

1st BLOCK MCB QUESTION BANK PROVIDED BY AGBAKHI PRINCE (THREE POINTER) FOR '021 CLASS

Provided here, are the most commonly asked past questions in 1st block MICROBIOLOGY tests over the last 5 years. Enjoy it, happy smashing!

1. The Approaches adapted in Bacterial Taxonomy include
 - a. Phylogenic Approach T
 - b. Numerical Approach
 - c. Genotypic approach T
 - d. Bacterial Growth Approach
 - e. Phage Typing Approach T
2. Important Morphological features employed in bacterial classification include
 - a. Staining behavior T
 - b. Colonial Morphology
 - c. Motility
 - d. Cell shape T
 - e. Cell size
3. The Major Pathogens of Bacterial Meningitis include
 - a. Cryptococcus neoformans
 - b. Streptococcus Pneumoniae T
 - c. Neisseria meningitides T
 - d. Escherischia coli T
 - e. Hemophilus influenza T
4. Concerning Primary Pulmonary Tuberculosis,
 - a. Source of infection is Endogenous
 - b. The regional lymph node are more involved T
 - c. About 95% of cases heal spontaneously T
 - d. Assman focus develops
 - e. It usually affects the apex of the lungs
5. The followings are first line treatments drugs for acute pulmonary tuberculosis
 - a. Rifampicin T
 - b. Isoniazid T
 - c. Pyrezinamide T
 - d. Ethambutol T
 - e. Sulphonic Acid F
6. True options concerning the Mycobacterium acium intracellulare complex (MAC)include
 - a. MAC infections are uncommon except in immunocompromised individuals T
 - b. They are common in water, soil, and domestic animals T
 - c. The hallmark is abundant acid fast bacilli without macrophages in body tissues T
 - d. Aids and LOW CD4 count is a contributory factor T
 - e. MAC is not an important clinical consideration in AIDS Mangement
7. The risk factors concerning cholera may include
 - a. Overcrowding T
 - b. 7F's T
 - c. Blood Group A
 - d. Antacid Ingestion T
 - e. Gastric Surgery T
8. Correct options concerning the current epidemic of meningococcal meningitis include
 - a. Spanning across the meningitic belt of Sahel Region of Africa T
 - b. N. meningitidis serotype C is implicated T
 - c. The vaccine is widely available
 - d. The current empirical treatment in Nigeria is intravenous Ceftriaxone T
 - e. Complications may include bleeding into the adrenal medulla T

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9. Anaerobic bacteria are normally the most common organisms in the
 - a. Oral cavities
 - b. Upper GIT
 - c. Female Genital Tract
 - d. Urinary tract
 - e. Central Nervous System

10. Match the diseases caused by the pathogenic treponemes
 - a. *Treponem pallidum* -Venereal Syphilis T
 - b. *Treponem pertenue*- Yaws T
 - c. *Treponem carateum*- Pinta T
 - d. *Treponem endemicum* – Endemic Syphilis (BEJEL) T
 - e. *Treponoma pallidum*- Congenital Syphilis T

11. With Respect to Staphylococci, the following are true
 - a. It is the commonest cause of UTI in young women T
 - b. It produces glucose 6-phosphate dehydrogenase
 - c. *S. aureus* produces food poisoning characterized by a long incubation period F (short incubation period)
 - d. Only *S. aureus* ferments mannitol T
 - e. Nasal carriage of *S. Aureus* occurs in 20-40% of humans T

12. Drawbacks of Treponomal Tests include
 - a. Chances of acute and chronic biological false positives are always there
 - b. They do not indicate the response of the patient to treatment T
 - c. They are of limited diagnostic value in primary syphilis and latent syphilis
 - d. They are of doubtful diagnostic value in active neurosyphilis T
 - e. Quantitative treponomal tests are of no value in diagnosis or prognosis T

13. The following are important virulence factors of microorganisms
 - a. Toxigenicity T
 - b. Chemotaxis
 - c. Invasiveness T
 - d. Plasmid mediated phenotypic expressions T
 - e. Lymphocytes

14. With Respect to Gonorrhoea
 - a. The causative organism is a gram positive intracellular diplococcus
 - b. Incubation period is about 2-5 days T
 - c. Complications include infertility T
 - d. Symptoms in females include dysuria and vaginal discharge T
 - e. The best specimen for diagnosis in females is high vaginal swab T

15. Cholera Red reaction may be positive for the following bacteria
 - a. *Vibrio Cholera* T
 - b. *Proteus mirabilis*
 - c. *Proteus vulgaris* T
 - d. *Klebsiella pneumonia*
 - e. *Escherichia coli* T

16. The following are true about El tor biotype of *Vibrio Cholera*
 - a. Positive Voges-Proskauer's reaction T
 - b. Positive hemolysis production T
 - c. Negative CAMP test
 - d. Sensitive to group IV phage T
 - e. Sensitive to 50 units polymyxin B T

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17. The following bacteria pathogens of acute meningitis exhibit **antigenic variation**
- E. coli in neonatal period
 - N. meningitides T
 - Streptococcus agalactiae
 - H. influenza
 - Streptococcus pneumonia
18. False statements concerning Mycobacterium tuberculosis include
- In primary tuberculosis, the regional lymph nodes are primarily involved T
 - Pott's disease of the spine involves mainly lumbar vertebrae L1-L3
 - Secondary pulmonary tuberculosis is usually seen in adults in the tropics
 - Assman focus is usually a complication of secondary pulmonary tuberculosis T
 - Ghon focus is usually a complication of secondary tuberculosis
19. The true statements about Leprosy include
- Leprosy is a slow progressive infection affecting the skin and peripheral nerves by Mycobacterium leprae T
 - The spectrum/types of leprosy include TT, BT, BB, BL, and LL T
 - Lepromin test is NOT a delayed type of Hypersensitivity reaction
 - In lepromatous leprosy, there is strong T-Cell immune response
 - Fernandez reaction is an early reaction
20. The following statements are true about Nesseria Gonorrhoea
- Media for cultivation include Thayer Martin Medium, modified Thayer Martin medium, and Chocolate agar
 - It ferments glucose and maltose only with acid production
 - It is a gram positive diplococci
 - It is highly resistant to penicillins and cephalosporins
 - Possesses pili which act as virulence factor
21. The appropriate specimens for an adult with Streptococci pneumonia meningitis include
- Csf T
 - Blood
 - Nasopharyngeal swab T
 - Lung aspirate
 - Early morning urine
22. Bacterial virulence factors in favour of development of meningitides in humans include the following except
- Capsule
 - Pili T
 - Inner membrane protein F (outer)
 - Endotoxin T
 - igG protease F (igA)
23. The diagnosis of Gas Gangrene entails the following
- Inoculation of appropriate clinical specimen into thioglycate broth T
 - Demonstration of a positive Nagler reaction by the clinical isolate
 - Serological tests to demonstrate anti-clostridial antibodies
 - Demonstration of drum-stick bacilli in gram-stained smears of specimen T

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- e. Demonstration of 'stormy clot' in litmus milk tube inoculated with suspected isolates
24. Select the statements which are true
- Only people who have dealings with herbivores or their products are exposed to anthrax T
 - As cutaneous anthrax is limited to the skin, so is pulmonary anthrax limited to the lungs
 - Bacillus cereus can cause severe endophthalmitis or keratitis following penetrating traumatic injuries T
 - Enteritis necroticans is caused by Clostridium perfringens T
 - Fever, dysphagia, and diplopia are clinical features of botulism T
25. The following statements are correct with respect to Salmonella species
- They are found in virtually all animals T
 - Large inocula of 10^6 - 10^8 bacteria are required for symptomatic disease to develop
 - Incubation period of salmonella enteritis is 48-72 hrs
 - Septicemia is frequently caused by S. Typhimurium
 - Salmonella typhi is a member of the normal intestinal flora of humans
26. Select the statements which are true with respect to the normal microbial flora of GIT
- Lactic acid producing bacteria predominate in the mouth
 - Colonization of the mouth doesn't require the presence of teeth F
 - Enterobacteriaceae and bacterioides species predominate in the distal ileum
 - Intestinal bacteria synthesize many useful vitamins T
27. Dental caries,
- Is caused principally by Streptococcus mutans T
 - Requires the presence of dietary glucose T
 - Has no relationship with the PH of the mouth
 - Affects older people more than younger people
 - Can be controlled by restricting intake of sucrose and other refined carbohydrates T
28. Choose the correctly-matched pairs of enteric organism and pathogenic mechanisms
- Enterotoxin production: Vibrio Cholerae T
 - Cytotoxin: Clostridium botulinum
 - Neurotoxin: Staphylococcus aureus T
 - Attachment/Adherence: Rotavirus T
 - Invasion of tissue: Cryptosporidium parvum
29. The following organisms cause enteric infections which symptoms include watery diarrhea, no fever, no fecal leucocytes
- Shigella dysenteriae
 - Norwalk virus T
 - Bacillus cereus T
 - Salmonella typhi
 - Yersinia enterocolitica

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30. Post Streptococcal diseases includes
- Erysipelas
 - Puerperal fever
 - Sepsis
 - Rheumatic fever T
 - Acute glomerulonephritis T
31. In laboratory culture and isolation of campylobacter
- Ordinary blood agar can be used F
 - Incubation temperature of 37 degrees celsius is applied F (42degrees)
 - The Polybag system can be used T
 - Fortner's principle is useful T
 - Candle jar system can be used for economic reasons T
32. Media for Isolation of Campylobacter include
- MacConkey agar
 - Chocolate agar
 - CLED Medium
 - Butzler type medium T
 - Blood agar base with antibiotic T supplement
33. The following require both X and V factors
- H. ducreyi
 - H. influenza T
 - H. aegyptius T
 - H. hemolyticus T
 - H. parainfluenzae
34. The family pasturellaceae consist of
- Hemophilus
 - Bordetella
 - Brucella
 - Pasturella
 - Actinobacillus spp
35. Select correct options concerning Bacterial Taxonomy
- Caroleus Linneus is considered the father of taxonomy T
 - The name of an organism is derived from its shape, disease, discoverer T
 - Phylogenic and phenotypic approach can be used in classifying bacteria
 - Genetic approaching can be used in classifying bacteria T
 - Phage typing approach can be used in classifying bacteria T
36. Which of the following components is present only in Gram negative bacteria
- Peptidoglycan F
 - Flagellum
 - Pili
 - Capsule
 - Lipid A T
37. The following phases are in bacterial growth
- Lag phase T
 - Acceleration phase T
 - Log phase/ exponential phase T
 - Stationary phase T
 - Death/Decline phase T
38. Methods of Assessing Growth in Bacteria
- Total Cell Count method T
 - Viable Cell Count Method T
 - Dry Weight Method T
 - Nitrogen Content T
 - Turbidometric method/Colorimetric method T
39. Components of Genetic exchange

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- a. Conjugation T
- b. Transformation T
- c. Transduction T
- d. Transposition T
- e. mutation T

40. Concerning Mycobacterium

- A. High content of Mycolic acid T
- b. Dr. Armeur Hansen discovered M. Leprae in 1878 T
- c. Obligate pathogens include : M. Tuberculosis and M. Leprae and M. bovis T
- d. Manteux, Heaf Test, and Tuberculin test is an example of Hypersensitivity Type4 T
- e. Mycobacterium Avium Complex occurs in Immunocompromised individuals T

41. Concerning Vibrio Cholerae

- a. the medium for isolation include TCBS in which it forms a characteristic Greenish Agar
- b. effortless massive diarrhea is inflammatory in nature
- c. Vibrio cholera serogroup O1 and O139 responsible for disease T
- d. The A2 is the main toxin virulent toxin
- e. Epidemiological factors include 7 F's T

42. Complications of Meningococcal include

- a. Bleeding into Adrenal medulla T
- b. Bleeding into the Brain & Spleen T
- c. Bleeding into the Adrenal cortex
- d. Disseminated Intravascular Coagulation (DIC) T
- e. Sudden Progression to Coma T

43. Characterization of streptococci depends on

- a. Colour production on blood agar
 - b. Colony growth characteristics
 - c. Formation of spores
 - d. Hemolytic pattern on blood agar
 - e. antigenic composition of group-specific cell wall substances
44. Corynebacterium has the following characteristics
- a. Gram positive cocci
 - b. Form spores
 - c. possess swelling at one end
 - d. C. diphtheria produce a powerful exotoxin
 - e. C. diphtheria has no biotype

45. Commercial Production of penicillin came into effect through

- a. Alexander Fleming
- b. Louis Pasteur
- c. Chain and Florey T
- d. Robert Koch
- e. S. Waksman

46. Select the alpha hemolytic streptococci

- a. Strept. pyogenes
- b. Peptostreptococcus T
- c. S. Agalacticae
- d. S. pneumonia T
- e. S. durans T

47. Strept. Pyogenes is associated with

- a. Erysipelas T
- b. Surgical scarlet fever T
- c. Puerperal fever T
- d. Rheumatic fever T
- e. Sore Throat T

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48. Select the correctly matched pairs of organisms as it relates to the drug of choice used to treat it

- a. Chlamydia infection : Tetracycline
- b. Mycoplasma: Penicillin and iron
- c. Rickettsiae: 3rd Generation cephalosporin
- d. Chlamydia Psittacosis: Sulphonamide
- e. Chlamydia pneumonia: sulphnamide

49. Select the correctly matched pairs

- a. R. rickettsii – Rocky mountain Spotted fever T
- b. R. Akari- Rickettsial pox T
- c. R. Tsusugamushi – Scrub typhus T
- d. R. prowazekii – Lousebornetyphus T
- e. R. Typhi – flea borne endemic typhus T

50. False statements about Lepromin test include:

- a. Lepromin is a tissue extract
- b. Lepromin is from the causative bacteria
- c. Fernandez test is a late reaction
- d. Mitsuda test is an early reaction
- e. Mitsuda test is a late reaction

51. The following are true about gonorrhoea:

- a. Incubation period is 2-5 days T
- b. Water-burn perineum can be a complication T
- c. causative organism is a gram positive diplococcus
- d. causative agent ferments glucose and maltose T
- e. media for cultivation include chocolate agar and modified Thayer martin T

52. Chlamydia infection may include

- a. trachoma T
- b. inclusion conjunctivitis T
- c. psittacosis (ornithosis) T
- d. atypical pneumonia T
- e. Lymphogranuloma venereum T

53. True options concerning lymphogranuloma venereum

- a. Chlamydia trachomatis serotype D-K is implicated
- b. Chlamydia trachomatis serotype L1-L3 is implicated
- c. it may cause lymphadenitis, lymphatic obstruction, and urethral stricture T
- d. may present as kissing ulcer T
- e. it is not sexually transmitted

54. Correct option about Rickettsiae include:

- a. obligate intracellular parasite T
- b. Stains well with gram stain
- c. stains well with giemsa stain T
- d. Rickettsial disease manifests with rash, fever, vasculitis, except Q-fever TRUE
- e. Rickettsiae is a small bacteria that tapers at both ends

55. The unique features concerning Chlamydia spp include

- a. Their cell wall peptidoglycan is comparable to that of gram negative bacteria T
- b. their cells contain only RNA
- c. their cells contain only DNA
- d. their cells contain RNA and DNA T
- e. generally sensitive to the penicillins and cephalosporins

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56. True statements concerning *Chlamydia trachomatis*

- implicated in Trachoma, NGU, and cervicitis T
- Serotypes A-C implicated in Lymphogranuloma venereum
- Serotypes D-K implicated in PID in women T
- Serotypes L1-L4 implicated in trachoma
- Intracytoplasmic inclusion lack glycogen

57. True statements about *Chlamydia psittaci* include

- It is a zoonotic human disease T
- it is a natural disease of psittacine birds T
- intracytoplasmic inclusion contains glycogen
- it causes occupational disease among poultry workers T
- the sulfonamides are the drug of choice

58. Select the correctly matched pairs as it concerns Rickettsial spp and their respective causal diseases

- Rocky mountain spotted fever – *Rickettsia rickettsii* T
- Rickettsial pox – *Rickettsia tsutsugamushi*
- Louse born typhus – *Rickettsia akashi*
- Scrub typhus- *Rickettsia prowazeki*
- Scrub typhus *Rickettsia tsutsugamushi* T

59. *Corynebacterium* has the following characteristics

- Gram positive cocci
- form spores
- possesses swelling at one end T

d. *C. diphtheria* produces a powerful exotoxin T

e. *C. diphtheria* has no biotype

60. The following are reliable for diagnosis of *Legionella pneumophila*

- urine T
- stool
- sputum T
- blood T
- bronchial washings T

61. Drawbacks of treponemal tests include

- Chances of acute and chronic Biological false positives are always there
- They do not indicate the response of the patient to treatment T
- They are of limited diagnostic value in primary syphilis and latent syphilis
- They are doubtful diagnostic value in active neurosyphilis T
- Quantitative treponemal tests are of no value in diagnosis or prognosis T

61. **False statements** concerning *Mycobacterium tuberculosis* include

- In primary pulmonary tuberculosis, the regional lymph nodes are primarily involved
- Potts disease of the spine involve mainly lumbar vertebrae L1-L3 T
- Secondary pulmonary tuberculosis is usually seen in the adults in the tropics T
- Assman focus is usually a complication of secondary pulmonary tuberculosis
- Ghon focus is usually a complication of secondary pulmonary tuberculosis T

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62. The following are toxins produced

by *S. Aureus*

- A. Lecithinase
- B. Hemolysins T
- C. Betalactamases T
- D. Enterotoxins T
- E. IgA1 proteases

63. The following antibiotics are bacteriostatic in action

- A. Nalidixic acid T
- B. Tetracycline T
- C. Cephalosporins - cidal
- D. Erythromycin - cidal
- E. Sulphonamides T

64. Antimicrobial agents that impair DNA function include

- A. Nalidixic acid
- B. Tetracycline T
- C. Cephalosporins
- D. Erythromycin T
- E. Sulphonamides

65. The following are important virulence factors of microorganisms

- A. Toxigenicity T
- B. Chemotaxis
- C. Invasiveness T
- D. Plasmid mediated phenotypic expression T
- E. Lymphocytes

66. The following are true with respect to treponemes

- A. They stain gram negative by the gram method T
- B. Pathogenic *T. Pallidum* can be cultured using tissue culture
- C. Some species cause syphilis which can be transmitted through blood transfusion T

D. The primary stage in syphilis is characterized by the appearance of chancre T

E. The infection caused by *T. Pallidum* cannot be spread throughout formites

67. Gram staining reagents include the following

- A. Crystal violet T
- B. Lugol's iodine T
- C. Strong Carbol fuschin
- D. Acid alcohol
- E. Safranin T

68. Mechanism of resistance to antimicrobial drugs include the following

- A. Inhibition of nucleic acid synthesis
- B. Production of enzymes that destroy the active drug T
- C. Microorganisms change their permeability to the drug T
- D. Inhibition of cell wall synthesis
- E. Inhibition of protein synthesis

69. The following are members of family spirochaetaceae

- A. *Borrelia*
- B. *Spirochaeta* T
- C. *Treponema*
- D. *Mycoplasma*
- E. *Leptospira*

70. Specific antibody tests for the Diagnosis of syphilis

- A. Venereal disease research laboratory test (VDRL)
- B. *Treponema pallidum* immobilisation test (TPI) T
- C. *Treponemal pallidum* immobilisation hemagglutination test (TPHA)

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- D. Fluorescent microscopy test
- E. Dark ground illumination

71. Characteristics of acquired immunity

- A. Specificity T
- B. Pathogenicity
- C. Memory T
- D. Localisation T
- E. Inflammatory response

72. Taxonomy consists of the following:

- A. Classification T
- B. Nomenclature T
- C. Morphology
- D. Species
- E. Identification T

73. Common skin flora among the staphylococci include:

- A. *S. epidermidis* T
- B. *S. aureus* T
- C. *S. Hominis*
- D. *S. saprophyticus*
- E. *S. capitis*

74. Important infection caused by *S. aureus* include

- A. Rheumatic fever
- B. Glomerulonephritis
- C. Acute osteomyelitis T
- D. Sore throat T
- E. Food poisoning T

75. Advantages of VDRL test include the following

- A. It is simple and rapid T
- B. The results are reproducible T
- C. False positive reactions do not occur
- D. It is useful in diagnosis of congenital syphilis

E. It is as specific as the *Treponema pallidum* complement fixation test

76. The following enzymes play important roles in the infection process

- A. Coagulase T
- B. Creatinine phosphokinase
- C. Collagenase T
- D. Glucose 6-phosphate dehydrogenase (Diagnostic role)
- E. Proteases T

77. The following are true of leptospirosis

- A. The mode of entry of the causative organism into the host is by penetration of the lower limb F (mucous membrane & wounds)
- B. Domestic as well as wild birds act as reservoir T
- C. In Weil's disease, hemorrhages can be seen in various organs and epistaxis may be present T
- D. Dark field and fluorescent microscopy is used to demonstrate the organisms from materials T
- E. Aseptic meningitis is more severe than Weil's disease

78. Select only the correctly matched pairs

- A. Alpha hemolysis – *Streptococcus pneumoniae* T
- B. Beta hemolysis – *Streptococcus agalactiae* T
- C. Gram positive cocci – *Staph. aureus* T
- D. Gram negative cocci – *Pseudomonas aeruginosa* F (g (-) bacilli)
- E. Catalase positive – *S. epidermidis*

79. *Corynebacterium diphtheriae*

- A. It is the cause of whooping cough

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- B. It is the cause of diphtheria T
- C. Causes wheezing T
- D. Causes enterocolitis
- E. Causes glandular fever

80. These are true of the diagnosis of diphtheria

- A. Produces exotoxin T
- B. Produces endotoxin
- C. Can be diagnosed by Elek's test T
- D. Is a gram positive coccus
- E. Is a gram negative coccus

81. These are involved in pathogenesis of diphtheria

- A. A gene is responsible for the production of cytotoxin T
- B. Toxigenic strains are infected by a phage T
- C. There is formation of a pseudomembrane across the pharynx T
- D. The organisms multiply intracellularly within macrophages
- E. The toxin consists of one polypeptide T

82. Bacterial growth can be quantified in the laboratory by:

- A. Germ tube inoculation
- B. Growth on agar plates T
- C. Growth in suspension
- D. Total plate count T
- E. Viable plate count T

83. Choose the correct pairs:

- A. Log phase- Adjustment to the new environment F (lag phase)
- B. Log phase: there is maximum growth T
- C. Lag phase: Depletion of nutrients F (stationary phase)

- D. Death phase: growth rate approximates death rate F (log phase)
- E. Death phase: maximum toxicity in the suspension F (stationary phase)

84. The bacterial growth time is known as

- A. Doubling time T
- B. Generation Time T
- C. optional time
- D. Degeneration time
- E. Fusion time

85. These are true of bacterial genetic material:

- A. Made of only DNA T
- B. Made up of only RNA
- C. Made up of both DNA & RNA
- D. Made up of a single chromosome T
- E. Contain plasmids T

86. Bacterial recombination can be by

- A. Conjugation T
- B. Transduction T
- C. Transcapsidation
- D. Heterozygosis
- E. Transformation T

87. Mutation in bacterial can affect

- A. Colonial morphology T
- B. Antibiotic resistance T
- C.. virulence T
- D. Antigenicity T
- E. Biochemical reactions T

88. Genetic exchange in viruses include

- A. Conjugation T
- B. Transformation T
- C. Phenotypic mixing
- D. Heterozygosis
- E. Complementation

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89. The first outstanding scientific publications was contagion b

- A. A. Leeuwenhoek
- B. A. Bassi
- C. H. fracastoro T
- D. Edward Jenner
- E. Benjamin Marten

90. Penicillin was discovered in

- A. 1940
- B. 1929 T
- C. 1884
- D. 1729
- E. 1720

91. The postulate put forward as a proof requires before a particular microbe could be accepted as a cause of a disease was by

- A. Louis Pasteur T
- B. Christian Gram
- C. Alexander Fleming
- D. Robert Koch
- E. Chain and Florey

92. Specimens for diagnostic microbiology include:

- A. Blood T
- B. Urine T
- C. Stool T
- D. Muscle
- E. CSF T

93. The following media are best suited for campylobacter's isolation

- A. Skirrows medium T
- B. Butler's type medium T
- C. Campy Bap medium T
- D. Blood agar
- E. macconkey agar

94. Campylobacter are

- A. Strictly aerobic
- B. Strictly anaerobic
- C. Gram negative curved rods T
- D. Microaerophilic T
- E. Aerobic

95. The following are needed for the diagnosis of Helicobacter pylori

- A. Test for acid fastness
- B. Coagulase test
- C. Catalase test T
- D. Oxidase test T
- E. Urease test T

96. For Laboratory Diagnosis of cholera

- A. Alkaline peptone water should be used as transport medium F (culture medium)
- B. It is best to collect fresh fecal material by catheter T
- C.. serological identification is by means of anti-O1 polyclonal antisera
- D. It is best to collect solid stool F
- E. Sample should be played on acidic blood agar F

97. For quick diagnosis of cholera the following are needed:

- A. Dark ground illumination microscopy T
- B. Liquid stool T
- C. Hard stool
- D. Specific antiserum T
- E. Light source microscope

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98. Streptococcus Pyogenes is associated with

- A. Erysipelas T
- B. Gingivitis
- C. Puerperal Fever T
- D. Surgical scarlet fever T
- E. Rheumatic fever T

99. Choose the correct options about legionella

- A. Produce gelatinase T
- B. Are aerobic T
- C. Are gram negative small rods T
- D. They are catalase positive T
- E. Air conditioners are not an important factor

100. Characteristics of mycobacteria include

- A. Exist as free-living saprophytes
- B. Availability to ferment sugars oxidatively T
- C. Cell wall contain mycolic acid T
- D. Cannot resist Alkalis F
- E. Not able to resist decolourization by weak mineral acid F

101. With respect to Bartonella spp.

- A. They are gram negative rods T
- B. They are pleomorphic T
- C. Slow growing T
- D. They are not flagellated
- E. Easy to isolate in the laboratory

102. Bacteria that cause vaginosis include:

- A. N. Gonorrhoea
- B. Staph. Aureus
- C. Strept. Agalacticae
- D. Gardnerella vaginalis T
- E. Mobiluncus spp T

103. The following systems can be used for isolation of campylobacter

- A. Anaerobic jar
- B. Open incubator
- C. Fortners principle T
- D. Candle jar system T
- E. Evacuation-replacement system T

104. Select alpha-hemolytic Streptococci

- A. Strept. Pyogenes
- B. Strept agalacticae
- C. Peptrostreptococcus T
- D. Strept. Pneumonia T
- E. Strept. Durans T

105. Water can be made safe by

- A. Boiling T
- B. Exposure to sunlight (radiation) T
- C.. adding of chlorine T
- D. Treatment with herbs
- E. Filter with cloth material T

106. Normal flora

- A. Are organisms which are found in or on the various parts of humans under normal circumstances T
- B. Are exclusively bacterial in nature
- C. Never cause disease to humans
- D. Remain the same from birth to death of an individual
- E. May contribute to the well being of the host T

107. The following organisms which occur as normal flora are commonly pathogenic

- A. Neisseria gonorrhoea T
- B. Streptococcus pneumoniae T
- C. Salmonella typhi
- D. Clostridium perfringens T
- E. Bacillus stearothermophilus

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108. The following are disinfecting rather than sterilising:

- A. Pasteurization T
- B. Hot air oven
- C. 70% ethanol T
- D. Autoclaving
- E. Steam at atmospheric pressure T

109. Select the correctly matched pairs of disinfectants/sterilants and appropriate application

- A. Inoculation hood: Ultraviolet radiation T
- B. Bacteriological media: Boiling at 100 degree Celsius
- C. Soiled wound dressing: Hot air oven
- D. Skin Disinfection: Povidone iodine T
- E. Blood stained laboratory bench: Hypochlorite

110. The following Hemophilus species require X and V factors

- A. H. influenzae T
- B. H. Parainfluenza
- C. H. Aegyptus
- D. H. ducreyi
- E. H. Hemolyticus T

111. Hemophili cause

- A. Gastroenteritis
- B. Chancroid T
- C. Urethritis
- D. Conjunctivitis T
- E. Meningitis T

112. The following belong to the family enterobacteriaceae

- A. *Klebsiella* T
- B. *Pseudomonas aeruginosa*
- C. *Yersinia pseudotuberculosis* T
- D. *Vibrio cholerae*

E. Proteus mirabilis T

113. *Enterobacteriaceae* can cause the following diseases

- A. Cholera
- B. Plague T
- C. *Bacillary dysentery* T
- D. *Giardiasis*
- E. *Typhoid fever* T

114. The following are non- lactose fermenting

- A. *Escherichia species*
- B. *Klebsiella species*
- C. *Shigella species* T
- D. *Citrobacter species*
- E. *Yersinia species* T

115. Virulence factors of *Enterobacteriaceae* include

- A. *Teichoic acid*
- B. *Endotoxin* T
- C. *Capsule* T
- D. *Peptidoglycan*
- E. *Fibrinolysin*

116. Select the statement which are true of the family *Bacillaceae*

- A. They are gram positive anaerobic bacilli
- B. They all form endospores T
- C. All *Bacillus* species are pathogenic
- D. Many clostridia secrete a wide array of toxins T
- E. *Bacillus* are common environmental contaminants T

117. Select the true statement concerning anthrax

- A. The causative agent is *Bacillus Anthracis* T

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B. The disease is exclusive to humans who handle animals or their products

T

C. The incubation period for cutaneous anthrax is 1-7 days

D. Mortality is greatly reduced in appropriately treated patients

E. The causative organism requires a enriched medium for primary isolation

118. Clostridium perfringes

A. Is a member of the normal flora of humans

B. Causes cellulitis, fasciitis, and other soft tissue infections

C. Gives a positive McFayden's reaction with polychrome methylene blue

D. Growth is enhanced by hyperbaric oxygen

E. Is non-hemolytic on blood agar

119. Tetanus,

A. Is caused by a strictly aerobic gram positive bacillus

B. Is caused by invasion of the causative organism into the central nervous system, via the blood stream

C. Fetal death

D. Pneumonia

E. Subacute sclerosing panencephalitis (SSPE)

120. Choose the correct options about the legionella

A. Became known following it's outbreak in Philadelphia and Michigan

B. They are gram negative small rods

T

C. They are catalase positive

D. They are aerobic

E. Produce gelatinase

121. The following specimens are reliable for the diagnosis of legionella pneumophila

A. Urine

B. Bronchial washings

C. Sputum

D. Lung biopsy

E. Blood

122. Carcinogenic substances can

A. Physical

B. Chemical

C. Biological

D. Mutagenic

E. None of the above

123. These are true of transformation in bacteria

A. Transfer of naked DNA in solution

B. Occurs in Escherichia

C. Occurs in Neisseria

D. Occurs in Clostridium

E. Occurs in Bacillus

124. These are true of Corynebacterium

A. Are gram negative cocci

B. Are gram negative bacilli

C. Are gram positive bacilli

D. Are gram positive cocci

E. Are oxidase positive

125. These are not true of bacterial growth and reproduction

A. Involves binary fission

B. Involves transverse binary fission

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- C. Involves increase in mass T*
- D. Involves increase in height T*
- E. Includes fragmentation*

*126. With respect to anaerobes,
A. They are found in the mucosal
surfaces and GIT T*

*B. Do not produce heparinase,
collagenase, and other enzymes that
damage tissue*

*C. Bacteroides fragilis is the most
important pathogen among those
that are part of normal flora*

*D. Clinical signs of infection caused by
them include infection in proximity to
a mucosal surface T*

*E. Penicillin G is the drug of choice
that involve Beta lactamase producing
species*

*127. Diseases produced by
Actinomycetes include*

A. Nocardiosis T

B. Gingivo-stomatitis

C. Acne

D. Actinomycosis T

E. Pleuropulmonary disease

*128. Features suggestive of anaerobic
infections include*

A. Gas in tissue and discharge T

*B. Presence of multiple ulcers on the
skin*

C. Septic thrombophlebitis

D. Necrotic tissue and gangrene T

E. Presence of pulmonary infection

*129. Anaerobic bacteria are normally
the most common Bacteria in the*

A. Oral cavities

B. Upper GIT T

C. Female genital tract

D. Urinary tract

E. Central nervous system

*130. The following are true about
Borrelia*

A. They are strict aerobes T

*B. All forms of relapsing are clinically
identical T*

*C. The louse borne European
Relapsing fever caused by the
organism is transmitted from man to
man by the body louse T*

*D. Borrelia buccale is the causative
agent of Vincent's angina T*

*E. They are easily stained by Gention
violet giemsa stains T*

*131. The following antibiotics inhibit
cell wall formation*

A. Vancomycin T

B. Tetracycline

C. Penicillin T

D. Erythromycin

E. Novobiocin

*132. The following are true of
antimicrobial Agents*

*A. Those that reversibly inhibit growth
of bacteria are called bacteriocidal*

*B. Those that are produced
synthetically but have action similar
to that of antibiotics are called
chemotherapeutic agents T*

*C.. the cephalosporins contain Beta
lactamase structure that is similar to
that of the penicillin T*

*D. Those that inhibit nucleic acid
synthesis function by hydrolyzing a
bond in the Beta lactam ring*

*E. Sulphonamide is an example of
those that inhibit protein synthesis*

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133. *Clostridium* species,

- A. Are large anaerobic or aerobic rectangular bacilli
- B. Are all motile gram positive organisms found in the soil and intestinal tracts of animals and humans
- C. Grow well in enriched media incubated in candle-jar T
- D. Commonly ferment carbohydrates producing acid and large amounts of gas T
- E. Which are pathogenic, produce large amounts of toxins T

134. Tetanus infection,

- A. Is caused by *Clostridium tetani* T
- B. mediated by the toxin tetanolysin T
- C. Leads to the blockage of neurotransmission at peripheral cholinergic synapses
- D. Presents with flaccid paralysis commonly
- E. Presents with bulbar paralysis commonly

135. Diagnosis of gas gangrene entails the following

- A. Inoculation of appropriate clinical specimen into thioglycollate T
- B. Demonstration of positive Naeglar reaction by the clinical isolate T
- C. Serological tests to demonstrate anti-clostridial antibodies
- D. Gram-stained smears to show gram positive motile rods T
- E. Demonstration of the production of phospholipase C T

136. *Clostridium difficile*

- A. Causes antibiotic-associated pseudomembranous colitis T
- B. Occurs normally in the gastrointestinal tract of man T
- C. Produces two toxins, an exotoxin and an endotoxin
- D. Is associated with long term use of some broad spectrum antibiotics T
- E. Is highly susceptible to antibiotics such as clindamycin and ampicillin

137. The following features are important in the laboratory diagnosis of *Hemophilus Meningitis*

- A. Alpha hemolysis
- B. Demonstration of satellitism
- C. Oxidase positive reaction
- D. Demonstration of requirements for X and V Factors
- E. Organism is gram positive cocci

138. Characteristics of acquired immunity include

- A. Self limiting
- B. Specificity T
- C. Non-self limiting
- D. Diversity
- E. More effective in males and females

139. These do not happen on the exponential phase

- A. Death of bacterial cell
- B. Increase in metabolism
- C. Increase in toxicity
- D. Decrease in metabolism
- E. Increase in cell division

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140. *Corynebacterium* is

- A. Gram positive rods
- B. Gram positive cocci
- C. Comma shaped
- D. Club shaped T
- E. Spiral shaped

141. In the pathogenesis of *Corynebacterium diphtheria*

- A. There is formation of a thick adherent exudates T
- B. Toxigenicity is due to a lysogenic relationship with a phage T
- C. There are 3 biotypes
- D. There are 3 serotypes
- E. There are 3 phagetypes

142. A gene,

- A. Is defined as a functional unit of DNA
- B. Occupies a locus
- C. Directs the synthesis of proteins
- D. Is self-reproducing
- E. Is self transposable

143. These are involved in bacterial genetic exchange

- A. Transformation
- B. Transduction
- C. Conjugation
- D. Mutation
- E. Genotypic mixing

144. Select the statements that are true of disinfection and sterilisation

- A. Absolute ethanol disinfects better than 70% ethanol
- B. Antiseptics can be used to achieve sterilisation
- C. Objects that are disinfected do not harbour viable micro-organisms

D. Heat and filtration methods can achieve sterilisation when properly applied

E. Sterilisation implies the complete removal or inactivation of microorganisms

145. *Clostridium perfringens* is associated with

- A. Uterine myonecrosis
- B. A positive McFayden's reaction
- C. Typical drumstick appearance in gram-stained smears
- D. "Stormy clot" reaction in litmus milk medium
- E. Profuse secretion of a wide array of toxins

146. Select the statements which are untrue about Tetanus

- A. An important predisposing factor is extensive tissue damage
- B. The causative organism invades the blood stream and central nervous system
- C. Low tissue oxidation-reduction potential is an important predisposing factor
- D. Trismus or lock-jaw is a common feature of generalized tetanus
- E. Neonatal tetanus remains an important cause of mortality in developed countries of the world

147. Virulence factors of *Neisseria gonorrhoea* include

- A. The enzyme lecithinase
- B. Potent exotoxin
- C. IgM protease
- D. Lipo oligosaccharide
- E. Protein antigens I, II, and III

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148. *Escherichia coli* is associated with

- A. Asymptomatic colonization of the GIT
- B. Majority of community acquired UTI
- C. A wide variety of adhesions and toxins
- D. Exogenous contamination leading to infection and disease
- E. Formation of heat resistant spores

149. Bacterial causes of sore throat usually includes

- A. *Vibrio parahemolyticus*
- B. *M. Tuberculosis*
- C. *Campylobacter spp*
- D. *Neisseria gonorrhoea* T
- E. *Strept.spp* of Lancefield Group A T

150. General under the family Bacillaceae

- A. *Brucella*
- B. *Bacillus*
- C. *Borrelia*
- D. *Clostridium*
- E. *Bordetella*

151. Concerning Anthrax

- A. Anthrax is a direct human infectious disease
- B. It is associated with woolsorters disease
- C. For a successful infection *B. Anthracis* must invade the host innate immune system by killing the macrophages
- D. EF has adenylate cyclase activity that increases intracellular cAMP
- E. NONE of the above

152. Concerning vectors of *Rickettsiae*

- A. *R. Rickettsii* – mite
- B. *R. Akari* - tick
- C. *R. Typhi* - flea
- D. *R. Tsutsugamushi* – Tick
- E. *R. Prowazekii* – Louse

153. True about Penicillin discovery

- A. Discovered in 1929 T
- B. Discovered by Chain and Florey
- C. Discovered by Hoeffler and Frisch
- D. Commercial production began in 1949
- E. commercial production began in 1940 T

154. An approach in bacteria classification

- A. Phylogenetic T
- B. Genome sequencing
- C. Protein sequencing and profile T
- D. Adamsonian T
- E. Computerized T

155. About *Vibrio* spp.

- A. Most are oxidase -ve, distinguishing them from *Enterobacteriaceae* which are oxidase +ve
- B. *Vibrio vulnificus* cause ear and other extra intestinal infection
- C. Their selective transport medium includes alkaline blood agar
- D. *Vibrio* infection without diarrhea is known as cholera sicca
- E. Characteristic diarrhea in cholera infection is effortless and massive

156. The virulence factors of *Bordetella pertussis* include

- A. The antigens A and M
- B. Tracheal cytotoxin T

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- C. Hyaluronidase enzyme
- D. Heat labile toxin T
- E. Filamentous hemagglutinin T

157. Whooping cough
- A. Collection of perinasal swab specimen T
 - B. Gram stain examination of the smear from the swab T
 - C. Incubation of the inoculated Bordet-Gengou agar plate for a maximum of 48 hrs
 - D. Slide agglutination examination of isolate using specific antiserum T

158. Gardnerella vaginalis is associated with
- A. Gram stain variability T
 - B. Large gram positive Bacilli
 - C. Anaerobic vaginosis T
 - D. Optimal growth of 42°C
 - E. Beta hemolysis T

159. Choose the correctly matched pairs of Hemophili and associated diseases
- A. H. Aegyptius- Acute contagious conjunctivitis T
 - B. H. Parainfluenza- Endocarditis T
 - C. H. Influenzae- cellulitis T
 - D. H. ducreyi- Chancre T
 - E. H. Parahemolyticus- bronchopulmonary pneumonia

160. Brucellosis,
- A. Refers to Malta fever, undulant fever, or Gibraltar fever T
 - B. Is caused by a gram -ve, aerobic pleomorphic bacillus T
 - C. Is commonly feco-orally transmitted
 - D. Can be transmitted via inhalation T

- E. Has an acute onset and runs a short but often fulminant course

161. Select the correct options about Mycobacteria

- A. They form mould like pellicle in liquid medium T
- B. Referred to as fungus bacterium T
- C. They are gram negative
- D. They are acid fast T
- E. They are gram positive

162. Choose the statements that are correct with respect to Yersinia spp.

- A. Yersinia pestis is a highly virulent organism and it causes a disease with a high mortality T
- B. The organism is transmitted feco-orally
- C. Yersinia organisms replicate in the M cells T
- D. Yersinia do not survive in neutrophils
- E. Virulent yersiniae are non capsulated T

163. Hemophilus influenzae is associated with the following

- A. Growth on ordinary laboratory media incubated anaerobically
- B. Variation in virulence between capsule and non-capsule strains T
- C. Secretion of IgA protease T
- D. Acute bacterial epiglottitis, Meningitis, and otitis T
- E. Requirement of CO₂ for growth and production of hemolysins T

164. Select the statements which are correct with respect to the diagnosis of typhoid fever

- A. Blood and faeces for culture should be collected by the first week of illness

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- B. Faeces should be inoculated onto an enrichment medium such as Tetrathionate broth*
- C. Significant bacteria is an important consideration when urine is cultured*
- D. Blood for serological diagnosis can be collected at any time*
- E. A four-fold rise in titre of antibodies is more diagnostically significant than a single raised titre*

165. *Neisseria gonorrhoea,*
- A. Has no other known reservoir than man T*
- B. Infects the eye, throat, joints, and urethra T*
- C. Causes vulvovaginitis in post-pubertal women*
- D. Always causes symptomatic infections*
- E. Is motile with a single polar flagellum*

166. *Select the statements which are true*
- A. Gonorrhoea is more commonly diagnosed in men than women T*
- B. Asymptomatic carriage is more common in women than in men T*
- C. The peak incidence of gonorrhoea is in adolescents T*
- D. Both piliated and non-piliated gonococci are virulent*
- E. Gonococci do not survive intracellular within polymorphs*

167. *The following characteristics are true of S. Aureus*
- A. Produce Beta hemolysis*
- B. Colonies are usually white*
- C. Produces DNA-ase*
- D. Novobiocin resistant*

- E. Produce coagulase*

168. *Clostridium difficile ,*
- A. Cause antibiotic associated pseudomembranous colitis T*
- B. Occurs normally in the GIT of man T*
- C.. produces two toxins, an Exotoxin and Endotoxin F*
- D. Is associated with long-term use of some broad spectrum antibiotics T*
- E. Is highly susceptible to antibiotics such as clindamycin and ampicillin F (metronidazole and vancomycin)*

169. *The following are examples of second generation cephalosporins*
- A. Cefotetan T*
- B. Cefuroxime T*
- C.. Cefepine*
- D. Cefotetan*
- E. Ceftriaxone*

170. *The following antimicrobial agent inhibit protein synthesis*
- A. Tetracycline T*
- B. Nalidixic acid*
- C. Chloramphenicol T*
- D. Nystatin*
- E. Bacitracin*

171. *Factors influencing antimicrobial drug effectiveness*
- A. Drug must be able to reach site of infection T*
- B. Development of altered enzyme by microorganisms is not important*
- C.. Pathogen must be susceptible to the drug T*
- D. Pathogen's MIC must exceed the chemotherapeutic agent*
- E. Absence of drug resistant genes in microorganisms*

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172. *Brucella species*

- A. Small non-motile grain positive cocco-bacilli
 - B. Obligatory intracellular parasites
 - C. Requires an aminoglycoside and/or Doxycycline for treatment
 - D. Transmitted via unpasteurised milk
 - E. Are primarily animal pathogens which infect men who are close contact with animals or their products
- T

173. The following are antiseptics

- A. Glutaraldehyde
- B. Formaldehyde
- C. Iodophor T
- D. Silver sulfadiazine T
- E. Chlorhexidine T

174. Match the correct pairs

- A. Impaired DNA Function – Tetracycline T
- B. Damage to cell membrane – Nystatin T
- C. Inhibit cell wall synthesis – Erythromycin
- D. Acts on 30S ribosome – Metronidazole
- E. Metabolic antagonist – Isoniazid

175. Mechanisms of drug resistance

- A. Altered enzymes of microorganisms T
- B. Altered structural target T

C. Altered metabolic pathway T

D. Altered permeability

E. Enzymes that destroy active drugs

176. Desirable properties of an antimicrobial agent include

- A. Preferably bacteriostatic F (bacteriocidal)
- B. Long shelf life T
- C. Inactivated in plasma and body fluids F (should remain active)
- D. Specific, not effective against a wide range of organisms F
- E. Non selective toxicity F (selective toxicity)

177. Match the correct pairs

- A. *H. Ducreyi* – X and V Factors
- B. *H. Aegyptius* - CO₂ and X factor
- C. *H. aphrophilus* - CO₂ and X Factor T
- D. *H. parainfluenza* – X factor
- E. *H. parahemolyticus* – V Factor T

178. Concerning Gram staining select the correctly matched pairs

- A. Gentian violet – Secondary stain
- B. Lugol's iodine – Mordant T
- C. Acetone- decolourizer T
- D. Safranin red – secondary stain T
- E. Concentrated strong Carbol fuschin- secondary stain

179. During the severe cholera epidemic in 1854, Dr. John Snow helped to stop the spread by

- A. Encouraging washing
- B. Preventing passing of Fecal matter in open areas that could contaminate water supply
- C. Removal of handle of a water pump where the spread was greatest T
- D. Inventing the first cholera vaccine

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E. Isolating the causative organism and prescribing drugs for it

180. The vibrio cholera factor responsible for diarrhea is a toxin that

- A. Blocks EF-2
- B. Yields increased intracellular levels of cyclic AMP T
- C. Cleaves VAMP
- D. Blocks EF-1 dependant binding of amino acyl t-RNA to ribosome
- E. Cleaves SNARE

181. Which of the following statements is **incorrect**?

- A. Endotoxins are produced only by gram negative bacteria except in the case of *Listeria* which is gram (+)
- B. Exotoxin is specific for particular tissue while endotoxin is not specific in action F
- C. The gravis biotype of *C. Diphtheria* may produce more severe disease than mitis
- D. Diphtheria toxin is heat labile, single chain, and weighs 62KDA T (double chain)
- E. Exotoxin is an integral part of the organism's cell wall T (endotoxin is integral)

182. Sterilisation can be achieved by

- A. Tyndallization T
- B. Heating to temperatures greater than 100°C T
- C. Membrane filtration T
- D. Pasteurization F (disinfects)
- E. Use of chlorhexidine T

183. *Gardnerella vaginalis*

- A. Presents as a commensal in almost 50% of normal women T

b. resistant to Gentamicin T

c. Shows metachromatic granules in special staining T

d. Causative organism in bacterial vaginosis T

e. grows more favourably in the presence of CO₂ T

184. *Corynebacterium diphtheria*

a. involved in pseudomembrane formation in the tonsils, pharynx, and larynx T

b. Colonies are brown with black halo on tellurite agar T

c. have club shaped appearance T

d. associated with metachromatic granules T

e. Pseudomonas aeruginosa produced a toxin with a similar mode of action as diphtheria toxin T

185. Concerning Microbiological discoveries

a. Waksman discovered Streptomycin in 1943 T

b. Complete nucleotide sequence of yeast was discovered in 1997 T

c. Thort and Hercules discovered bacteriophage in 1917 T

d. Cholera was first described by John Snow

e. HIV was discovered in 1983 T

186. The following is true about Bacterial Growth curve **except**

a. It consists of four phases T (6 stages)

b. The exponential phase is inconstant

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- c. stationary phase is longest
- d. the log phase is the period of exponential growth and is the longest
- e. the generation time in lag phase is the longest T

187. Concerning Streptococci

- a. *Strep faecalis* belongs to Lancefield group G
- b. Viridans streptococci are the principal cause of infective endocarditis T
- c. Enterococci are an example of gamma hemolytic strep
- d. *S. agalacticae* is an important cause of neonatal sepsis and meningitis and belongs to Lancefield group C
- e. Gamma hemolysis means no hemolysis T

188. Staphylococci

- a. Gram positive rods
- b. Catalase positive
- c. *S. aureus* is the only coagulase positive strain T
- d. *S. saprophyticus* is one of the most common causes of Urinary Tract Infection (UTI) in sexually active women T
- e. Can be normal flora in certain areas of the body T

189. About sterilizing and disinfecting agents

- a. Formaldehyde denature protein
- b. Some can promote bacterial growth
- c. Chlorine is a powerful stain antiseptic
- d. Savlon is an example of biguanine T

- e. Alcohols denature proteins

190. Products of *Staphylococcus* include

- a. Protein B
- b. Leucocidin T
- c. Hemolysins T
- d. alpha lactamase
- e. Hyaluronidase T

192. The following are true about endotoxins

- a. Heat labile
- b. Converted into toxoid
- c. No anti-toxin formed T
- d. Heat stable T
- e. Highly antigenic

193. For the diagnosis of *Legionella pneumophila* the following conditions

- a. Nutrient agar
- b. CLED
- c. Deoxycholate agar
- d. Buffered charcoal yeast extract agar
- e. Antibiotics can be added to make the medium selective

194. Characteristics of *Campylobacter* include

- a. Gram positive non motile bacilli
- b. Gram negative non motile bacilli
- c. Gram negative negative, motile, and spiral shaped T
- d. Gram positive, motile spirochaete
- e. Gram negative, darting, spirochaete T

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195. The following are needed for the diagnosis of *Helicobacter pylori*

- a. Strict anaerobiosis
- b. Microscopy of stained biopsy specimen
- c. Catalase positive
- d. Coagulase test
- e. Urease test T

196. Diseases caused by *Escherichia coli* include

- a. Weaning Diarrhoea T
- b Hemorrhagic colitis T
- c. Urinary tract infections T
- d. Epidemic cerebrospinal fever
- e. Chronic constipation

197. The following statements are true concerning *Bacillus Anthracis*

- a. It is a large Gram positive rod which tends to occur in a long serpentine chain in culture T
- b. it forms endospores which ensure its survival in soil for many years T
- c. The polypeptide capsule is the sole virulence factor
- d. The organism has in the recent past been used as a weapon of bioterrorism T
- e. It gives a positive reaction to the Nagler test

198. Gas-gangrene, is associated with

- a. *Clostridium perfringens* and other clostridia T
- b. An array of toxins including phospholipase C T
- c. Rapid fermentation of muscle glycogen leading to large amount of gas T

d. Exclusive exogenous contamination of traumatized tissue by the etiological organism

e. Rapid diagnosis it MacFayden's stain

199. *Hemophilus* species share the following characteristics

- a. Small gram negative pleomorphic rods T
- b. Form endospores under harsh environmental conditions
- c. Commonly produce oxidase and catalase enzymes
- d. All require X and V enzymes for growth
- e. Many cause important human diseases T

200. *Brucella* species

- a. Are small non-motile gram positive cocco-bacilli F (gram -ve)
- b. Are primarily animal pathogens which infect men who are in close contact with animals their products T
- c. All require carbon dioxide, and hydrogen sulphide
- d. Are obligatory intracellular parasites T
- e. Are transmitted via unpasteurized milk T

201. Characterization of streptococci depends on

- a. Colour production on blood agar T
- b. Colony growth characteristics
- c. Formation of spores
- d. Hemolytic pattern on blood agar T
- e. Antigenic composition of group specific cell wall substances T

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202. The following are associated with penicillin

- a. Louis Pasteur
- b. Robert Koch
- c. Alexander Fleming T
- d. S. Waksman
- e. Chain and Florey T

203. Bacterial causes of sore throat include

- a. Strep spp of Lancefield Group A T
- b. Vibrio parahemolyticus
- c. Neisseria gonorrhoea
- d. M. tuberculosis
- e. Clostridium tetani

204. Dental caries

- a. Is caused principally by Streptococcus mutans T
- b. Requires the presence of dietary glucose T
- c. Has no relationship with the pH of the mouth
- d. Affects older people more than younger people
- e. Can be controlled by restricting intake of sucrose and other refined carbohydrate T

205. Choose the correctly matched pairs of enteric organisms and pathogenic mechanism

- a. Enterotoxin production: Vibrio cholera T
- b. Cytotoxin: Clostridium botulism
- c. Neurotoxin: Staphylococcus aureus
- d. Attachment/Adherence: rotavirus
- e. Invasion of tissue: Cryptosporidium

206. Select the statements which are true with respect to the normal microbiota of the Gastrointestinal tract

- a. Lactic acid producing streptococci predominate in the mouth F
- b. Colonization of the mouth by anaerobes does not require the presence of teeth F
- c. Enterobacteria and bacteroides species predominate in the distal ileum
- d. Intestinal bacteria synthesize many useful vitamins T
- e. E. coli is the predominate organism in the colon T

207. Match the correct pairs

- a. Intestinal Tuberculosis – Longitudinal ulcers
- b. Typhoid fever – Transverse ileal ulcer
- c. Intestinal tuberculosis – Transverse ileal ulcers T
- d. Typhoid fever – Longitudinal ileal ulcers T
- e. NONE of the above

208. The major bacterial agents implicated in acute bacterial meningitis in the post neonatal period include

- a. Escherichia coli
- b. Streptococcus pneumoniae
- c. Streptococcus pyogenes
- d. Neisseria meningitidis
- e. Hemophilus influenzae

209. The following specimen are ideal for the laboratory diagnosis of acute bacterial meningitis:

- a. CSF T
- b. Throat swab
- c. Sputum

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- d. Nasopharyngeal swab
- e. Petechial swab T

210. Peptidoglycan is an essential component of the cell wall of the following bacteria except

- a. *Staphylococcus epidermidis*
- b. *Streptococcus pyogenes*
- c. *Borrelia recurrentis*
- d. *Mycoplasma pneumoniae* T
- e. *Chlamydia trachomatis* T

211. Select the correctly matched pairs

- a. Catalase positive- *Streptococcus pyogenes*
- b. Coagulase positive- *Staphylococcus saprophyticus*
- c. Glucose fermentation only- *Neisseria meningitidis*
- d. Glucose+Maltose fermentation – *Neisseria gonorrhoea*
- e. Lactose fermentation- *Escherichia coli*

212. In tuberculosis of the spine, the vertebrae usually affected are:

- a. T1
- b. T3
- c. L1
- d. T10 T
- e. T11 T

213. Normal flora of the Upper respiratory tract include:

- a. *Streptococcus pneumoniae* T
- b. *Streptococcus viridans* T
- c. Diphtheroid T
- d. Anaerobic cocci
- e. *Strept. Pyogenes* T

214. In 1940, penicillin was commercially produced by

- a. Anthony Van Leuwenhock
- b. L. Pasteur
- c. S. Waksman
- d. Alexander Fleming
- e. Chain and Florey T

215. The virulence factors of *Bordetella pertussis* include

- a. The antigens A and M
- b. Tracheal cytotoxin T
- c. Hyaluronidase enzyme
- d. Heat-labile toxin T
- e. Filamentous haemagglutinin T

216. The following are best suited for *Campylobacter* isolation

- a. Chocolate agar
- b. Blood agar T
- c. Butzler type medium T
- d. *Campylobacter* medium T
- e. Skirrow's medium T

217. The following are true with respect to the treponema

- a. Stain gram negative by the Gram's method
- b. Pathogenic *T. pallidum* is cultured on tissue culture
- c. Syphilis can be transmitted through blood transfusion T
- d. The secondary stage in syphilis is characterized by the appearance of chancre F (primary stage)
- e. The organism cannot be spread through fomites T

218. The following antibiotics inhibit cell wall formation

- a. Vancomycin T
- b. Tetracycline

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- c. Penicillin T
- d. Erythromycin
- e. Novobiocin

219. Mechanisms by which microorganisms exhibit resistance to drugs include

- a. Production of enzymes that destroy the active drug T
- b. Inhibition of cell wall synthesis
- c. Inhibition of nucleic acid synthesis
- d. Development of an altered structural target for the drug T
- e. Changing their permeability to the drug T

220. The following are true about antimicrobial agents

- a. Those that reversibly inhibit growth of bacteria are called Bacteriocidal
- b. Those that are produced synthetically but have action similar to that of antibiotics are called chemotherapeutic agents T
- c. The cephalosporins contain a Beta lactam structure that is similar to that of penicillins T
- d. Those that inhibit nucleic acid synthesis function by hydrolyzing a bond in the Beta lactam ring
- e. Sulphonamide is an example of those that inhibit protein synthesis

221. The following correctly apply in the diagnosis of gonococcal infections

- a. The clinical specimen should be examined without delay T
- b Proper gram staining examination can be used to diagnose the disease in some situations T

c. Incubation of the cultured organism should be under 5-10% carbon dioxide with humidity T

d. Specimens such as rectal swab and pharyngeal swab should be inoculated onto chocolate agar medium T

e. Serological tests such as ASO titre may be used in the absence of any other facility

222. Clinical features of gonorrhoea in males include

- a. Pharyngitis T
- b. Acute urethritis T
- c. Prostatitis T
- d. Salpingitis
- e. Fitz Hugh and Curtis syndrome

223. Complications of typhoid fever include

- a. Intestinal perforation
- b. Splenomegaly
- c. Abdominal rose spots T
- d. Intestinal hemorrhage
- e. Hepatomegaly

224. Select the correctly matched pairs of organisms and associated diseases

- a. *Escherichia coli* – Hemolytic Uremic Syndrome T
- b. *Salmonella typhimurium* – Gastroenteritis
- c. *Proteus species*- constipation
- d. *Yersinia enterocolitica* – Blood transfusion related sepsis T
- e. *Klebsiella oxytoca*- Urethritis T

225. *Escherichia coli*

- a. possesses O, H, and K antigens T

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- b. is an important cause of osteomyelitis*
- c. possesses a wide variety of adhesins which mediate its virulence*
- d. produces the shiga toxin*
- e. causes the majority of Urinary Tract infections*

**THE BEST WAY TO
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IS WITH PAST
QUESTIONS, BUT
ALWAYS REMEMBER
THAT YOUR NOTES
ARE INDISPENSIBLE IN
PASSING
PATHOLOGY..**