole derivatives (such as metronidazole) are used.  
3)  c- metronidazole highly effective against the trophozoite form of the amoeba.  
4)  d- metronidazole have little effect on amoeba cysts.
- 69) 4- Malaria (all true. except one):
- 1)  a - An infectious disease transmitted by flies and infects humans.  
2)  b. It causes symptoms that usually include fever, fatigue, vomiting, and headache.  
3)  c - In severe cases, malaria can cause jaundice, seizures, coma, or death.  
4)  d - Symptoms usually begin ten to fifteen days after the bite of an infected mosquito.
- 70) 5-Malaria (all true. except one):





- 1) - a-It is caused by single-celled microorganisms of the Plasmodium group.  
2) - b- It is spread exclusively through bites of infected Anopheles mosquitoes.  
3) - c- The mosquito bite introduces the parasites from the mosquito's saliva into a person's blood circulation.  
4)  d- The parasites travel to the spleen where they mature and reproduce.
- 71) 1- The most common Cutaneous leishmaniasis is the Oriental Sore (caused by Old World species *L. major*, *L. tropica*, and *L. aethiopica*).  
1)  true.  
2) - false.
- 72) 2-Cutaneous infections of leishmaniasis are most common in Afghanistan, Brazil, Iran, Peru, Saudi Arabia, Syria and Yemen.  
1)  true.  
2) - false.
- 73) 3- visceral leishmaniasis (VL) is the first -largest parasitic killer in the world (more than malaria), responsible for an estimated 20,000 to 30,000 deaths each year worldwide.  
1) - true.  
2)  false.
- 74) 4-Two main species of Leishmania are known to give rise to the visceral form of the disease, the first is *L. donovani* and the *L. infantum*.  
1)  true.  
2) - false.
- 75) 5-The insect vectors of VL are species is *Culex* mosquito in the Old World, and of *Lutzomyia* in the New World.  
1) - true.  
2)  false.
- 76) 6-Sandflies are tiny flies, measuring 3–6 mm long by 1.5–3 mm in diameter, and are found in tropical or temperate regions throughout the world.  
1)  true.  
2) - false.
- 77) 7-The traditional treatment of VL is with pentavalent antimonials such as sodium stibogluconate and meglumine antimoniate.  
1)  true.  
2) - false.
- 78) 8-Manifestation of acute infection from schistosoma include cercarial dermatitis occurred after 2 weeks of exposure to contaminated water with Schistosome cercariae.  
1) - true.  
2)  false.
- 79) 9-Acute schistosomiasis (Katayama fever) may occur weeks or months (around 2–8 weeks) after the initial infection as a systemic reaction against migrating schistosomulae as they pass through the bloodstream through the lungs to the liver and also against the antigens of eggs.  
1)  true.  
2) - false.
- 80) 10-Two drugs, chloroquine and tetracycline, are available for the treatment of schistosomiasis.  
1) - true.  
2)  false.
- 81) 1-Hypersensitivity is  
1) - a-sometimes the result of specific memory is that re-exposure to the same stimulus,  
2) - b- has unpleasant or damaging effects on the body's own tissues.  
3) - c- examples are allergies such as hay fever and some forms of kidney disease.



- 4)  d- powerful mechanism against infectious organisms.
- 82) 2-Interferons
- 1)  a-A family of proteins produced rapidly by many cells in response to virus infection.
  - 2)  b- its activation produce widespread inflammatory effects.
  - 3)  c-it block the replication of virus in the infected cell.
  - 4)  d- Interferons also have an important role in communication between immune cells.
- 83) 3-Complement
- 1)  a-A group of proteins present in serum which when activated produce widespread inflammatory effects,
  - 2)  b- It produced as a result of specific memory of exposure to antigens.
  - 3)  c-It lysis of bacteria, etc.
  - 4)  d- Some bacteria activate complement directly, while others only do so with the help of antibody.
- 84) 4-Mast cell
- 1)  a-A large tissue cell that releases inflammatory mediators when damaged. ,
  - 2)  b- A large tissue cell that releases inflammatory mediators under the influence of antibody.
  - 3)  c- The releases inflammatory mediators increasing vascular permeability and allows complement and cells to enter the tissues from the blood.
  - 4)  d- Mast cell is PMN Polymorphonuclear leucocyte.
- 85) 5-PMN Polymorphonuclear leucocyte
- 1)  a- a large tissue cell responsible for removing damaged tissue.
  - 2)  b-It counts 80% of white cells in human blood.
  - 3)  c- a short-lived 'scavenger' blood cell whose granules contain powerful bactericidal enzymes.
  - 4)  d- The name derives from the peculiar shapes of the nuclei.
- 86) 6-Phagocytosis
- 1)  a-Engulfment of a particle by a cell.
  - 2)  b- Macrophages and PMNs are the most important phagocytic cells.
  - 3)  c- Macrophages produce a antibody.
  - 4)  d-The great majority of foreign materials entering the tissues are ultimately disposed of by this mechanism.
- 87) 7-Antigen is
- 1)  a-Strictly speaking, a substance that stimulates the production of antibody.
  - 2)  b- the term is applied to substances that stimulate any type of adaptive immune response.
  - 3)  c- Typically, antigens are foreign('non-self') and either particulate (e.g. cells, bacteria) or large protein or polysaccharide molecules.
  - 4)  d- Under special conditions small molecules and even 'self' components cannot become antigenic.
- 88) 8-Lymphocyte
- 1)  a-A small cell found in blood, from which it recirculates through the tissues and back via the lymph, 'policing' the body for non-self material.
  - 2)  b-Its ability to recognize individual antigens through its specialized surface receptors and to divide into numerous cells of identical specificity and long lifespan makes it the ideal cell for adaptive responses.
  - 3)  c- Three major populations of lymphocytes are recognized: T, B and D.
  - 4)  d- It is endothelial cells that provide support and secrete growth factors for haemopoiesis.
- 89) 9-Antibody is
- 1)  a- a major fraction of serum proteins, often called immunoglobulin.
  - 2)  b-It is made up of a collection of very similar proteins each able to bind specifically to different antigens, and resulting in a very large repertoire of antigen-binding molecules.
  - 3)  c- Antibodies can bind to and neutralize bacterial toxins and some viruses directly.
  - 4)  d- they do not act by opsonization and by activating complement on the surface of invading





- pathogens.
- 90) 10- S=Stem cell
- 1) - a-the totipotent and self-renewing marrow cell.
  - 2) - b-Stem cells are found in low numbers in blood as well as bone marrow.
  - 3) - c- stem cell numbers can be boosted by treatment with appropriate growth factors (e.g. G-CSF), which greatly facilitates the process of bone marrow transplantation .
  - 4)  d- stem cell numbers can be boosted by treatment with some of antibiotics.
- 91) 1-Immunity is concerned with the recognition and disposal of foreign or 'non-self' material that enters the body.
- 1)  true.
  - 2) - false.
- 92) 2-Resistance to infection may be 'innate' (i.e. get it with time and changing) or 'acquired' as the result of an adaptive immune response.
- 1) - true.
  - 2)  false.
- 93) 3-Adaptive immune response: The development or augmentation of defence mechanisms in response to a particular ('specific') stimulus, e.g. an infectious organism.
- 1)  true.
  - 2) - false.
- 94) 4-Vaccination: A method of stimulating the innate immune response and generating memory and acquired resistance without suffering the full effects of the disease.
- 1) - true.
  - 2)  false.
- 95) 5-Grafting Cells or organs from another individual usually survive innate resistance mechanisms but are attacked by the adaptive immune response, leading to rejection.
- 1)  true.
  - 2) - false.
- 96) 6-Hypersensitivity: Sometimes the result of specific memory is that re-exposure to the different stimulus, as well as or instead of eliminating the stimulus, has unpleasant or damaging effects on the body's own tissues. This is called hypersensitivity; examples are allergies such as hay fever.
- 1) - true.
  - 2)  false.
- 97) 7-Complement: A complex set of serum proteins, some of which can be triggered by contact with bacterial surfaces. Once activated, complement can damage some cells and stop inflammation.
- 1) - true.
  - 2)  false.
- 98) 8-Some cells possess receptors for complement, which can assist the process of phagocytosis.
- 1)  true.
  - 2) - false.
- 99) 9-The great majority of cells involved in mammalian immunity are derived from precursors in the spleen and liver and circulate in the blood, entering and sometimes leaving the tissues when required.
- 1) - true.
  - 2)  false.
- 100) 10-Macrophage is the uncommon resident phagocyte of the tissues and serous cavities such as the pleura and peritoneum.
- 1) - true.
  - 2)  false.
- 101) 11- In adaptive immunity, there are numerous antimicrobial (mainly antibacterial) secretions in the skin and mucous surfaces; these include lysozyme (also found in tears), lactoferrin, defensins and peroxidases.





- 1) - true.  
2)  + false.
- 102) 12-NK (natural killer) cell is a lymphocyte-like cell capable of killing some targets, notably virus-infected cells and tumour cells, but without the receptor or the fine specificity characteristic of true. lymphocytes.  
1)  + true.  
2) - false.
- 103) 13-B lymphocytes secrete antibody, the humoral element of innate immunity.  
1) - true.  
2)  + false.
- 104) 14-Eosinophil A leucocyte with large refractile granules that contain a number of highly basic or 'cationic' proteins, possibly important in killing larger parasites including worms.  
1)  + true.  
2) - false.
- 105) 15- H, L: heavy and light chains of antibody which, being only disulphide-linked, separate under reducing conditions.  
1)  + true.  
2) - false.
- 106) 16-Affinity and avidity is the strength of binding between one V domain and an antigen is called the affinity of the antibody.  
1)  + true.  
2) - false.
- 107) 17- If the antigen recognized also has repeated units, such as the surface of many bacteria or viruses, one antibody molecule can not make multiple attachments to the same target antigen.  
1) - true.  
2)  + false.
- 108) 18-The strength of antigen -antibody overall binding is known as the antibody's avidity.  
1)  + true.  
2) - false.
- 109) 19-Classes of antibodies : Physical, antigenic and functional variations between constant regions define the five main classes of light chain: M, G, A, E and D.  
1) - true.  
2)  + false.
- 110) 20- IgM is usually the first class of antibodies made in response, and is also thought to be the first to appear during development.  
1)  + true.  
2) - false.