

# FINAL COLLECTED QUESTIONS OF MICROBIOLOGY 017

**1-Which of the following doesn't have a cell wall?**

- a-Ureaplasma
- b-Neisseria
- c-Streptococcus
- d-Clostridium

**2-Which of the following is not vertically transmitted?**

- a-HHV-3
- b-B19
- c-HSV-2
- d-pox virus

**3-Which of the following herpes infections can be diagnosed by slit lamp examination?**

- a-Pharyngitis
- b-Keratitis
- c-Genital herpes
- d-Herpes labialis

**4-A british woman is diagnosed with a benign infection caused by EBV. Which of the following treatments can be used?**

- a-Antivirals
- b-Vaccine
- c-Supportive treatment
- d-Radiotherapy

**5-Which of the following receptors is associated with HIV?**

- a-CD81
- b-Scavenger receptor B
- c-CD4
- d-CD55

**6-Which of the following is true about chickenpox?**

- a-It needs no treatment in normal children
- b-It is caused by HHV-8
- c-It is extremely likely to get chickenpox twice in your life
- d-It's not contagious at all

**7-Which of the following is incorrect about hepatitis Viruses transmission?**

- a-Not all types have the same mode of transmission
- b-HepA is transmitted Feco-orally
- c-HepE is transmitted through blood
- d-HepD has the same mode of transmission as HepB

**8-The most common cause of congenital abnormalities is:**

- a-CMV
- b-Rubella
- c-Toxoplasma
- d-HSV

**9-Erethyma infectiosum is also called the:**

- a-Sixth disease
- b-Forth disease
- c-Second disease
- d-Fifth disease

**10-A common cause of sporadic encephalitis is:**

- a-HSV-1
- b-HSV-2
- c-Arboviruses
- d-CMV

**11-The only hepatitis virus with dsDNA is:**

- a-Hepatitis A
- b-Hepatitis B
- c-Hepatitis C

d-Hepatitis D

**12-A common cause of nasopharyngeal carcinoma is:**

a-JC virus

b-EBV

c-Variola virus

d-Adenovirus11

**13-Which of the following is not an onco-virus?**

a-Parvovirus B19

b-Merkel cell polyoma virus

c-Human T-lymphotropic virus

d-Kaposi's Sarcoma Herpes virus

**14-Absence of which of the following would make the individual resistant against parvovirus B19 infection?**

a-CD81

b-CCR5

c-P antigen

d-gp120

**15-Which of the following is not a mode of HIV transmission?**

a-Blood transfusion

b-MSM

c-needlestick injury

d-Feco-orally

**16- All of the following helped in eradication of smallpox except:**

a-The availability of a live-attenuated vaccine

b-The absence of animal reservoirs

c-The absence of asymptomatic carriers

d-The antigenic instability of variola virus

**17-Which of the following is involved in H. pylori pathogenesis?**

- a-Mucinases
- b-VacA and cagA toxins
- c-Urease
- d-All of the above

**18-A man was moved to the hospital after a car accident and a catheter was used to drain the urine from his bladder. This patient developed cystitis, and signs of septicaemia were observed on the next day. The lab tests showed that a gram-positive coccus was responsible for the illness. what is this bacterium?**

- a-Neisseria meningitidis
- b-Staphylococcus epidermidis
- c-Streptococcus pyogenes
- d-Mycoplasma

**19- Which of the following is incorrect about Escherichia?**

- a-It is gram-positive
- b-It has a bacillus shape
- c-It can be part of the normal flora
- d-Some strains are toxic

**20- Which of the following is false regarding helicobacter?**

- a-It is a gram-negative rod
- b-It is nonmotile
- c-It is similar to campylobacter in its shape
- d-It is associated with gastric cancer

**21- Pityriasis versicolor is caused by:**

- a-Candida albicans
- b-Dermatophytes
- c-Malassezia furfur
- d-Madurella mycetomatis

**22- Which of the following is false regarding C. Jejuni?**

- a-It is a microaerophile
- b-It has both oxidase and catalase enzyme
- c-It is a small gram-negative curved rod
- d-It is transmitted by food-handlers

**23- Which statement regarding fungal growth and morphology is correct?**

- a-Pseudohyphae are produced by all yeasts
- b-Molds produce hyphae that may or may not be partitioned with cross-walls or septa
- c-Most yeasts reproduce by budding and lack cell walls
- d-Most pathogenic dimorphic molds produce hyphae in the host and yeasts at 30°C.

**24-Which statement regarding fungal structure is correct?**

- a-The major components of fungal cell walls are proteins such as chitin, glucans, and mannans
- b-The cell wall is not essential for fungal viability or survival
- c-Fungal cell membrane components are the targets for the major classes of antifungal antibiotics, such as the polyenes and azoles.
- d-Fungal cell wall components rarely stimulate an immune response

**25- A mother states that she has observed her 4-year-old son scratching his anal area frequently. The most likely cause of this condition is:**

- a-Trichomonas vaginalis
- b-Enterobius vermicularis
- c-Ascaris lumbricoides
- d-Necator americanus

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# FINAL QUESTIONS OF MICROBIOLOGY

## 2018

(MADE BY AMEEN ALSARAS)

**26- An 8-year-old boy develops a severe sore throat. On examination, a grayish-white exudate is seen on the tonsils and pharynx. The differential diagnosis includes group A streptococcal infection, Epstein-Barr virus infection, severe adenovirus infection, and diphtheria. The cause of the boy's pharyngitis is most likely:**

- a-A catalase-negative gram-positive coccus that grows in chains
- b-A single-stranded positive-sense RNA virus
- c- A catalase-positive gram-positive coccus that grows in clusters
- d-A catalase-negative gram-positive bacillus

**27- A primary mechanism responsible for the pathogenesis of the boy's disease (question 26) is:**

- a-A net increase in intracellular cyclic adenosine monophosphate
- b-Action of M protein
- c-Action of IgA1 protease
- d- Action of enterotoxin A

**28- A 28-year-old patient is present with large renal stones and urinary tract infection. After culturing, a gram-negative bacillus was found. This bacterium is most probably a member of the genus:**

- a-Proteus
- b-Yersinia
- c-Shigella
- d-Enterococcus

**29- Heat-labile toxin of ETEC acts by which of the following mechanisms?**

- a-Attachment and effacement
- b-Activation of adenylyl cyclase
- c-Aggregative adherence
- d- Ribosomal dysfunction

**30- Moraxella catarrhalis can be seen under the microscope as gram-negative diplococci. A differential test must be carried out to differentiate between this bacterium and:**

- a-Streptococcus Pneumoniae
- b-Vibrio
- c-Neisseria

d-E. coli

**31- A 17-year-old girl with cystic fibrosis has a slight increase in her frequent cough and production of mucoid sputum. A sputum specimen is obtained and plated on routine culture media. The predominant growths are Gram-negative bacilli that form very mucoid colonies after 48 hours of incubation. These bacilli are oxidase positive, grow at 42°C, and have a grapelike odor. These Gram-negative bacilli are which of the following?**

a-Klebsiella pneumoniae

b-Pseudomonas aeruginosa

c-Staphylococcus aureus

d-Streptococcus pneumoniae

**32-An 18-year-old woman in rural Bangladesh develops profuse (8 L/d) diarrhea. She has no symptoms other than the diarrhea and the manifestations of the fluid and electrolyte loss caused by the diarrhea. The most likely cause of her diarrhea is:**

a-Campylobacter jejuni

b-Enterotoxigenic Escherichia coli

c-Salmonella typhimurium

d-Vibrio cholerae

**33- In September 1854, a severe epidemic of cholera occurred in the Soho/Golden Square area of London. Dr. John Snow, a father of epidemiology, studied the epidemic and helped stop it by which of the following actions?**

a-Banning the sale of apples at the local markets

b-Replacing the contaminated handle of the main water pump in the city

c-Encouraging people to wash their hands

d-Pasteurizing milk

**34- Which of the following food items is most frequently associated with infant botulism?**

a-Corn syrup

b-Canned infant formula

c-Liquid multivitamins

d-Honey

**35- Tetanus toxin (tetanospasmin) diffuses to terminals of inhibitory cells in the spinal cord and brainstem and blocks which of the following?**

- a-Release of acetylcholine
- b-Cleavage of SNARE proteins
- c-Release of inhibitory glycine and  $\gamma$ -aminobutyric acid
- d-Activation of acetylcholine esterase

**36- Which of the following is false regarding *Listeria monocytogenes*?**

- a-It is a gram-negative rod
- b-It is a weak  $\beta$ -hemolytic
- c-It is motile
- d-None of the above is false

**37- *Yersinia pestis* entered North America through San Francisco in the 1890s, carried by rats on ships that had sailed from Hong Kong, where a plague epidemic occurred. The current reservoir for *Y. pestis* in the United States is:**

- a-Urban feral cats
- b-Rural wild rodents
- c-Domestic cows
- d-Coyotes

**38- A patient who has not maintained good dentition presents with induration and swelling of the mandibular area. On examination, you note purulent material draining from a small opening. The material appears yellowish, and there are some visible granules as if it was a fungal infection. You perform a Gram stain, and pleomorphic gram-positive rods with short branches are noted along with cells suggestive of acute and chronic inflammation. You suspect which of the following organisms?**

- a>*Bacteroides fragilis*
- b>*Lactobacillus*
- c>*Clostridium perfringens*
- d>*Actinomyces*



**39- A 31-year-old Asian woman is admitted to the hospital with a 7-week history of increasing malaise, myalgia, non-productive cough, and shortness of breath. She has daily fevers of 38–39°C and a recent 5-kg weight loss. She had a negative chest radiograph when she entered the United States 7 years ago. A current chest radiograph is normal; results of other tests show a decreased hematocrit and liver function test abnormalities. Liver and bone marrow biopsies show granulomas with giant cells and acid-fast bacilli. She is probably infected with:**

- a-*Mycobacterium leprae*
- b-*B. fragilis*
- c-*N. meningitidis*
- d-*Mycobacterium tuberculosis*

**40- Humans become infected with *Legionella pneumophila* by**

- a-Kissing a person who is a legionella carrier
- b-Breathing aerosols from environmental water sources
- c-Receiving a mosquito bite
- d-Consuming undercooked meat

**41- A 42-year-old woman went camping in the Sierra Nevada Mountains, where she slept for two nights in an abandoned log cabin. After the second night, a tick was found on her shoulder. Six days later, she developed fever to 38°C, which lasted for 4 days. Ten days later, she had another similar episode of fever (relapsing fever). Examination of a blood smear stained with a special stain showed what species?**

- a-*Borrelia*
- b-*Treponema pallidum*
- c-*Rickettsia*
- d-*Bartonella*

**42- Which of the following is not considered an opportunistic fungal infection?**

- a-Candidiasis
- b-Sporotrichosis
- c-Aspergillosis
- d-Zygomycosis

**43- Which one of the following antifungal drugs does not target the biosynthesis of ergosterol in the fungal membrane?**

- a-Ketoconazole
- b-5-fluorocytosine (5-FC)
- c-Nystatin
- d-Fluconazole

**44- Which of the following is true regarding Tinea versicolor?**

- a-It is an example of cutaneous mycoses
- b-It is caused by candida species
- c-Its only clinical manifestation is hyperpigmentation
- d-It is diagnosed by a device called Wood lamp

**45-You are working in a rural medical clinic in China and a 3-year-old girl is brought in by her mother. The child appears emaciated and, upon testing, is found to have anemia. Her feet and ankles are swollen, and there is an extensive rash on her feet, ankles, and knees. The most likely parasitic infection that causes the child's condition is:**

- a-Schistosomiasis
- b-Cyclosporiasis
- c-Hookworm infection
- d-Trichuriasis

**46- Chagas disease is especially feared in Latin America because of the damage that can occur to the heart and parasympathetic nervous system and the lack of an effective drug for the symptomatic later stages. Your patient is planning to reside in a Venezuelan village for 1–2 years. Which one of the following suggestions would be of special value for avoiding Chagas disease?**

- a-Boil or treat all your drinking water
- b-Sleep under a bed net that keeps bugs away
- c-Do not keep domestic pets in your house
- d-Never walk barefoot in the village compound

**47-Several New Guinea villagers known to eat pork during celebrations were reported to be suffering from an outbreak of epilepsy. One of the first things you should investigate is**

- a-The prevalence of Ascaris infections in the population
- b-The presence of Taenia solium in the pigs
- c-The presence of Trypanosoma brucei gambiense in the villagers
- d-The presence of Giardia cysts in the drinking water

**48-A 32-year-old male tourist travelled to Senegal for 1 month. During the trip, he swam in the Gambia river. Two months after his return, he began complaining of intermittent lower abdominal pain with dysuria. Laboratory results of ova and parasites revealed eggs with a terminal spine. Which of the following parasites is the cause of the patient's symptoms?**

- a-Toxoplasma gondii
- b-Schistosoma mansoni
- c-Schistosoma haematobium
- d-Ascaris lumbricoides

**49-What type of specimen was collected for laboratory analysis based on the answer in the previous question?**

- a-Thick blood smear
- b-Stool sample
- c-Urine sample
- d-Sputum sample

**50-Which of the following is false regarding Entamoeba histolytica?**

- a-They are commensal microorganisms
- b-They move using pseudopodia
- c-They cause a condition of dysentery stool
- d-They may cause a flask-shaped ulcer

## Answers

1	A	26	A
2	D	27	B
3	B	28	A
4	C	29	B
5	C	30	B
6	A	31	C
7	C	32	D
8	A	33	B
9	D	34	D
10	A	35	C
11	B	36	A
12	B	37	B
13	A	38	D
14	C	39	D
15	D	40	B
16	D	41	A
17	D	42	B
18	B	43	B
19	A	44	D
20	B	45	C
21	C	46	B
22	D	47	B
23	B	48	C
24	C	49	C
25	B	50	A

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وتظل تسعى جاهدا في همة، والله يعطي من يشاء إذا شكر... 🌟

*Good Luck!!*