

# GENESIS

(Post Graduation Medical Orientation Centre)

## Crash Foundation Batch

Total Number- 100

Pass Mark-70

Topic: Bacteriology, Parasitology, Mycology

Question 31-50 is based on Single answers

Time: 40 Min

Date: 13/03/20

### 1. Plasmid

- a) Is chromosomal DNA
- b) Contain linear DNA
- c) Replicate independently of bacterial chromosome
- d) Can be integrated into the bacterial chromosome
- e) Present only in gram negative bacteria

**F(extrachromosomal DNA) F (Circular DNA)TT F(Both in gm(+) & gm (-) bacteria ) [Lange (14<sup>th</sup>) P-10]**

### 2. Bacteria that are stained by Grams stain are

- a) Treponema pallidum
- b) Mycoplasma Pneumonia
- c) Corynebacterium diphtheriae
- d) Mycobacterium bovis
- e) Helicobacter pylori

**FFTFT**

### 3. Chemical agents that destroy spores are

- a) Phenol
- b) Alcohol
- c) Formaldehyde
- d) Ethylene oxide
- e) Peracetic acid

**FFTTT ( Lange 14<sup>th</sup> T-(2-4) P-12 + genesis sheet )**

### 4. The obligate intracellular bacteria are

- a) Chlamydia trachomatis
- b) Rickettsia prowazekii
- c) Legionella pneumophila
- d) Mycobacterium leprae
- e) Mycoplasma pneumoniae

**TTFFF**

### 5. Bacterial pili are involved in

- a) Adherence to host cells
- b) Transfer of genetic material
- c) Resistant to heat
- d) Endotoxin activity
- e) Motility

**TTFFF [Ref: Lange 14<sup>th</sup>, P11, 19, 12, 8, 3]**

### 6. Pigment producing bacteria are

- a) Pseudomonas aeruginosa
- b) Streptococcus pyogenes
- c) Corynebacterium diphtheriae
- d) Escherichia coli
- e) Staphylococcus aureus

**TFFFT**

### 7. Toxins acts as superantigen are

- a) Erythrogenic toxins
- b) Toxic Shock Syndrome Toxin
- c) Staphylococcal enterotoxin
- d) Botulinum toxin
- e) Cholera toxin

**TTTFF [Ref: Lange 14<sup>th</sup> T(7-11) P-41]**

### 8. Causes of genital ulcer include

- a) Treponema pallidum
- b) Neisseria gonorrhoea —
- c) Trichomonas vaginalis
- d) Hemophilus ducreyi
- e) Behcet's disease

**TFFTT (Lange 14<sup>th</sup> tab( 74-1)+ Davidson 22th )**

### 9. Normal flora of skin are

- a) Staphylococcus aureus
- b) Streptococcus pneumoniae
- c) Moraxella catarrhalis
- d) Malassezia furfur
- e) Streptococcus viridiansi

**TFFFT [Ref:Lange 14<sup>th</sup>, ( 6-2)]**

### 10. Live attenuated vaccines are

- a) Oral polio vaccine
- b) BCG –live
- c) CHOLERA -killed
- d) Influenza
- e) Hepatitis B vaccine

**TTFTF [Ref: Lange 14<sup>th</sup>(36-2) P- 282]**

### 11. Antimicrobial agents that act by inhibition of protein synthesis are

- a) Streptogramins
- b) Nalidixic acid
- c) Vancomycin
- d) Clarithromycin
- e) Clindamycin

**TFFTT [Ref: Lange (10-2) + Katzung pharmacology]**

### 12. Bacteria that can be transmitted by blood transfusion are

- a) HIV
- b) Treponema pallidum
- c) Toxoplasma gondii
- d) Borrelia burgdorferi
- e) Brucella melitensis

**FTFTT (Essential Haematology, Hoffbrand, 6th, P-403)**

**13. Following are Gram positive rods**

- a) Corynebacterium
- b) Neisseria
- c) Bordetella
- d) Serratia
- e) Nocardia

**TFFFT**

**14. Parasites causing anaemia-**

- a) Plasmodium
- b) L donovani
- c) E granulosus
- d) T solium
- e) W bancrofti

**TTFTF**

**15. Zoonotic Diseases-**

- a) Scabies
- b) Plague
- c) TB
- d) Brucellosis
- e) Echinococcus

**FTFTT**

**16. Fungi can be identified by-**

- a) Gram stain
- b) PAS stain
- c) Giemsa stain
- d) Immunofluorescence
- e) Acid fast stain

**FFTTT**

**17. Cryptococcus neoformans**

- a) Forms hyphae
- b) Has polysaccharide capsule
- c) Is dimorphic
- d) Cause infection through inhalation
- e) Is associated with infection in immunocompromised person

**FTFTT**

**18. Parasites reside in human intestine are**

- a) Schistosoma haematobium
- b) Fasciolopsis buski
- c) Heterophyes heterophyes
- d) Fasciola hepatica
- e) Schistosoma mansoni

**FTTFF [Ref: Lange/14<sup>th</sup>/P-467]**

**19. Medically important protozoa are**

- a) Echinococcus granulosus
- b) Trypanosoma cruzi
- c) Toxoplasma gondii
- d) Loa loa
- e) Leishmania donovani

**FTTFT**

**20. Eggs or larvae of parasites found in the sputum are**

- a) Paragonimus westermani
- b) Wuchereria bancrofti
- c) Ascaris lumbricoides
- d) Strongyloides stercoralis
- e) Ascaris lumbricoides

**TFTTT**

**21. Parasites causing surgical complication are**

- a) Echinococcus granulosus
- b) Mycobacterium tuberculosis
- c) Salmonella typhi
- d) Schistosoma haematobium
- e) Wuchereria bancrofti

**TFTTT**

**22. Dimorphic fungi are**

- a) Candida albicans
- b) Histoplasma capsulatum
- c) Cryptococcus neoformans
- d) Blastomyces dermatidis
- e) Malassezia furfur

**FTFTT [Davidson 23<sup>rd</sup>/Fig 11.59/P-300]**

**23. Fungal agents causing keratitis are**

- a) Cryptococcus neoformans
- b) Paracoccidioides brasiliensis
- c) Aspergillus niger
- d) Penicillium spp
- e) Fusarium spp

**FTTTT**

**24. Regarding structure of fungi**

- a) The fungal cell wall consists primarily of chitin.
- b) Chitin is a polysaccharide composed of long chains of N-acetylglucosamine
- c) The fungal cell membrane contains cholesterol.
- d) Molds grow as single cells that reproduce by asexual budding
- e) Most fungi are obligate aerobes

**TFTFT**

**25. Causes of onychomycosis are**

- a) Trichophyton
- b) Microsporum
- c) Candida
- d) Cryptococcus neoformans
- e) Fusarium

**TFTFT**

**26. Treponema pallidum**

- a) Has not been grown on bacteriologic media
- b) Grows very slowly
- c) They induce both specific & nonspecific antibodies
- d) Condylomata lata is found in primary syphilis
- e) VDRL test is based on the cross-reaction of an antigen present in *T. pallidum* with the O antigen polysaccharide found in *P. vulgaris*

**TTTTF**

**27. Regarding MRSA**

- a) They are virtually resistant to all antibiotics except 5<sup>th</sup> generation cephalosporins
- b) Resistance is chromosome mediated.
- c) They contain *mecA* gene, which helps in genotypic diagnosis of MRSA
- d) Such organisms produce sizable outbreaks of disease in community
- e) The drug of choice for these staphylococci is vancomycin

**FTTFT**

**28. Regarding mycobacteria**

- a) Rigid cell wall contains mycolic acid
- b) Capsulated & spore bearing organism
- c) *M. marinum* is photochromogen
- d) *M. fortuitum* is slow grower
- e) *M. avium* intracellulare complex is photochromogen

**TFTFF**

**29. Regarding *Cl. tetani***

- a) Aerobic
- b) Motile
- c) Toxin blocks the release of inhibitory neurotransmitter (glycine) from CNS.
- d) There is a killed vaccine against *Cl. tetani*.
- e) *Cl. tetani* cannot grow in immunized person.

**FTTFF**

**30. *Helicobacter pylori* can be detected by**

- a) H<sub>2</sub> breath test
- b) Rapid urease test
- c) Blood culture
- d) Endoscopy of upper GIT
- e) Urea breath test

**FTFTT**

**31. Which structure is found in gm(-) bacteria but not in gm(+) bacteria-**

- a) Cell wall
- b) Capsule
- c) Cytoplasmic membrane
- d) Outer membrane
- e) Exospore

**D (Lange 14<sup>th</sup>, T-(2-1), T(2-2), Page-6)**

**32. A patient came to you with loose motion for the last two days. On query he/she gave H/O taking reheated frozen fried rice. What organism may cause this.**

- a) *E. coli*
- b) *Cl. botulinum*
- c) *Cl. difficile*
- d) *B. cereus*
- e) *Staph. aureus*

**D (Lange 14<sup>th</sup> P-137)**

**33. A 10 years old child came to you with 2 wks fever. O/E he/she was pale, coated tongue, hepatosplenomegally present. Lab leucopenia with lymphocytosis, rise ESR, Hb reduce. blood C/S not growth. Recently she/he developed weakness, lethargy & fatigue. When standing or walking like feature of osteomyelitis. Which is the most common cause**

- a) *Shigella*
- b) *Salmonella*
- c) *Streptococcus*
- d) *E. coli*
- e) *L. monocytogenes*

**B (Lange 14<sup>th</sup> P-156)**

**34. A 50 year old patient habituated in smoking & alcohol now the developed S/S of severe pneumonia with microscopic hematuria & cough which is purulent & scanty. Lab. Hyponatremia (Na<130). Which one of the bacteria is most likely to be cause**

- a) *B. pertussis*
- b) *H. Influenzae*
- c) *K. pneumoniae*
- d) *Legionella pneumophila*
- e) *Pseudomonas*

**D (Lange 14<sup>th</sup> P-174)**

Each question below contains five suggested answers-choose the one best response to each Question (31-50)

**35. Which of the following statements concerning bacterial spore are correct except.**

- a) Their survival ability is based on their enhanced metabolic activity.
- b) They are formed by gram positive rods.
- c) Killed by heated to 121 C for 15 min.
- d) They are formed primarily when nutrient are limited
- e) They survive few years in soil

**A [Lange 14th p-709]**

**36. Acute glomerulonephritis is a non suppurative complication that follows infection by which organism**

- a) Enterococcus faecalis
- b) Strep. Pneumoniae
- c) Staph. aureus
- d) Strep. pyogens
- e) Strep. agalactae

**D (Lange 14 th p- 715)**

**37. Which antibiotic cause "red man" Syndrome**

- a) Azithromycin
- b) Gentamycin
- c) Doxycycline
- d) Cotrimoxazole
- e) Vancomycin

**E (Lange 14<sup>th</sup> P-86)**

**38. A family had a delicious picnic lunch last Sunday during warm day & the food sat in the sun for several hours at last 3 hour later, everyone came down with vomiting & non bloody diarrhoea. In the emergency room, found that who prepared the food, had a paronychia on her thumb. So which one of the following is the most likely causative organism.**

- a) Enterococcus
- b) Staph epidermidis
- c) Streptococcus pyogen
- d) Staph. aureus
- e) E. coli

**D (Lange 14<sup>th</sup> P-126)**

**39. Which of the following statements concerning endotoxin are correct except**

- a) They are less toxic than exotoxin
- b) They are most stable on heating than exotoxin
- c) They are bind to specific cell receptors whereas exotoxin not
- d) They are part of the bacterial cell wall, whereas exotoxin not
- e) Present only gram negative bacterial cell wall

**C (Lange 14th p-710)**

**40. Which one of the following is not an important character of either N. gonorrhea or N. meningitis?**

- a) Polysaccharide capsule
- b) Ig-A protease
- c) M. Protein
- d) Pili
- e) Outer membrane protein

**C (Lange 14<sup>th</sup> P-128-133)**

**41. A patient comes to you as a diagnosed case of elephantiasis. He had recently developed skin infection over infected limb. What may be the cause?**

- a) Staphylococcus epidermidis
- b) Staphylococcus aureus
- c) Candida albicans
- d) Wolbachiaspp
- e) Viridans streptococci

**D**

**42. Several fungi are associated with disease in immunocompromised patients. Which one of the following is the least frequently associated?**

- a) Cryptococcus neoformans
- b) Aspergillus fumigates
- c) Malassezia furfur
- d) Mucor species
- e) Penicillium marne

**C**

**43. Regarding syphilis, which one of the following is most accurate?**

- a) The characteristic lesion of primary syphilis is a painful vesicle on the genitals.
- b) In secondary syphilis, the number of organisms is low, so the chance of transmitting the disease to others is low.
- c) In secondary syphilis, both the rapid plasma reagin (RPR) and the fluorescent treponemal antibody-absorbed (FTA-ABS) tests are usually positive.
- d) The antibody titer in the FTA-ABS test typically declines when the patient has been treated adequately.
- e) In congenital syphilis, no antibody is formed against Treponema pallidum because the fetus is tolerant to the organism

**C**

**44. Your patient is a 25-year-old woman with pain on urination and cloudy urine but no fever or flank pain. She has not been hospitalized. You think she probably has cystitis, an infection of the urinary bladder. A Gram stain of the urine reveals gram-negative rods. Culture of the urine on EMB agar shows colorless colonies, and a urease test was positive. Swarming motility was noted on the blood agar plate. Which one of the following bacteria is the most likely cause of this infection?**

- a) Escherichia coli
- b) Helicobacter pylori
- c) Proteus mirabilis
- d) Pseudomonas aeruginosa
- e) Serratia marcescens

**C**

**45. Your patient in the pediatric intensive care unit is a 2-week-old boy with a high fever and the signs of meningitis. Gram stain of the spinal fluid reveals small gram-positive rods. Colonies on blood agar show a narrow zone of  $\beta$ -hemolysis. Which one of the following is the most likely cause of his neonatal meningitis?**

- a) Bacillus anthracis
- b) Bacillus cereus
- c) Clostridium perfringens
- d) Corynebacterium diphtheriae
- e) Listeria monocytogenes

**E**

**46. Physical methods of sterilization does not include**

- a) Radiation
- b) Sterilization by ethylene oxide
- c) Filtration
- d) Boiling
- e) Pasteurization

**B**

**47. The following bacteria are used as probiotics except**

- a) Lactobacillus
- b) Peptostreptococcus
- c) Saccharomyces cerevisiae
- d) Bifidobacterium
- e) E. coli

**B**

**48. Free living amoeba except**

- a) Naegleria fowleri
- b) Acanthamoeba spp
- c) Sapinia pedata
- d) Entamoeba coli
- e) Balamuthia mandrillaris

**D**

**49. Fungal toxin causes cancer**

- a) Amanitin
- b) Enterotoxin
- c) Aflatoxins
- d) Exfoliatin
- e) Ergotamine

**C**

**50. Mosquito born diseases except**

- a) Kala-azar
- b) Dengue
- c) Yellow fever
- d) Bancroftian filariasis
- e) Brugia malayi

**A**