

**MEDICAL TECHNOLOGY
LICENSURE EXAM
PREPARATION IN THE
PHILIPPINES**

**MICROBIOLOGY
&
PARASITOLOGY**

**PRACTICE EXAM QUESTION
400 QUESTIONS**

**TEST YOUR KNOWLEDGE AS IF YOU WERE TAKING A
BOARD EXAM**

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

1. The laboratory accident that could most likely lead to hepatitis B infection is:

a. Accident needle puncture

b. Spilling infectious material on the floor

c. Breaking tubes in centrifuge

d. Paper or glassware cuts
2. The best way to prevent HIV infection when handling blood is:

a. Refuse to process HIV blood

b. Keep HIV blood separate from the test

c. Wear gloves and wash your work area with dilute chlorox

d. Treat all blood and body fluids as potentially HIV- Infected

e. Don't worry because HIV is very fragile in the lab environment
3. 85% N2, 10% H2, 5% CO2 is the environmental condition that best suit which type of organism?

a. Aerobes

b. Anaerobes

c. Capnophiles

d. Microaerophiles
4. Before an AFB smear is reported as negative, it should be examined carefully by scanning atleast ____ oild immersion fields (magnification x1000):

a. 100

b. 30

c. 300

d. 500
- 5.Thioglycollate broth:

a. Contains pancreatic digest of casein, soy broth, glucose enrich growth of most microorganisms

b. Supports growth of anaerobes, aerobes, microaerophilic and fastidious microorganisms

c. Both of these

d. None of these
6. Thayer- martin medium is basically a (an):

a. Blood agar

b. Enriched MacConkey agar

c. Enriched chocolate agar

d. Potassium tellurite agar
7. Inhibitor(s) contained in salmonella- shigella (ss) agar

a. Gentian violet

b. Sodium azide

c. Bile salts and brilliant green

d. Potassium tellurite
8. Which organism produces the camp factor enhancing beta hemolysis in the presence of the S. Aureus beta lysin?

a. Group A streptococci

b. Group B streptococci

c. Group C streptococci

d. Group D streptococci
9. MacConkey agar is quantitatively inoculated with urine specimen and incubated appropriately, results are 100,000 CFU/ mL urine of gram- negative lactose- fermenting organisms. Which of the following would be statistically the most likely organism to cause this urinary tract infection?

a. E. Coli

b. Proteus spp.

c. S. Aureus

d. Klebsiella spp
10. Yellow colonies on xylose- lysine- desoxycholate (XLD) agar:

a. E. Coli

b. Shigella

c. Salmonella

d. Edwardsiella
11. Which id the following bacteria is able to hydrolyze urea via urease production, which results in an increase in urine pH that is toxic to kidney cells and stimulates the formation of kidney stones?

a. E. Coli

b. Proteus

c. S. Aureus

d. Pseudomonas aeruginosa
12. In the Kirby- Bauer disc diffusion susceptibility test, Which variable is critical when testing pseudomonas species for antibiotic susceptibility to aminoglycosides?

a. Incubation temperature

b. Duration of incubation

c. Cation content of media

d. Depth of agar
13. Which of the following haemophilus species is an agent of a sexually transmitted disease?

a. H. Parainfluenzae

b. H. Influenza

c. H. Ducreyi

d. H. Hemolyticus

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14. Spore- forming cells in bamboo pole arrangement of bacillus anthracis can be found in:

- a. Specimen from patient
- c. Cultures
- b. Guinea pigs
- d. None of these

15. A test used in the diagnosis of anthrax in animals dead of the disease, or to detect contamination of hides by bacillus anthracis is known as:

- a. Schick test
- c. Ascoli precipitation test
- b. Mallein test
- d. Ramon flocculation test

16. A large, aerobic, gram-positive, spore forming rod is isolated from a blood culture. it can be further confirmed as B. anthracis if it is:

- a. Hemolytic and motile
- c. Nonhemolytic and motile
- b. Hemolytic and nonmotile
- d. Nonhemolytic and nonmotile

17. Which of the following is the only catalase- negative, gram-positive, non- spore- forming rod that produces H2S on TSI?

- a. Gardnerella sp.
- c. Erysipelothrix sp.
- b. Lactobacillus sp
- d. Arcanobacterium sp.

18. Unopened, cut bacon, packaged in oxygen- resistant material, is spoiled mostly by:

- a. Lactobacilli
- c. Streptococci
- b. Micrococci
- d. Molds

19. Which of the following produces macroconidia that are large, multicellular, and club- shaped with smooth walls?

- a. Fonsecaea pedrosoi
- c. Epidermophyton floccosum
- b. Microsporum audouinii
- d. Trichophyton mentagrophytes

20. A mold is isolated in the laboratory displays a velvety, gray- green colony morphology. On microscopic evaluation, flask- shaped conidiophores' are seen. The most likely organism is which of the following?

- a. Penicillium
- c. Paecilomyces
- b. Acremonium
- d. Scopulariopsis

21. The protein coat that surrounds the nucleic acid of a virion is called which of the following?

- a. Capsid
- c. Capsule
- b. Capsomere
- d. Nucleocapsid

22. Which if the following swabs cannot be used for specimens intended for viral testing?

- a. Cotton swabs
- c. Dacron swabs
- b. Calcium alginate swabs
- d. Rayon swabs

23. Hand- foot and mouth disease is a mild, contagious viral infection common in young children. It is characterized by sores in the mouth and a rash on the hands and feet. Hand- foot- and- mouth disease is most commonly caused by:

- a. Coxsackievirus
- c. Poliovirus
- b. Echovirus
- d. Rhinovirus

24. What specimen(s) should be collected from a patient with suspected influenza?

- a. Stool
- c. Urine
- b. Throat swab
- d. All are correct

25. Prions are best described by which of the following?

- a. Infectious viral RNA without capsid proteins
- b. Infectious proteins with no associated nucleic acid
- c. Infectious viral DNA without capsid proteins
- d. Non- enveloped virus highly resistant to heat and chemical inactivation

26. Settings of RPMs on the face of the rheostat control on the centrifuge should be checked once:

- a. Weekly
- c. Monthly
- b. Daily
- d. Every other week

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27. For serological testing, an acute phase blood specimen is generally:

- a. Taken within 48 hours

b. Taken within 7 days
- c. Taken within 14 days

d. Taken after 14 days

28. For serological testing, a convalescent phase blood specimen is generally:

- a. Taken within 48 hours

b. Taken within 7 days
- c. Taken within 14 days

d. Taken after 14 days

29. Which of the following filters can give 100% sterility?

- a. Seitz

b. Millipore (0.22 um)
- c. Millipore (0.5 um)

d. A and B

30. Which of the following pathogens is not commonly transmitted by water?

- a. Salmonella

b. Shigella
- c. Pasteurella

d. Vibrio

31. The filariform larva is the infective stage for:

- a. Ascaris lumbricoides, Trichostrongylus spp

b. Ascaris lumbricoides, Strongloides stercoralis

c. Ancylostoma duodenale, Strongloides stercoralis

d. Trichuris trichiura, Necator americanus

32. S stool specimen was collected at 8pm from a patient. following collection the specimen was not submitted to the laboratory until 11 pm. The laboratory technologist found larvae with a long buccal cavity and a small, reduced genital primordium in the fecal sample. The larvae are most likely:

- a. Ancylostoma duodenale

b. Trichuris trichiura
- c. Strongloides stercoralis

d. Unable to determine

33. In the Philippines, the dominant liver fluke affecting cattle and buffaloes, there are only a few human cases reported locally.

- a. F. Hepatica

b. F. Gigantica
- c. C. Sinensis

d. O. Felineus

34. Infection with clonorchis or opisthorchis may result from eating raw or undercooked:

- a. Aquatic vegetation

b. Crayfish
- c. Crabs

d. Freshwater fish

35. The mode of transmission of Schistosomal infection is by:

- a. Ingestion of contaminated aquatic vegetation

b. Direct penetration of the skin by cercariae
- c. Ingestion of raw fish

d. Mosquito bite

36. A diagnostic characteristic of the egg of S. mansoni is:

- a. A large lateral spine

b. A pointed terminal spine
- c. No spine

d. A small lateral spine

37. What is a schistosomule?

- a. Cercaria

b. Cercaria minus tail
- c. Free- swimming cercaria

d. Metacercariae

38. Which of the following organs of the body is most often involved in extraintestinal amoebiasis?

- a. Lungs

b. Kidneys
- c. Pancreas

d. Liver

39. Mature cysts of entamoeba polecki have how many nuclei/

- a. 2

b. 8
- c. 1

d. 0

40. Which of the following would have a double- walled, wrinkled cyst form?

- a. Naegleria fowleri

b. Entamoeba hartmanni
- c. Acantamoeba fragilis

d. Dientamoeba fragilis

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41. Which flagellate can be a pathogen of the small intestines?

- a. Giardia

b. Trichomonas
- c. Chilomastix

d. Strongloides

42. Which of the following is the intracellular form of the blood and tissue flagellates?

- a. Crithidial

b. Leishmanial
- c. Trypanosomal

d. Leptomonad

43. In which type of malaria is there synchronized rupture of the red blood cells every 72 hours?

- a. P. Vivax

b. P. Malariae
- c. P. Ovale

d. P. Falciparum

44. Plasmodium vivax and plasmodium ovale are similar because they:

- a. Exhibit Schuffner’s dots and have a true relapse in the life cycle

b. Have no malarial pigment and multiple rings

c. Commonly have applique forms in the red cells

d. Have true stippling, do not have a relapse stage and infect old red cells

45. Babesia is an organism that has been implicated in disease from both splenectomized and nonsplenectomized patients. morphologically, the parasites resemble:

- a. Plasmodium falciparum rings

b. Leishmania donovani mastigotes

c. Plasmodium vivax developing rings

d. Trypanosoma cruzi trypomastigotes

46. What type of blood specimen is preferred for preparing blood smears for protozoa?

- a. Finger puncture

b. Venipuncture
- c. Arterial puncture

d. Plasma

47. To detect stippling, prepare blood films from venipuncture within:

- a. 1 to 2 minutes

b. 30 minutes to 1 hour after being drawn
- c. 2 hours after being drawn

d. 5 to 10 minutes

48. The demonstration of retinochoroiditis and cerebral calcifications in a newborn would result in whcih of these laboratory requests?

- a. Casoni skin test

b. MHA- ABS test for congenital syphilis
- c. Ramon flocculation test

d. Titer of toxoplasma abs

49. Preferred specific gravity of zinc sulfate solution for the flotation method is:

- a. 1. 01

b. 1. 04
- c. 1. 18

d. 1. 48

50. Corn meal agar test is used to identify Candida albicans through the organism’s production of:

- a. Chlamydospore

b. Urease
- c. Germ tube

d. Inositol

51. This presumptive test for Candida uses serum.

- a. Germ tube test

b. Latex agglutination
- c. Hair perforation test

d. Chlamydospore test

52. In order to demonstrate of the encapsulated yeast Cryptococcus neoformans in wet preparations of patient specimens, what should be used?

- a. Methylene blue

b. India ink
- c. Malachite green

d. Safranin

53. Which of the following is diagnostic for chromoblastomycosis?

- a. Flowerette conidia

b. Asteroid body
- c. Sclerotic body

d. Germ tube

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54. Rose gardener’s disease:

- a. Sporotrichosis
- b. Histoplasmosis
- c. Coccidioidomycosis
- d. Blastomycosis

55. Which of the following media identifies species of Aspergillus?

- a. Urease medium
- b. Rice agar
- c. Czapek’s agar
- d. Blood agar

56. Which of the following parasite larva can be isolated in sputum?

- a. Paragonimus westermani
- b. Entamoeba histolytica
- c. Taenia saginata
- d. Ascaris lumbricoides

57. The following are techniques used for detection of parasitic infection and their corresponding causative agent. Which of the following is correctly matched?

- a. Harada Mori Technique and Capillaria philippinensis
- b. Xenodiagnosis and Leishmania
- c. Knott’s Technique and Microfilariae
- d. Sellotape Method and Trichuris trichiura

58. Proper collection of a sample for recovery of Enterobius vermicularis includes collecting:

- a. A 24-hour urine collection
- b. A first morning stool with proper preservative
- c. Capillary blood
- d. A scotch tape preparation from the perianal region

59. Diphyllbothrium latum adult resembles the adult form of:

- a. Paragonimus westermani
- b. Echinococcus granulosus
- c. Taenia saginata
- d. Spirometra

60. Second intermediate host of Paragonimus westermani:

- a. Snail
- b. Fish
- c. Freshwater crab
- d. Vegetation

61. The definitive host to Plasmodium is the:

- a. Tsetse fly (Glossina)
- b. Sandfly (Phlebotomus)
- c. Mosquito (Female Anopheles)
- d. Reduviid bug (Male Triatoma)

62. Cytomegalovirus isolation is best accomplished using:

- a. Monkey kidney cells
- b. A549 cells
- c. Human embryonic fibroblasts
- d. Embryonated hen’s eggs

63. Enteroviruses can be differentiated from rhinoviruses by:

- a. Size
- b. Ether stability
- c. Ribonuclease treatment
- d. Acid resistance

64. Which of the following is a suitable transport medium for bacteria and virus?

- a. Phosphate buffered sucrose (2SP)
- b. Hank’s balanced salt solution
- c. Eagles minimum essential medium
- d. Stuart’s medium

65. Lysostaphin susceptibility is a test used to differentiate:

- a. Staphylococcus spp. from Micrococcus spp.
- b. Streptococcus spp. from Staphylococcus spp.
- c. Staphylococcus spp. from Pseudomonas spp.
- d. Streptococcus spp. from Micrococcus spp.

66. Prosthetic heart valve endocarditis is most commonly caused by this staphylococcal species:

- a. S. aureus
- b. S. epidermidis
- c. S. saprophyticus
- d. S. pyogenes

67. Which Staphylococcus spp. is resistant to 5µg novobiocin?

- a. S. aureus
- b. S. epidermidis
- c. S. saprophyticus
- d. S. pyogenes

68. .In the β-lactamase chromogenic cephalosporin method, which of the following indicates a positive reaction?

- a. Production of acid
- b. Reduction of nitrates
- c. Color change
- d. Turbidity

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69. A medical technologist cultured a specimen from a suspected cystic fibrosis patient. After 24 hours of incubation, the MT noticed colonies which were spreading and flat, with serrated edges and a metallic sheen. There was a characteristic corn taco-like odor. Identify the bacteria

- a. Klebsiella pneumoniae

b. Escherichia coli
- c. Staphylococcus aureus

d. Pseudomonas aeruginosa

70. Serratia strains are readily differentiated from Klebsiella on the basis of their:

a. Failure to produce gas from inositol

b. Slowness and reluctance to ferment lactose

c. Rapid gelatin liquefaction

d. All of the above

71. Diagnosis of typhoid fever can be confirmed best by culture of:

a. Stool

b. Urine

c. Bone marrow

d. Blood

72. Cultures of Staphylococcus supplies which of the following for cultures of Haemophilus?

a. III factor

b. I factor

c. X factor

d. V factor

73. String test is used for the diagnosis of which bacteria?

a. Stenotrophomonas maltophilia

b. Elizabethkingia meningoseptica

c. Vibrio cholerae

d. Campylobacter jejuni

74. Which diphtheroid has the same morphology as Corynebacterium diphtheriae on blood agar plate (BAP)?

a. C. ulcerans

b. C. minutissimum

c. C. jeikeium

d. C. urealyticum

75. Mycobacterium tuberculosis is best differentiated from Mycobacterium bovis by:

a. Growth rate

b. Niacin and nitrate reduction tests

c. Hydrolysis of Tween 80

d. Catalase test at 68oC

76. Woolsorter’s disease is caused by the ___ form of anthrax.

a. Gastrointestinal

b. Cutaneous

c. Pulmonary

d. Urinary

77. Which anaerobic, gram-positive rods produce terminal “lollipop” spores?

a. Clostridium tetani

b. Eubacterium lentum

c. Clostridium butyricum

d. Bacteroides ureolyticus

78. In water bacteriology, the following are used as confirmatory test media except:

a. Lactose broth

b. Endo agar

c. Eosin methylene blue agar

d. Brilliant green lactose broth

79. Optochin test for S. pneumonia?

a. <10 mm zone of inhibition in 6mm disk

b. >14mm zone of inhibition in 6mm disk

c. <14mm zone of inhibition in 6mm disk

d. >16mm zone of inhibition in 6mm disk

80. Best Quality control in parasitology Laboratory

a. Slides with ova and adult

b. Hanging drop from preserved stools

c. Parasitology atlas

d. all of these

81. How is water bacteriology reported?

a. CFU

b. Colonies/ml

c. MPN/100ml

d. IU/ml

82. Incubation period for fungal development in bone marrow and CSF?

a. 14 days

b. 7 days

c. 28 days

d. 20 days

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- 83. What is the step before hybridization in FISH?**
- a. Combination of target and probe
 - b. Labeling of the probe
 - c. Denaturation of probe and target sequences
 - d. Visualization of target sequences
- 84. What is the denaturation temperature in PCR?**
- a. 55 C
 - b. 72 C
 - c. 94 C
 - d. 100 C
- 85. The enzyme ligase joins the Okazaki fragments of the _____.**
- a. Template strand
 - b. Lagging strand
 - c. Leading strand
 - d. Primer fragments
- 86. How does RNA differ from DNA?**
- a. RNA has uracil and DNA has thymine
 - b. RNA does not contain nucleotides and DNA does
 - c. DNA resides in the cytoplasm of the cell and RNA is in the nucleus
 - d. DNA has a messenger form and RNA does not
- 87. What is the pre-analytical part of Microbiology testing?**
- a. Standardization of parasite naming
 - b. QC using slides
 - c. Proper storage of reagents and stains
 - d. Identify Patient
- 88. Evaporation of formalin in FECT**
- a. Systematic error
 - b. Random error
 - c. Clerical error
 - d. Total error
- 89. How to validate the test result of AST?**
- a. Parallel testing with a new method
 - b. Parallel testing with another personnel
 - c. Testing with a reference reagent
 - d. Testing with a reference organism
- 90. Which of the following describes the correct way to select organisms for QC?**
- a. They should represent the most fastidious organisms for which the medium was designed.
 - b. They should be organisms that will grow most easily.
 - c. They should be immediately removed from the freezer.
 - d. Streaking should be done only once after their removal from the freezer.
- 91. Susceptibility tests must be quality controlled daily EXCEPT when?**
- a. An automated system is in use
 - b. Controls have been in an acceptable range for 6 months
 - c. Precision is demonstrated for 20 or 30 consecutive days
 - d. A new antimicrobial agent is added
- 92. The laboratory must perform QC on all of the following media, EXCEPT:**
- a. Complex media
 - b. Media made by the laboratory
 - c. Media with a history of failure
 - d. All media obtained from a commercial source
- 93. What should be done when interpreting the zone size of a motile, swarming organism?**
- a. The swarming should be ignored
 - b. The results of the disk diffusion method are invalid
 - c. The swarming area should be measured as the growth boundary
 - d. The isolate should be retested after diluting to a 0.5 McFarland standard
- 94. Storage temp for viral specimens**
- a. -20C
 - b. 4C
 - c. 20C
 - d. -70C

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95. If processing is delayed, fungal specimens is stored at:

- a. 37 C
- b. Ref
- c. RT
- d. -20C

96. Which of the following is INCORRECT regarding steam sterilization?

- a. Dry heat
- b. 15 psi
- c. Wet heat
- d. 121 deg C

97. What causes the death of organisms in autoclave?

- a. Pressure
- b. Heat
- c. Both
- d. Neither

98. What is the most effective method for sterilization and waste disposal?

- a. Ionizing radiation
- b. Filtration
- c. Autoclave
- d. Formaldehyde vapor

99. The presence of residual chlorine in drinking water means:

- a. Safe for consumption
- b. Sufficient amount of chlorine was added initially to the water
- c. Water is contaminated with coliform
- d. Overchlorination

100. Not a reservoir

- a. Environment
- b. Vector
- c. Human
- d. Animal

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1. How do you identify the taxonomy that is composed of similar species that have several important features in common but differ sufficiently to still maintain their status as individual species?

- a. Genus

b. Family
- c. Order

d. Kingdom

2. Mechanism that is mediated by viruses, by which DNA from two bacteria come in one cell for recombination.

- a. Transduction

b. Mutation
- c. Transformation

d. Conjugation

3. Culture media

- a. Autoclave

b. Membrane filtration
- c. Both

d. Neither

4. Parasite found in the urine

- a. S. haematobium

b. S. mansoni
- c. S. japonicum

d. S. intercalatum

5. A 32-year-old male tourist traveled 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. Taenia solium

6. Which schistosome is characterized by, finely tuberculate integument?

- a. S haematobium

b. S. mansoni
- c. S. japonicum

d. All of the above

7. Which of the following protects bacteria from attacks by cells of human defense system- resists phagocytosis and desiccation?

- a. Plasmid

b. Pilus
- c. Capsule

d. Plasma Membrane

8. The Ixodes tick is a transmission factor for which of the following organisms?

- a. Trichomonas vaginalis

b. Leishmania donovani
- c. Babesia

d. Plasmodium

9. Identify the bacteria being decribed:

- Pear shaped shape Elementary bodies
- Glycogen inclusion absent
- Round or dense inclusion

- a. C. pneumoniae

b. C. trachomatis
- c. C. psittaci

d. Rickettsia

10. Identify the bacteria being described:

- Glycogen positive
- SXT- susceptible
- Round elementary body

- a. C.psittaci

b. C.trachomatis
- c. C.pneumoniae

d. T. spiralis

11. What is detected in specimen that is refrigerated without preservatives?

- a. Antigen

b. Antibody
- c. Ova and parasite

d. Trophozoites

12. Which technique to be used for the identification of large trematode egg?

- a. Floatation

b. Sedimentation
- c. Filtration

d. Brine floatation

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13. Which laboratory method is best used when there are only few parasites present in stool?

a. Concentration method

b. Molecular

c. Serological

d. Direct microscopy
14. Microfilaria that Circulate in the blood in 24 hour-period without significant change in their number.

a. Non periodic

b. Subperiodic

c. Diurnal

d. Nocturnal
15. Which protozoa should be reported to the clinicians?

a. Endolimax nana

b. Entamoeba coli

c. Entamoeba dispar

d. Dientamoeba fragilis
16. What is NOT considered a Critical/panic value in a Microbiology laboratory?

a. Positive acid fast stain

b. S. pyogenes in a surgical wound

c. Positive blood cultures

d. Negative blood smear for malaria
17. The mode of transmission of this organism is direct skin penetration. Which organism is referred to?

a. Strongyloides stercoralis

b. Entamoeba coli

c. Entamoeba hartmanii

d. Gardia lamblia
18. Which of the following is the best technique to identify D. fragilis in stool specimen?

A. Formalin concentration

B. Trichrome-stained smear

C. Modified acid fast

D. Giemsa
19. In thioglycollate broth medium, flocculation is observed, what would be the probable microorganism?

a. obligate aerobes

b. obligate anaerobes

c. gram positive cocci

d. facultative anaerobe
20. Which of the following microorganisms exhibit a mushroom-like odor?

a. P. multocida

b. H. influenzae

c. S. aureus

d. P. aeruginosa
21. Which of the following microorganisms exhibit a burnt chocolate like odor?

a. E.corrodens

b. C.defficile

c. Serratia odorifera

d. Proteus
22. What type of specimen where trphozoites and cyst can be found?

a. Watery

b. Soft

c. Formed

d. Any consistency
23. Which of the following parasites causes cholangiocarcinoma?

a. Fasciola

b. Chlonorchis

c. Echinicoccus

d. Paragonimus
24. Color brown color on Bap, what is the type of hemolysis?

a. Alpha

b. Beta

c. Zeta

d. Gamma
25. The most important virulence factor and determines the type of group A B-hemolytic streptococci

a. C- carbohydrate

b. M- protein

c. Protein A

d. Protein S
26. How does herpes is transmitted?

a. Sharing of soap

b. Skin to skin

c. Sharing of utensils

d. Skin to skin
27. Standard serologic procedure for the identification of Leptospira

a. Microscopic agglutination test

b. ELISA

c. PCR

d. Enzyme immune assay

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28. Acid fast, non-spore forming gram positive bacilli that is niacin and nitrate positive.

- a. M.tuberculosis
- c. M. intracellulare
- b. M. fortuitum
- d. M.bovis

29. Parasite associated with food borne trematode infection.

- a. Fasciola
- c. Schistosoma
- b. Echinococcus
- d. Dracunculus

30. Person responsible for interpreting Zone of inhibition in diffusion disks?

- a. Chief MedTech
- c. Nurse
- b. Physician
- d. Intern

31. Method of identification for single strains of bacteria

- a. Phage typing
- c. Biochemical
- b. Disk diffusion

32. Nontuberculous colonies that develop pigment in the dark or light, and take longer than 7 days to appear on solid media are known as ____.

- a. Photochromogens
- c. Schotochromogens
- b. Nonphotochromogens
- d. rapid grower

33. The method that gives an antimicrobial a concentration resulting in a 99.9% reduction in CFU/ml compared with the organism concentration in the original inoculum is recorded as ____.

- a. MBC
- c. MIB
- b. ESBL
- d. MIC

34. Which is the CORRECT sequence of the Gram staining procedure?

- a. crystal violet, safranin, iodine, alcohol
- c. crystal violet, iodine, alcohol, safranin
- b. crystal violet, alcohol, iodine, safranin
- d. crystal violet, iodine, safranin, alcohol

35. The purpose of mordant in GS

- a. Acts as secondary stain
- c. Reinforcing stain
- b. Dye fixative
- d. For differentiation

36. which of the following differentiates Gram negative from Gram positive during staining?

- a. Component of their Cell wall
- c. Exotoxin
- b. Endotoxin
- d. Pilli

37. Which of the following staining method for acid fast organism is the so-called cold method?

- a. Kinyoun method
- c. truant’s method
- b. zeihl-neelsen method
- d. Spergler’s

38. The first larval stage of a trematode which is hatched from an egg often ciliated and free-swimming is

- a. Rediae
- c. Miracidium
- b. Cercaria
- d. Metacercaria

39. Which of the following beta-hemolytic Streptococci gives a positive hippurate test?

- a. Streptococcus pyogenes
- c. Streptococcus anginosus
- b. Streptococcus agalactiae
- d. Streptococcus pneumonia

40. Which is not used to describe morphology of fungi?

- a. Verrucose
- c. Glabrous
- b. Rugose
- d. Umbonate

41. A fungal culture is seen as furrowed or convoluted, what is an appropriate term to describe this?

- a. Verrucose
- c. Rugose
- b. Umbonate
- d. Cottony

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

42. A part of the compound microscope that gathers and focuses light from the illuminator into the specimen being viewed is the ____

- a. iris diaphragm
- b. lens
- c. aperture
- d. condenser

43. An organism with the BCM test below is suggestive of:

- a. E. tarda
- b. P. vulgaris
- c. S. typhi
- d. P. mirabilis

44. Sixty percent of the trophozoite of D. fragilis have

- a. 2 nuclei
- b. 3 nuclei
- c. 1 nucleus
- d. No nuclei

45. An organism that causes chancroid and which appears as small gram negative coccobacilli is ____.

- a. H. ducreyi
- b. Gardnerella vaginalis
- c. Treponema pallidum
- d. N. gonorrhoea

46. Which one of the following specimen request is acceptable?

- a. Feces for anaerobic culture.
- b. Foley catheter tip submitted for aerobic culture.
- c. Rectal swab submitted for direct smears for gonococci.
- d. Urine for culture for acid fast bacilli.

47. All these aerobes have cell walls containing mycolic acid, EXCEPT:

- a. Nocardia
- b. Rhodococcus
- c. Corynebacterium
- d. Streptomyces

48. A patient diagnosed with staphylococcus aureus infection, has a leg ulcer and diabetes. The organism is said to be resistant to methicillin, what other antibiotic should be tested?

- a. Erythromycin
- b. Clindamycin
- c. Gentamycin
- d. Vancomycin

49. A patient has been diagnosed with STD, microscopic examination of has been made to a lesion present on his scrotum, the microbiologist noticed a corkscrew motility, which of the following is the probable microorganism?

- a. N.gonorrhoeae
- b. T.pallidum
- c. L. monocytogenes
- d. B.burgdorferi

50. Which of the following is being described?

- **Motility negative**
- **Nitrate negative**
- **No Broth on BAP**

- a. B.pertusis
- b. B.parapertusis
- c. B.bronchyseptica
- d. B.thermophilus

51. A lymphatic filarial parasite resembling W. bancrofti that do not typically cause lymphadenitis in the genital regions is

- a. Ancylostoma spp.
- b. Brugia spp.
- c. E. vermicularis
- d. T. spiralis

52. Specimen for filarial

- a. Blood
- b. CSF
- c. stool
- d. urine

53. What is the best protection against serious aerosol droplet infection?

- a. Well fit mask and goggles
- b. Gown and gloves
- c. N 95mask
- d. Adequate handwashing

54. Total Exhaust Biosafety Cabinets:

- a. CLASS I
- b. CLASS IIA
- c. CLASS IIB1
- d. CLASS IIB2

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

55. Total Exhaust Biosafety Cabinets:

- a. CLASS I

b. CLASS IIA
- c. CLASS IIB1

d. CLASS IIB2

56. Which of the following is/are classified under biosafety level 2?

- a. Bacillus subtilis

b. Coxiella burnetti
- c. Toxoplasma

d. Arbovirus

57. Which of the following is used as an isolation media for fungal culture?

- a. Sabouraud’s dextrose agar

b. Schaedler agar
- c. Todd-Hewit

d. Bordet-gengou agat

58. Which of the following Automated antimicrobial susceptibility tests uses a software called Advanced Expert System (AES)?

- a. Vitek

b. Walkaway system
- c. Phoenix system

d. All of the above

59. Causative agent of bubonic plague

- a. Yersinia enterocolitica

b. Shigella sonnei
- c. Yersinia pestis

d. Shigella boydii

60. _____ is the removal of pathogenic microorganisms so items are safe to handle or dispose of

- a. Sterilization

b. Disinfection
- c. Aseptic

d. decontamination

61. Infective stage of T. cruzi is _____

- a. Promastigote

b. Amastigote
- c. Epimastigote

d. Trypomastigote

62. In African sleeping sickness, which one has a faster rate of progression?

- a. T. b. rhodensiense

b. T. b. gambiense
- c. T.cruzi

d. All of the above

63. A gram negative bacilli that produces exotoxin A. it is associated with cystic fibrosis patients

- a. P.aeruginosa

b. B. cepacia
- c. B. pseudomallei

d. B. mallei

64. A zoonotic infection primarily affecting horses and causes severe local supportive or acute pulmonary infections in humans.

- a. B.pseudomallei

b. B. cepacia
- c. B.mallei

d. P.aeruginosa

65. An organism that is characterized by dry, wrinkled and have a deep pink color on ashdown medium and is also characterized by bipolar bodies.

- a. Pseudomonas aeruginosa

b. Yersinia pestis
- c. Burkholderia pseudomallei

d. Burkholderia mallei

66. An organism capable of causing opportunistic infection in humans but usual pathogen of horses and related animals.

- MAC- NLF
- NITRATE- POS
- OXIDASE- POS

- a. Acinetobacter baumanii

b. B. mallei
- c. B. pseudomallei

d. S.maltophilia

67. When is the best time to collect specimen for malaria?

- a. After the height of fever

b. At the height of fever
- c. Anytime of the night

d. Anytime of the day

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

68. Which of the following organisms is/are the organism probable of the BCM test below?

- a. Proteus spp

b. Salmonella spp
- c. Shigella

d. Campylobacter

69. Standard inoculum used in agar dilution.

- a. 1.0X10^4

b. 1.5 X10^8
- c. 1.0X10^8

d. 1.5X10^4

70. Inoculum concentration of E.coli suspension for the preparation of McFarland Standard.

- a. 1.5 X10^8 CFU/ml

b. 5.0 X10^5 CFU/m
- c. 1.0X10^6 CFU/ml

d. 1.0 X10 ^4 CFU/ml

71. Which of the following can be used as a sample for C.dificille toxin?

- a. stool

b. Blood
- c. Food

d. Urine

72. Hanging drop method is used to identify_____

- a. Motility

b. Hemolysis
- c. Biochemical reaction

d. Growth pattern

73. Which temperature range does a mesophile is able to live?

- a. 30 to 40’C

b. 100-125’C
- c. 0-4’C

d. 4-15’C

74. Which of the following parasites inhabit the large intestines?

- a. Enterobius vermicularis

b. Ascaris lumbricoides
- c. Ancylostoma duodenale

d. Strongyloides stercoralis

75. Which of the following organism is being described?

- Phenylalanine deaminase: GREEN
- H2S: BLACK
- Indole: RED RING

- a. Proteus mirabilis

b. Proteus vulgaris
- c. Morganella morganii

d. Providensia spp

76. Food-borne botulism in adults is a result of

- a. Ingestion of preformed toxin

b. Ingestion of spores
- c. Spores contaminating wounds

d. All of the choices

77. If there will be a delay in the processing of cultures, a CSF specimen must be kept at

- a. Refrigerator temp.

b. Room temp.
- c. Freezer temp.

d. Incubator temp

78. Which technique is most widely used for the confirmation of infection with human immunodeficiency virus (HIV)?

- a. Western blot assay

b. ELISA
- c. Complement fixation

d. Polymerase Chain Reaction

79. Which of the following is the causative agent of HEM?

- a. E. histolytica

b. N.fowleri
- c. A.cantonensis

d. N.meningitidis

80. How long is the cellophane tape used in pinworm identification?

- A. 4 inch/10 cm

B. 5 inch
- C. 6 inch

D. 7 inches

81. What is the ratio of stool to preservative?

- a. 3:1

b. 1:1
- c. 1:3

d. 2:1

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

82. A method best used for the recovery of coccidian oocyst mainly Cryptosporidium, Cyclospora and Cytoisospora?

- a. Brine floatation
- c. Sheather’s sugar floatation
- b. Formalin ether concentration
- d. Kato-katz technique

83. Layers after centrifugation of FECT tube

- a. Ether, fecal Debris, Formalin, Sediments
- c. formalin, fecal debris, ether, sediments
- b. Fecal debris, ether, formalin, sediments
- d. Ether, Formalin, fecal Debris, Sediments

84. An outbreak of mild intestinal distress, sleeplessness, perianal itching, and anxiety has broken out among preschool children in a private home. The most likely cause of this condition is

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

85. In order to rule out pinworm infection, how many consecutive scotch tape preparations should show a negative result?

- a. 1 to 3
- c. 6 to 10
- b. 4 to 6
- d. 5 to 10

86. A sexually active 24-year-old woman complains of vaginal itching and a malodorous purulent vaginal discharge. To verify your tentative diagnosis of trichomoniasis, you should include which of the following in your workup?

- a. Specific serologic test
- c. Wet mount of vaginal fluid
- b. Ova and parasite fecal smear
- d. Stool culture

87. A 37-year-old sheep farmer from Australia presents with upper right quadrant pain and appears slightly jaundiced. A stool exam was negative for ova and parasites but a CT scan of the liver reveals a large 14-cm cyst that appears to contain fluid. Which of the following parasites should be considered?

- a. Toxoplasma gondii
- c. Clonorchis sinensis
- b. Taenia solium
- d. Echinococcus granulosus

88. Malonate test positive color is?

- a. Yellow
- c. Red
- b. Blue
- d. Green

89. The second intermediate host of P. westermani is _____

- a. Crabs or cray fishes
- c. Fresh water vegetation
- b. Fresh water fish
- d. Snail

90. Using NATIONAL STANDARD REPORTING SCALE, 12 AFB/OIF in at least 20 fields is seen. How do you report this?

- a. 1+
- c. 3+
- b. 2+
- d. 4+

91. Which of the following specimen is recommended for the detection of B. pertussis?

- a. Nasal swab
- c. Throat swab
- b. Nasopharyngeal swab
- d. Anal swab

92. Trophozoites of what protozoan parasite have the following characteristics:

I. small, delicate nuclear karyosomal chromatin

II. fine, even peripheral chromatin

III. progressive motility with hyaline, fingerlike pseudopods

- a. E. coli
- c. D.fragilis
- b. E.histolytica
- d. T.vaginalis

93. The head of this roundworm contains four rows of cephalic hooklets. The body is covered with transverse rows of spines that diminish anteriorly to posteriorly

- a. Gnathostoma spinigerum
- c. Parastrongylus cantonensis
- b. Ancylostoma duodenale
- d. Parastrongylus costaricensis

94. Which of the following is not included?

- a. oX-19
- c. OX-2
- b. Ox-K
- d. OX-12

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

95. Identify the organism.

- OX-2: NEGATIVE
- OX- 19: NEGATIVE
- OX-K: NEGATIVE

- a. O. tsutsugamushi
b. R.ricketsii

- c. R.thyphi
d. R.akari

96. Identify the organism:

Gram negative bacilli

IMVC - - + +

LOA + + -

- a. Klebsiella pneumoniae
b. Klebsiella oxytoca

- c. Enterobacter aerogenes
d. Enterobacter cloaceae

97. Which of the following has been recommended as an effective disinfectant for drinking water?

- a. Sodium hypochlorite
b. Chlorine

- c. Iodine
d. Alcohol

98. What method of Antimicrobial Susceptibility testing is based on the determination of an inhibition zone proportional to the bacteria susceptibility to the antimicrobial present in the disk?

- a. Disk diffusion
b. Broth dilution

- c. Agar dilution
d. Gradient strips

99. Used to measure the zone of inhibition around the disk

- a. Tape measure
b. Ruler

- c. Meter stick
d. Caliper

100. Kirby-Bauer Disk Diffusion Agar Depth:

- a. 3mm
b. 4mm

- c. 2mm
d. 5mm

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

1. K/A, gas positive, H2S positive

- a. E.coli

b. Shigella
- c. Pseudomonas

d. Salmonella

2. Most Enterobacteriaceae give _____ MR and VP reaction

- a. Opposite

b. Similar
- c. Variable

d. Indeterminate

3. Which of the following indicators is/are used in Mac-Conkey agar

- a. Phenol red

b. Neutral red
- c. Bromthymol blue

d. Eosin methylene blue

4. What type of infection mimics acute viral enteritis, bacillary bacterial poisoning and traveler's diarrhea where the dysentery, diarrheic stools lack blood, mucus, and cellular exudate?

- a. Cryptosporidiosis

b. Giardiasis
- c. Balantidiosis

d. Sarcocysticosis

5. Identify the trematode: Operculated, immature egg.

- a. Echinostoma

b. Schistosoma
- c. Clonorchis

d. Opistorchis

6. Which of the following shows hammered copper shiny surface colonies on SBA?

- a. B.anthraxis

b. Y. pestis
- c. C.burnetti

d. B.psuedomallei

7. What specimen is obtained from a patient when performing Schlichter test?

- a. Serum

b. Stool
- c. Exudate

d. Throat swab

8. Using toluidine blue method, what is the positive color in DNase test?

- a. Clearing

b. No clearing
- c. Pink

d. Green

9. Which of the following is a confirmatory test for congenital HIV and congenital syphilis respectively?

- a. Western blot, PCR

b. PCR, Western blot
- c. Western blot, RIA

d. PCR, RIA

10. Which of the following shows antigenic variation?

- a. American trypanosomiasis

b. B.recurrentis

c. Influenza virus
- d. N.meningitidis

e. T pallidum

f. AOTA

11. Which of the following conditions is transmitted through the bite of an assassin bug?

- a. West African sleeping sickness

b. Cutaneous leishmaniasis
- c. Visceral leishmaniasis

d. American trypanosomiasis

12. All of the ff. organism contains the enzyme Beta-galactosidase, except?

- a. Citrobacter

b. Proteus
- c. coli

d. Hafnia

13. Identify the organism given the following biochemical reactions:

i. H2S (+)

ii. Urea (-)

iii. LDC (-)

- a. Proteus

b. Citrobacter
- c. Escherichia

d. Enterobacter

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

14. Which of the following shows bipolar staining (bipolar bodies) characteristics?

- a. L.monocytogenes
- c. B. melitensis
- b. C.granulomatis
- d. V. cholera

15. Which of the following culture media is used to induce capsule formation of B.anthraxis?

- a. Phenylethyl alcohol (PEA) agar
- c. Bicarbonate agar
- b. Polymixin Lysozyme EDTA thallous acetate (PLET)
- d. Egg yolk agar

16. Which of the following organism is being described?

- oxidase positive
- does not ferment carbohydrates, but many strains oxidize glucose
- growth at 42°C

- a. Pseudomonas aeruginosa
- c. Pseudomonas putida
- b. Acinetobacter
- d. Haemophilus

17. This gram-negative bacillus, which is oxidase positive and does not ferment carbohydrates, is frequently found in human bite infections

- a. Escherichia coli
- c. Chromobacterium violaceum
- b. Neisseria meningitidis
- d. Eikenella corrodens

18. A gamma- hemolytic streptococcus that blackens bile esculin agar but does not grow in 6.5% NaCl broth is most likely?

- a. Group B
- c. Group D Streptococcus
- b. Enterococcus
- d. Streptococcus pneumoniae

19. An organism gave the following reaction

TSI: yellow /yellow , cracks and elevation of the agar is seen, no blackening Indole: RED RING

MOTILE

Urease: PINK

VP: YELLOW

- a. Klebsiella pneumoniae
- c. Escherichia coli
- b. Shigella dysenteriae
- d. Enterobacter cloacae

20. Which of the following cestode is a pseudophyllidean?

- a. E.granulosus
- c. H.nana
- b. T.solium
- d. D.latum

21. A Gram stain from a gum lesion showed what appeared to be amoebae. A trichrome smear showed amoebae with a single nucleus and partially digested PMNs. The correct identification is:

- a. Trichomonas tenax
- c. Entamoeba gingivalis
- b. Entamoeba histolytica/E. dispar
- d. Entamoeba polecki

22. Anticoagulant often used for viral culture and for isolation of Mycobacterium spp. in the blood:

- a. CITRATE
- c. Heparin
- b. EDTA
- d. SPS

23. All of the following specimens should be kept in a sterile container EXCEPT

- a. Wound swab
- c. Body fluids
- b. CSF
- d. Urine

24. Plating media for CSF collected from shunt:

- a. BAP
- c. BAP, CAP
- b. CAP
- d. BAP, CAP, Thio

25. Before the collection of sputum, you should instruct the patient to:

- a. Rinse mouth and do not gargle
- c. Rinse mouth or gargle with Listerine
- b. Rinse mouth or gargle with water
- d. Rinse mouth or gargle with Colgate 360

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

26. Which of the following has not been isolated in sputum?

- a. HBV
- b. Paragonimus
- c. M. tuberculosis
- d. S. pneumoniae

27. SPECIMEN FOR OVA AND PARASITE DETECTION SHOULD BE PLACED IN WHAT TYPE OF CONTAINER?

- a. Glass container
- b. Paper-board container
- c. Bicarbonate agar
- d. Egg yolk agar

28. What is the number of bacteria needed to cause turbidity in broth culture and to be seen with an unaided eye?

- a. 10^2 organisms/mL
- b. 10^4 organisms/mL
- c. 10^6 organisms/mL
- d. 10^8 organisms/mL

29. When examining body fluids by direct microscopic examination, if one organism is seen per oil immersion field, how many organisms per milliliter of specimen are present?

- a. 55
- b. 75
- c. 10^5
- d. 10^8

30. CSF

- a. Centrifuge
- b. G/S
- c. India ink
- d. Acridine orange

31. Todd Hewitt broth containing colistin and nalidixic acid

- a. LIM broth
- b. Thioglycolate broth
- c. GN broth
- d. All of the above

32. SDA is a _____ medium

- a. selective
- b. nutritive
- c. differential
- d. enrichment

33. THE D-zone susceptibility test is used to test inducible resistance On S .aureus strains demonstrating an initial antibiotic susceptibility profile of:

- a. Erythromycin sensitive, clindamycin sensitive
- b. Erythromycin resistant, clindamycin sensitive
- c. Erythromycin resistant, clindamycin resistant
- d. Erythromycin sensitive, clindamycin resistant

34. Specimens for the detection of Gonorrhea include:

- I. Gastric washing
- II. Genital swab
- III. Joint fluid

- a. I, II
- b. I, III
- c. I, II, III
- d. I, IV

35. Which organisms are plum coccobacilli that may resist decolorization and may be mistaken for Neisseria spp?

- a. Acinetobacter spp.
- b. Bordetella spp.
- c. Stenotrophomonas spp.
- d. Burkholderia spp

36. Incubation of which organism at 25 degrees celcius produces a characteristic yellow pigment?

- a. Cronobacter sakazakii
- b. Plesiomonas shigelloides
- c. Ewingella americana
- d. Hafnia alvei

37. Host cells, such as red and white blood cells (phagocytes) appear what color after gram staining procedure?

- a. Violet
- b. Colorless
- c. Pink
- d. Brown

38. The transport medium for Vibrio cholerae can be

- a. Venkatraman-Ramakrishnan medium
- b. Selenite F broth
- c. Tetrathionate broth
- d. Nutrient broth

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

39. is an enrichment medium used for recovery of Salmonella, except serotypes Typhi and Arizonae from stool specimens.

- a. Tetrathionate Broth

b. Thiosulfate Citrate Bile SaltsSucrose Agar
- c. Selenite broth

d. Sheep blood agar

40. The bacteria that is negative for fermentation of mannitol is

- a. S flexneri

b. S boydii
- c. S dysenteriae

d. S sonnei

41. Sereny test is used for the detection of

- a. enteropathogenic Escherichia coli

b. enterotoxigenic E. coli
- c. enteroinvasive E. coli

d. verotoxigenic E. coli

42. A psychrophilic halophile would be a microbe that prefers

- a. cold temperatures and increased amounts of salt

b. warm temperatures and increased amounts of pressure

c. cold temperatures and the absence of oxygen

d. warm temperatures and increased amounts of acid

43. Nagler's reaction is useful for the identification of

- a. C tetani

b. C perfringens
- c. C botulinum

d. C difficile

44. Which of the following species of Clostridium is predominantly asacchrolytic?

- a. C teteni

b. C perfringens
- c. C novyi

d. All of these

45. Which of the following(s) is/are obligate anaeorbes?

- a. C septicum

b. C novyi
- c. C tetani

d. All of these

46. Which of the following clostridium is being described

- **Non motile**
- **Lipase NEG**
- **Lactose positive**

- a. C. perfringens

b. C. botulinum
- c. C. tetani

d. C. difficile

47. Stained smears are initially examined using a _____objective to look for large structures, such as nematode larvae, Curschmann’s spirals, large granules, grains, bacterial microcolonies, or fungal forms.

- a. low-power

b. high power
- c. oil immersion

d. any of the above

48. Concentration of hydrogen peroxide used to disinfect inanimate surfaces?

- a. 10%

b. 5%
- c. 7%

d. 3%

49. During morning shift, different specimens where received by the MT at the same time, which of the following specimens should be processed first?

- a. Catheter tip

b. Urine
- c. Blood

d. Bone

50. In selective media, which of the following is /are used as an inhibitor to gram positive bacteria?

- a. Bile salts

b. Azide
- c. Potassium tellurite

d. Nota

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

51. Which of the following bacteria is being described:

Sucrose NEG

Urease POS

MotilityPOS

Ornithine NEG

- a. Yersinia pestis
- c. Y. pseudotuberculosis
- b. Yersinia enterocolitica
- d. Nota

52. Which of the following is being described

Growth at 37’C

Nalidixic sensitive

Cephalotin resistant

Hippurate hydrolysis positive

- a. Campylobacter jejuni
- c. Campylobacter fetus
- b. Campylobacter coli
- d. NOTA

53. It is typically the key to identification of Serratia marcescense

- a. DNase
- c. ONPG
- b. Prodigiosin
- d. Lipase

54. A medical technologist performed a Zinc sulfate centrifugal flotation on a stool sample, the SG of the zinc sulfate should be set at?

- a. 1.018
- c. 1.020
- b. 1.18
- d. 1.21

55. Which of the following is used as a skin test for Chlamydia?

- a. Dick’s test
- c. Foshay test
- b. Francis tes
- d. Frei test

56. Also known as Dwarf Intestinal Fluke.

- a. Echinostoma ilocanum
- c. Fasciolopsis buski
- b. Fasciola hepatica
- d. Heterophyes heterophyes

57. Which of the following organism can be acquired by eating dairy products and with contact with animal tissues and can be diagnosed by serology or culture?

- a. Francisella tularensis
- c. Yersinia pestis
- b. Brucella spp
- d. Pasteurella multocida

58. This bacterium requires carbon dioxide for growth. It cannot grow in the presence of thionine but can in the presence of basic fuchsin. It causes abortion in cattles.

- a. Brucella abortus
- c. Brucella suis
- b. Brucella mellitensis
- d. Brucella canis

59. A rapid indole test is performed on the lactose fermenter, with a positive result. This organism can be presuptively identified as?

- a. Enterobacter cloacae
- c. Proteus mirabilis
- b. Escherichia coli
- d. Klebsiella pneuminae

60. Which substance interferes with stool sample testing?

- a. Cooking oil
- c. Calcium
- b. Mineral oil
- d. Hair dye

61. Infection of which of the following species is/are considered as medical emergencies?

- a. Plasmodium vivax
- d. Plasmodium ovale
- b. Plasmodium knowlesi
- e. Two of the above
- c. Plasmodium falciparum

62. Swelling of the can is caused primarily by?

- a. gas forming, anaerobic spore formers
- c. both (a) and (b)
- b. gas forming, aerobic spore formers
- d. none of these

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

63. A gram negative bacilli is observed having a hazy blanket of growth on the surface that extends well beyond the streak lines, this organism is probably?

- a. *Proteus vulgaris*
- b. *Yersinia*
- c. Yeast
- d. *Klebsiella pneumoniae*

64. This bacteria produces a characteristic pigment

- a. *Bacillus cereus*
- b. *Serratia marcescens*
- c. *Eikenella corrodens*
- d. *Pseudomonas aeruginosa*

65. Which organism will BEST be identified using the following laboratory tests?

- Gram stain examination
- Reverse CAMP test
- Lecithinase
- Hemolysis

- a. *Clostridium perfringens*
- b. *Streptococcusagalactiae*
- c. *Bacillus anthracis*
- d. *Bacillus cereus*

66. The hair baiting test is used to differentiate which two species of Trichophyton that produce red colonies on Sabouraud’s agar plates?

- a. *T. mentagrophytes* and *T. rubrum*
- b. *T. tonsurans* and *T. schoenleinii*
- c. *T. tonsurans* and *T. violaceum*
- d. *T. verrucosum* and *T. rubrum*

67. A positive indole test indicates the presence of which bacterial enzymes?

- a. β -galactosidase
- b. tryptophanase
- c. hyaluronidase
- d. β -galactoside permease

68. What is the positive reaction in the Nagler test?

- a. Inhibition of lecithinase reaction
- b. Double zone of hemolysis
- c. Inhibition of growth without anti-toxin
- d. Arrowhead hemolysis

69. Gram (+) cocci, catalase (-), alpha hemolytic colonies were isolated. What should be your next test?

- a. Perform PYR hydrolysis
- b. Perform CAMP test
- c. Perform bile esculin
- d. Perform Taxo P

70. A technologist is reading a Gram stain from a CSF and observe small structures suggestive of gram-negative coccobacilli. Chemistry and hematology CSF results that would indicate bacterial meningitis include:

- a. WBC increased, glucose increased, protein increased
- b. WBC decreased, glucose decreased, protein decreased
- c. WBC increased, glucose decreased, protein increased
- d. WBC decreased, glucose increased, protein decreased

71. A med-tech reviewee came in with high fever, malaise, and constipation that persisted over a week. She recalls that the fever began slowly and climbed to 41°C. A physical exam reveals an enlarged spleen and tender abdomen with rose-colored spots. Laboratory isolation of a bacterium that produces H₂S and is motile is revealed. Which organism is the most likely cause of her condition?

- a. EHEC
- b. ETEC
- c. *Shigella flexneri*
- d. *Salmonella typhi*

72. Which of the following is a Mcfarland satandard composition?

- a. 99.5mL of 1% H₂SO₄ + 0.5mL of 1.175% BaCl₂
- b. 0.5 mL of 1.175% H₂SO₄ + 99.5 mL of 1% BaCl₂
- c. 0.05 mL of 1% H₂SO₄ + 99.5mL of 1.175% BaCl₂
- d. 99.5mL of 1% H₂SO₄ + 0.5mL of 1.75% BaCl₂

73. A bulls eye colony appearance is observed in a CIN medium, in order to identify it whether it is a Yesinia or Aeromonas, what test should be used?

- a. Oxidase
- b. PAD
- c. Oxidase and PAD
- d. No need because bulls eye colony is exclusive to *Yersinia*

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

74. Key test to differentiate Aeromonas and Plesiomonas from vibrio is?

- a. NaCl requirement and mannitol fermentation
- c. Gelatin liquefaction
- b. Glucose and oxidase
- d. Inositol

75. Positive result of the salt tolerance test?

- a. Turbidity
- c. green
- b. Yellow
- d. 2 of the above

76. Species of Corynebacterium that is reverse CAMP test positive.

I. C diphtheriae

II. C ulcerans

III. C pseudotuberculosis

IV. C pseudodiphtheriticum

V. C amycolatum

- a. I,II,III
- c. I,IV
- b. I,II,IV
- d. II,IV

77. 3 species of the Corynebacterium are positive in tinsdale (brown halo around the colonies). Which of the following tests differentiate them from each other?

- a. CAMP reaction and Urease
- c. Glycogen hydrolysis and CAMP
- b. Urease and glycogen hydrolysis
- d. CAMP and starch hydrolysis

78. A medical technologist received a pea size stool sample for a OP detection, what method should be done on the said specimen?

- a. Reject
- b. Proceed with the testing but state that the quantity is not sufficient (QNS)
- c. Do direct fecal smear
- d. Proceed with concentration technique to make sure that more parasite is seen.

79. Colistin–nalidixic acid agar (CNA) is used primarily for the recovery of:

- a. Neisseria species
- c. Pseudomonas aeruginosa
- b. Enterobacteriaceae
- d. Staphylococcus aureus

80. The porphyrin test for H. influenzae would be _____ because the organism _____ biosynthesizes heme.

- a. Negative; cannot
- c. Negative; can
- b. Positive; cannot
- d. Positive; can

81. Which forms of infection are caused by Bacillus anthracis?

- a. Injectional
- c. Gastrointestinal
- b. Inhalation
- d. Cutaneous
- e. All of the above

82. A commercial fisherman who had red sores on his hands was seen by his physician. Biopsy and culture of one of the lesions was performed. The culture grew an organism with the characteristics listed. What is the most likely organism?

Nonhemolytic on SBA

Gram-positive bacilli, no spores observed.

Catalase-negative

Hydrogen-sulfide-production-positive

Growth in gelatin resembled a test-tube brush at 22’C

- a. Rhodococcus equi
- c. Lactobacillus acidophilus
- b. Listeria monocytogenes
- d. Erysipelothrix rhusiopathiae

83. Which species. often grow embedded beneath the surface of solid media, therefore, transferring colonies with a loop is ineffective.

- a. Mycoplasma
- d. Streptomyces
- b. Erysipelothrix

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

84. _____ is the causative agent of the zoonosis erysipelas, seen primarily in pigs (rose disease), and is characterized by fever, skin lesions, arthritis, and sudden death.
- a. Streptococcus agalactiae

b. Streptococcus pyogenes

c. Erysipelothrix rhusiopathiae

d. Staphylococcus aureus
85. A spirochete that stains easily and can be visualized by bright field microscopy.
- a. Borrelia

b. Treponema

c. Leptospira

d. All of them are not stain easily. Dark field should be used.
86. A spirochete that has the ability to bind plasminogen and urokinase-type plasminogen activator to its surface. This binding could convert plasminogen to plasmin, which is a potent protease and could facilitate tissue invasion.
- a. Borrelia burgdorferi

b. Borrelia recurrentis

c. Treponoma pallidum

d. Leptospira interrogans
87. Which of the following statements about stool preservation is correct?
- a. Trophozoites will regain their motility in a warm slide containing warm saline and iodine.

b. Formed stool needs to be well broken up and mixed well with the preservative.

c. Liquid stools may be refrigerated overnight without considerable loss of important. stages.

d. Formaldehyde may be buffered with ZnSO4 to preserve morphology of amebic trophozoites.
88. A hyperemic edema of the larynx and epiglottis that rapidly leads to respiratory obstruction in young children is most likely to be caused by____
- a. H. influenzae

b. Neisseria meningitidis

c. K. pneumoniae

d. M. pneumoniae
89. What the working principle of autoclave?
- a. 121’C; 15-20 mins.; 15 psi

b. 121’C; 30 mins.; 15 psi

c. 132’C; 30–60 minutes; 25 psi

d. 130’C; 30–60 minutes; 25 psi
90. What is the Negative control for optochin disk?
- a. Streptococcus pneumoniae

b. Streptococcus pyogenes

c. Streptococcus agalactiae

d. Micrococcus luteus
91. EM rash is associated with____
- a. Bull ‘eye rash

b. Bull’s eye hemolysis on BAP

c. Bull’s eye colonies on CIN

d. Mycoplasma
92. Why blood agar plates are lysed to become chocolate agar?
- a. To support strict aerobic and anaerobic growth only

b. To provide X and V factors

c. To enhance hemolytic patterns

d. To enhance hardening of the agar
93. All of the following requires praziquantel as a treatment of choice, except.
- a. Fasciola spp.

b. Clonorchis

c. Opisthorchis

d. None
94. The unique cultivation method that involves the use of intermediate host to isolate a parasitic organism from a human host.
- a. Harada-mori

b. Coproculture

c. PCR

d. Xenodiagnoses
95. Which is not transmitted by sexual intercourse?
- a. G. lamblia

b. G vaginalis

c. B coli

d. E histolytica
96. Which is the main transmission of head lice?
- a. Airborne

b. Direct

c. Sexual

d. Black magic (barang)

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

97. Which of the following is the most specific, reliable ang gold standard test for syphilis?

- a. FTA-ABS
- c. MHA-TP
- b. TPI
- d. VDRL/RPR

98. Yellow color is observed in a Cary Blair transport media is indicative of?

- a. random change change in pH
- c. the buffering capacity is exceeded
- b. bacterial contamination

99. Material used for nasopharyngeal swab tip?

- a. Flocked cotton
- c. Flocked gauze
- b. Flocked nylon
- d. Cotton flocked gauze

100. Which of the following microorganism gives a positive result for CAMP?

- a. Streptococcus agalactiae
- c. Listeria monocytogenes
- b. Arcanobacterium
- d. All of the above

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

1. The figure A is indicative of?

- a. Streptococcus agalactiae

b. Arcanobacterium
- c. Listeria monocytogenes

d. ALL

2. A medical technologist is examining a urethral discharge and observed gram-negative intracellular diplococci. What is the possible microorganism?

- a. Neisseria gonorrheae

b. Chlamydia trachomatis
- c. Gardnerella vaginalis

d. Trichomonas vaginalis

3. Which microorganism is being described?

- Gram positive coccobacilli
- Lipophilic
- GS—v forms and palisade

- a. Corynebacterium urealyticum

b. Corynebacterium diphtheriae
- c. Corynebacterium ulcerans

d. Corynebacterium pseutotuberculosis

4. SSA is a modification of what agar?

- a. Desoxycholate agar

b. Blood agar
- c. MCconkey agar

d. Chocolate agar

5. When is the optimal time to collect for blood culture?

- a. Before administration of antimicrobial

b. After the height of fever
- c. Anytime

d. Whenever possible

6. New Taenia species?

- a. Taenia sollum

b. Taenia saginata
- c. Taenia asitica

d. Taenia multiceps

7. Which of the following parasite shows rosette formation in its uterus?

- a. Diphylobothrium latum

b. Taenia saginata
- c. Taenia sollum

d. Parastrongylus cantonensi

8. Which of the following parasite/s is/are capable of autoinfection?

- a. Taenia sollum

b. Capillaria philippinensis
- c. Enterobius vermicularis

d. All of the above

9. Which test/s differentiate/s proteus vulgaris and proteus mirabilis?

- a. Indole

b. Oxidase
- c. PAD

d. Urease

10. Which test/s identify Group A streptococcus?

- a. PYR hydrolysis

b. Bile esculin
- c. CAMP

d. Growth at 6.5% NaCl

11. Common preservative for stool examination.

- a. Formalin

b. Zinc sulfate
- c. PVA

d. Iodine

12. What is the term when water is safe to drink and can be used for cooking?

- a. Potable

b. Filtered

c. Distilled

13. which of the following has a virulence factor aflatoxin?

- a. Aspergillus

b. Histoplasma
- c. Cryptococcus

d. Coccidioides

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

14. Which of the following Haemophilus species shows no hemolysis in Bap and is xylose positive, glucose positive, and lactose negative?

- a. Haemophilus influenza
- b. Haemophilus parainfluenzae
- c. Haemophilus ducreyi
- d. Haemophilus haemolyticus

15. Which of the following microorganisms require increased concentration of Carbon dioxide?

- a. Haemophilus
- b. Helicobacter
- c. Either
- d. Neither

16. A term used to describe a microorganism that grow with reduced oxygen and increased CO2.

- a. Capnophiles
- b. Microaerophile
- c. Aerotolerant
- d. Aerobes

17. Which of the following describes a parasite that has both female and male sexes?

- a. Hermaphrodite
- b. Apolytic
- c. Craspedote
- d. Anapolytic

18. Which of the following is used to stain the uterine branches of Taenia species?

- a. India ink
- b. Gram staining
- c. Giemsa
- d. Trichrome

19. A stab was made on semi solid agar. Where does the bacteria grow?

- a. at the bottom
- b. in the middle
- c. at the stabbed area
- d. at the sides

20. In order for a sputum specimen to be acceptable for culture (Mtb), the specimen must have:___

- a. < 10 squamous epithelial cells and > 25 PMNs
- b. >10 squamous epithelial cells and > 25 PMNs
- c. < 10 squamous epithelial cells and < 25 PMNs
- d. < 10 squamous epithelial cells and < 25 PMNs

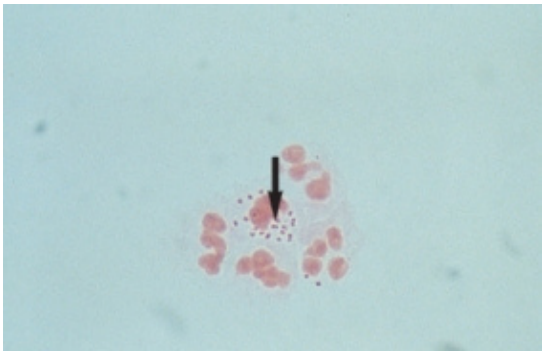
21. Which is the Most common cestode in humans with infection prevalence highest among children and in warm climates with poor sanitation facilities?

- a. Taenia sollum
- b. Echinococcu granulosus
- c. Diphylobothrium latum
- d. Hymenelopsis nana

22. It defines as larger than normal number of diseased or infected individuals that occurs over a relatively short period.

- a. Outbreak
- b. Pandemic
- c. Endemic
- d. Epidemic

23. identify



- a) Neisseria
- b) Bacteroides
- c) Staphylococcus
- d) Streptococcus

24. A man who had been wading while fishing in the Gulf of Mexico developed painful swellings that evolved into vesicles and bullae (image). These lesions became necrotic, and the man developed septicemia, severe sepsis, and multiorgan dysfunction syndrome. Which of the following is the most likely cause of this man’s infection?

- a. Pseudomonas aeruginosa
- b. Staphylococcus aureus
- c. Streptococcus pyogenes
- d. Vibrio parahaemolyticus
- e. Vibrio vulnificus

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

25. Smaller; convex, grows upward more than outward; creamy, white, dull surface; usually displays tiny projections at the base of the colony after 24 hours of incubation.

- a. Candida albicans (yeast)

b. Staphylococcus organisms
- c. Streptococcus agalactiae

d. Streptococcus pyogenes

26. Moderate growth of a β -hemolytic, gray colony is seen on a vaginal culture from a 25-year-old pregnant woman. The colonies are growing on the BAP and CHOC, but the MAC is negative for growth. The colonies are described as large with small, diffuse zones of β -hemolysis. This type of hemolysis is noticed when a colony is removed with a loop. A presumptive identification of this organism would be:

- a. Streptococcus pyogenes (group A)

b. Staphylococcus aureus
- c. Streptococcus agalactiae (group B)

d. Streptococcus pneumoniae

27. What would you suspect if you noticed “puffballs” growing in the broth medium?

- a. Streptococci

b. Pseudomonas aeruginosa
- c. Yeast

d. Enterics

28. This organism is acquired by tick bite.

- a. Treponema pallidum

b. Borrelia burgdorferi
- c. Borrelia recurrentis

d. Leptospira interrogans

29. What is the probable organism- pertaining to the black colonies pointed in arrow C (XLD agar)

- a. Salmonella

b. E.coli
- c. Klebsiella

d. Shigella

30. MacConkey agar – identify what’s on arrow B.

- a. Lactose fermenter

b. Non-lactose fermenter
- c. H2S positive

d. H2s negative

31. The image below is shown. Microscopic morphology and Biochemical reactions are the following

- Gram pos cocci
- Catalase negative
- Bacitracin resistant
- CAMP positive

- a. Group A streptococcus

b. Group B streptococcus
- c. Group C streptococcus

d. Staphylococcus

32. This group consists of gram-positive cocci that are natural inhabitants of the intestinal tracts of humans and animals. They are nonhemolytic or α -hemolytic, although some strains show β -hemolysis. sometimes exhibit a pseudo catalase reaction—weak bubbling in the catalase test. Are frequent causes of nosocomial infections

- a. Streptococci

b. Enterococci
- c. Staphylococci

d. Enteric

33. Structural protein/s of SARS-COV-2 include/s

- a. M protein

b. E protein

c. S protein
- d. All of the above

e. 2 of the above

34. What is the probable organism?



- a. S.aureus

b. S.pyogenes
- c. S.agalactiae

d. S.pneumoniae

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

35. Identify the ova below

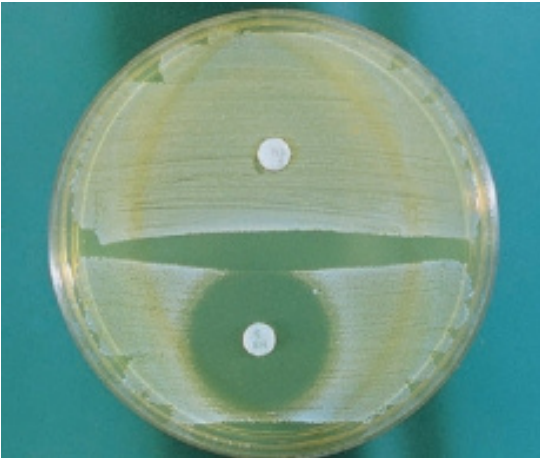


- a. Trichuris trichiura

b. Hookworm egg
- c. Enterobius vermicularis

d. Ascaris lumbricoides

36. What organism is probable in the upper result of the novobiocin test below?



- a. Staphylococcus saprophyticus

b. S. epidermidis
- c. Micrococcus spp.

d. Streptococcaceae

37. Gram negative rod with colonies below in EMB agar

- a. E. coli

b. P. aeruginosa
- c. Eikinella

d. Streptococci

38. A stool specimen submitted by a 50 year old patient. What is a possible etiologic agent?

- a. Vibrio

b. Campylobacter
- c. E. coli

d. S. aureus

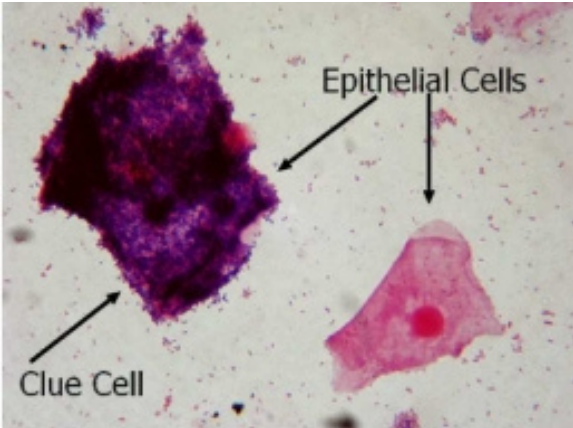
39. Asymptomatic neurosyphilis is under what stage?

- a. Primary

b. Secondary
- c. Tertiary

d. Latent

40. This is diagnostic of?



- a. G.vaginalis

b. Gonorrhea
- c. Syphilis

d. Chlamydia

41. Identify the microorganism based on the biochemical test below

TSI: A/A	VP pos
Urease pos	Citrate pos
Indole neg	Non-motile
MR neg	H2S neg

- a. P.vulgaris

b. K pneumoniae
- c. E cloacae

d. S marcescens

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

42. Identify the microorganism based on the BCM test below

TSI: A/A Indole pos
VP neg MR pos
H2S neg Citrate neg
Urease neg LDC pos
PAD neg

- a. E. coli

b. P vulgaris
- c. S typhi

d. Y enterocolitica

43. Transport media for V cholerae

- a. Stuart

b. Amies
- c. Cary-Blair

d. VTM

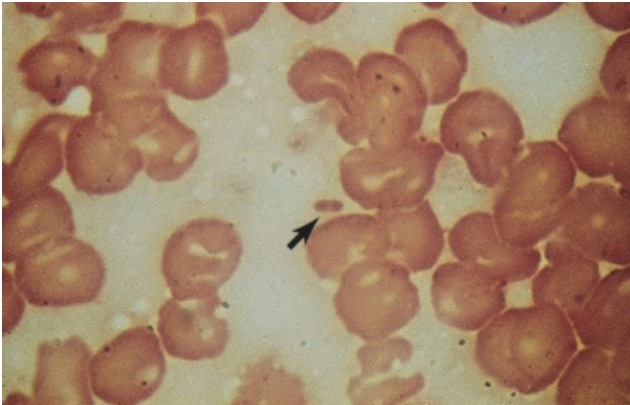
44. Forms spores except

- a. B anthracis

b. B subtilis
- c. B cereus

d. B fragilis

45. Identify the structure pointed in the arrow



- a. Y. pestis

b. C.perfringens
- c. Bacillus sp.

d. Cornynebacterium

46. Which of the following is correctly matched?

1. Beta hemolysisà complete destruction of RBC

2. Alpha hemolysis à complete destruction of RBC

3. Gamma hemolysisà partial destruction of RBC
- Gamma hemolysis à greening of the agar

a. 1

b. 2
- c. 3

d. 4

47. Where should the light source be situated when reading the hemolytic pattern on a BAP

- a. Left side

b. Above
- c. Behind

d. Right side

48. Which of the following match is correct?

- a. Leptospirosis: acquired through kissing

b. R prowazekii: acquired through lice

c. Lyme disease: acquired through contact with urine of rodent

d. V cholerae: acquired through sexual contact

49. True about actinomyces

- a. Gram pos cocci, aerobic

b. Gram neg cocci, aerobic
- c. Gram pos bacilli, facultative anaerobe

d. Gram neg bacilli, facultative anaerobe

50. Common name of T trichiura

- a. Pinworm

b. Threadworm
- c. Gian intestinal fluke

d. Whipworm

51. Specimen of choice for detecting rotavirus

- a. Throat swab

b. Urine sample
- c. Bronchoalveolar lavage

d. Fecal sample

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

52. TCBS agar

- a. Vibrio

b. Salmonella
- c. Shigella

d. Plesiomonas

53. The only known human tapeworm with an operculum is?

- a. D latum

b. H nana
- c. G lamblia

d. S haematobium

54. If the ova of this parasite are ingested by humans, the oncosphere form can migrate through the body via the blood stream, resulting in the condition known as cysticercosis

- a. E histolytica

b. C sinensis
- c. T solium

d. H nana

55. MOT of Paragonimus westermanii

- a. Ingestion of undercooked fish

b. Ingestion of undercooked crabs/ cray fish
- c. Ingestion of undercooked of ant

d. Ingestion of undercooked plat or vegetation

56. Ova recovered from the stool are routinely used to diagnose infection caused by all of the following except

- a. A lumbricoides

b. N americanus
- c. T trichiura

d. S stercoralis à rhabditiform larva

57. Which of the following specimens would be best for identifying B cereus as the cause of an outbreak of food poisoning

- a. Blood

b. Stool samples
- c. Food

d. Rectal swab

58. Which of the following Schistosoma ova is correctly matched to its characteristic appearance

- a. S japonicumà large sinuous terminally spined egg

b. S mansonià large lateral spine, unoperculated

c. S haematobiumà large terminal spine, unoperculated

d. S indicumà large lateral spine, unoperculated, embryonated

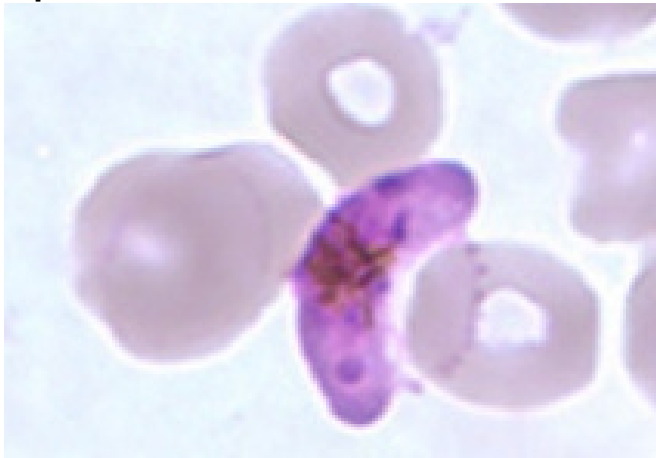
59. In pinworm infection, where does the female worm lays egg?

- a. Small intestine

b. Large intestines
- c. Perianal region

d. Skeletal muscle

60. Identify the parasite seen in the picture



- a. P vivax ring stage

b. P malariae trophozoite
- c. P falciparum gametocyte

d. P ovale schizont

61. Identify the result.

- a. Motile

b. Nonmotile

c. Invalid

d. Slightly motie



MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

62. *T solium* is an example of a tapeworm. A tapeworm is a

- a. Trematode

b. Cestode
- c. Protozoa

d. Nematode

63. What is the purpose of adding 0.025% to 0.050% SPS to nutrient broth media for the collection of blood cultures?

- a. Inhibits phagocytosis and complement

b. Promotes formation of a blood clot
- c. In enhances growth of anaerobes

d. It functions as a preservative.

64. MSA is a selective differential for

- a. *Staphylococcus* spp

b. *Enterococcus* spp
- c. Gram-positive cocci

d. *Streptococcus* spp

65. A throat culture was taken from a 6-year old boy with a gray pseudomembrane covering his oropharynx. It is catalase positive, isolated in CT medium and is subculture on tyinsdale medium, it grew as black colonies with brown halo. When you perform gram stain what is its possible morphology?

- a. Gram-positive branching bacilli

b. Gram positive bacilli in irregular clublike shape

c. Gram, positive cocci in chains

d. Gram positive cocci in grape like clusters

66. *Necator americanus* rhabditiform latvae can be differentiated from *strongyloides stercoralis* rhabditiform larvae by?

- a. Length of the notched tail

b. Length of the head region
- c. Segmentation

d. Size of the genital primordium

67. Not seen in PBS

- a. *Loa loa*

b. *S manson*i
- c. *Plasmodium*

d. *Trypanosoma*

68. Not classified as a sign, except

- a. Swelling

b. Redness
- c. Malaise

d. Fever

69. Which of the following concentration of alcohol is the most effective germicide?

- a. 75%

b. 100%
- c. 25%

d. 45%

70. Parasitemia refers to

- a. Parasites in the blood

b. Parasitic invasion which results in injury and reaction to injury

c. Parasite living the surface of the host

d. AOTA

71. Method of choice for recover of anaerobic bacteria in deep abscess

- a. Cotton swab in abscess area

b. Scalpel’s swab used for debridement

c. Skin snips in the surface

d. Needle aspirate for surface decontamination

72. What characteristic oral finding, often described as small white spots resembling grains of sand, is pathognomonic for a specific viral infection and typically precedes the onset of a maculopapular rash? Refer to the picture below.



- a. Koplik spots

b. Herman spots

c. Vesicular rash

d. Slapped cheek rash

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

73. Which of the following a gram staining characteristic of Actinomycetes?

- a. Gram pos. Cocci

b. Gram pos. Bacilli
- c. Gram Neg cocci

d. Gram neg bacilli

74. Organisms belonging to the genus Neisseria are described as which of the following?

- a. Gram-positive diplococci

b. Gram-negative diplococci
- c. Gram-negative coccobacilli

d. Gram negative bacilli

75. Gram positive bacilli except?

- a. Mycobacterium

b. Diphtheria
- c. Yersinia

d. Actinomycetes

76. Which of the following structure/s cover/s Paramecium spp?

- a. Flagella

b. Cilia
- c. Spikes

d. NOTA

77. Which of the following is a gram positive cocci under the microscope and in blood agar plate shows mall, round, smooth, and glistening colonies with a mucoid or slightly mucoid consistency shown below

- a. Streptococcus pneumoniae

b. Staphylococcus aureus
- c. P. aeruginosa

d. Y.pestis

78. TCA happens in?

- a. Mitochondria

b. ER
- c. GA

d. Cytoplasm

79. The organism most commonly associated with otitis media infections is associated with which of the following positive test results?

- a. Coagulase

b. VP
- c. Optochin

d. Bacitracin

80. The following identifies the most common cause of neonatal sepsis and meningitis.

- a. CAMP test

b. Coagulase
- c. PYR

d. 6.5% Nacl

81. The lowest concentration of antimicrobial agent that visibly inhibit the growth of the organism being tested known as the:

- a. Minimum inhibitory concentration (MIC)

b. Minimum bactericidal concentration (MBC)
- c. Agar disk diffusion test

d. Dilution test

82. Happens during microorganism resistance EXCEPT

- a. ag-ab complex

b. reduced penetration of membrane protein
- c. reduced antimicrobial therapy

d. bypassing the membrane protein

83. All of the following are spiral-shaped, EXCEPT:

- a. Clostridium botulinum

b. Helicobacter pylori

c. Treponema pallidum

d. Vibrio cholerae

84. Organisms that have a cell wall containing large amounts of lipid material belong to the genus:

- a. Chlamydia

b. Mycobacterium
- c. Mycoplasma

d. Leptospira

85. A fastidious gram-negative bacillus was isolated from a case of periodontal disease, which upon dark-field examination was noted to have a gliding motility. The most likely identification of this etiologic agent would be

- a. Capnocytophaga

b. Kingella
- c. Plesiomonas

d. Chromobacterium

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

86. Growth in a 48-hour gelatin stab culture that shows lateral filamentous growth resembling a test tube brush. This is mostly characteristic of which organism

- a. Streptobacillus moniliform

b. Erysipelothrix rhusiopat
- c. Gram Neg cocci

d. Gram neg bacilli

87. Cycloserine-cefoxitin-fructose agar (CCFA) is used for the recovery

- a. Yersinia enterocolitica

b. Yersinia pestis
- c. Clostridium perfringens

d. Clostridium difficile

88. Which single test best separates Klebsiella oxytoca from Klebsiella pneumoniae

- a. urease

b. lactose
- c. citrate

d. indole

89.Which of the following tests would be appropriate in the diagnosis of a mycobacterial infection

- a. Anton test

b. Frei test
- c. Elek test

d. PPD tes

90. Which spore type and location is found on Clostridium tetani

- a. Round, subterminal spores

b. Oval, terminal spores
- c. Oval, subterminal spores

d. Round, terminal spore

91. A gram-negative bacillus was recovered from the urine of a child with a history of recurrent urinary tract infections. The organism was oxidase negative, lactose negative, urease positive, and motile. The most likely identification of this agent would be

- a. Proteus mirabilis

b. Escherichia coli
- c. Pseudomonas aeruginosa

d. Klebsiella pneumonia

92. Haemophilus influenza biogroup aegyptius, which is associated with cases of acute conjunctivitis, is chracterized by all of the following reactions except:

- a. Indole negative

b. X factor negative
- c. Ornithine negative

d. V factor positive

93. Which one of the following disease process involves erythrogenic tox

- a. Syphilis

b. Leprosy
- c. Cutaneous anthrax

d. Scarlet feve

94. Special culture medium for isolation and identification of Cryptococcus neoform

- a. Czapek-Dox agar

b. SDA with cycloheximide
- c. Niger seed agar

d. Cornmeal agar-Tween 80

95. Thick walled structure containing spores that is a characteristic feature of Coccidiodes imm

- a. cleistothecium

b. perithecium
- c. vesicle

d. spherul

96. The ELEK test is for the detection of

- A. Corynebacterium diphteria toxin, in vitro

B. Corynebacterium diptheriae toxin in vivo
- C. Colstridium bolulinum toxin in vitro

D. Clostridium bololinum in vivo

97. Select the media of choice for recovery of Vibrio cholerae from a stool specime

- A. MacConkey agar and thioglycolate media

B. TCBS and alkaline peptone water
- C. Blood agar and selenite broth

D. Cycloserine-cefoxitin-fructose agar

98. A mucoid, lactose positive colony type on MacConkey agar that is indole-negative and citrate posit

- A. Escherichia coli

B. Klebsiella pneumoniae
- C. Proteus vulgaris

D. Serratia marcesc

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

99. Ethylhydrocupreine hydrochloride is used to differentiate
- A. Catalase positive Streptococcus spp. from catalase negative Staphylococcus spp.

B. Streptococcus pneumoniae from alpha-hemolytic streptococci

C. Enterobacteriaceae from non-enterobacteriaceae

D. Group D streptococci from Group D nonenteroc

100. The best medium for culture of Francisella tularensis
- A. Bordet-Gengou Medium

B. Cystine Blood Agar

C. Thayer-Martin

D. Loeffler’s Medium

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

1. The laboratory accident that could most likely lead to hepatitis B infection is:

a. **Accident needle puncture**

b. Spilling infectious material on the floor

c. Breaking tubes in centrifuge

d. Paper or glassware cuts
2. The best way to prevent HIV infection when handling blood is:

a. Refuse to process HIV blood

b. Keep HIV blood separate from the test

c. Wear gloves and wash your work area with dilute chlorox

d. **Treat all blood and body fluids as potentially HIV- Infected**

e. Don't worry because HIV is very fragile in the lab environment
3. 85% N2, 10% H2, 5% CO2 is the environmental condition that best suit which type of organism?

a. Aerobes

b. **Anaerobes**

c. Capnophiles

d. Microaerophiles
4. Before an AFB smear is reported as negative, it should be examined carefully by scanning atleast ____ oild immersion fields (magnification x1000):

a. 100

b. 30

c. **300**

d. 500
- 5.Thioglycollate broth:

a. Contains pancreatic digest of casein, soy broth, glucose enrich growth of most microorganisms

b. Supports growth of anaerobes, aerobes, microaerophilic and fastidious microorganisms

c. **Both of these**

d. None of these
6. Thayer- martin medium is basically a (an):

a. Blood agar

b. Enriched MacConkey agar

c. **Enriched chocolate agar**

d. Potassium tellurite agar
7. Inhibitor(s) contained in salmonella- shigella (ss) agar

a. Gentian violet

b. Sodium azide

c. **Bile salts and brilliant green**

d. Potassium tellurite
8. Which organism produces the camp factor enhancing beta hemolysis in the presence of the S. Aureus beta lysin?

a. Group A streptococci

b. **Group B streptococci**

c. Group C streptococci

d. Group D streptococci
9. MacConkey agar is quantitatively inoculated with urine specimen and incubated appropriately, results are 100,000 CFU/ mL urine of gram- negative lactose- fermenting organisms. Which of the following would be statistically the most likely organism to cause this urinary tract infection?

a. **E. Coli**

b. Proteus spp.

c. S. Aureus

d. Klebsiella spp
10. Yellow colonies on xylose- lysine- desoxycholate (XLD) agar:

a. **E. Coli**

b. Shigella

c. Salmonella

d. Edwardsiella
11. Which of the following bacteria is able to hydrolyze urea via urease production, which results in an increase in urine pH that is toxic to kidney cells and stimulates the formation of kidney stones?

a. E. Coli

b. **Proteus**

c. S. Aureus

d. Pseudomonas aeruginosa
12. In the Kirby- Bauer disc diffusion susceptibility test, Which variable is critical when testing pseudomonas species for antibiotic susceptibility to aminoglycosides?

a. Incubation temperature

b. Duration of incubation

c. **Cation content of media**

d. Depth of agar
13. Which of the following haemophilus species is an agent of a sexually transmitted disease?

a. H. Parainfluenzae

b. H. Influenza

c. **H. Ducreyi**

d. H. Hemolyticus

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

14. Spore- forming cells in bamboo pole arrangement of bacillus anthracis can be found in:

- a. Specimen from patient
- b. Guinea pigs
- c. Cultures
- d. None of these

15. A test used in the diagnosis of anthrax in animals dead of the disease, or to detect contamination of hides by bacillus anthracis is known as:

- a. Schick test
- b. Mallein test
- c. Ascoli precipitation test
- d. Ramon flocculation test

16. A large, aerobic, gram-positive, spore forming rod is isolated from a blood culture. it can be further confirmed as B. anthracis if it is:

- a. Hemolytic and motile
- b. Hemolytic and nonmotile
- c. Nonhemolytic and motile
- d. Nonhemolytic and nonmotile

17. Which of the following is the only catalase- negative, gram-positive, non- spore- forming rod that produces H2S on TSI?

- a. Gardnerella sp.
- b. Lactobacillus sp
- c. Erysipelothrix sp.
- d. Arcanobacterium sp.

18. Unopened, cut bacon, packaged in oxygen- resistant material, is spoiled mostly by:

- a. Lactobacilli
- b. Micrococci
- c. Streptococci
- d. Molds

19. Which of the following produces macroconidia that are large, multicellular, and club- shaped with smooth walls?

- a. Fonsecaea pedrosoi
- b. Microsporum audouinii
- c. Epidermophyton floccosum
- d. Trichophyton mentagrophytes

20. A mold is isolated in the laboratory displays a velvety, gray- green colony morphology. On microscopic evaluation, flask- shaped conidiophores' are seen. The most likely organism is which of the following?

- a. Penicillium
- b. Acremonium
- c. Paecilomyces
- d. Scopulariopsis

21. The protein coat that surrounds the nucleic acid of a virion is called which of the following?

- a. Capsid
- b. Capsomere
- c. Capsule
- d. Nucleocapsid

22. Which if the following swabs cannot be used for specimens intended for viral testing?

- a. Cotton swabs
- b. Calcium alginate swabs
- c. Dacron swabs
- d. Rayon swabs

23. Hand- foot and mouth disease is a mild, contagious viral infection common in young children. It is characterized by sores in the mouth and a rash on the hands and feet. Hand- foot- and- mouth disease is most commonly caused by:

- a. Cocksackievirus
- b. Echovirus
- c. Poliovirus
- d. Rhinovirus

24. What specimen(s) should be collected from a patient with suspected influenza?

- a. Stool
- b. Throat swab
- c. Urine
- d. All are correct

25. Prions are best described by which of the following?

- a. Infectious viral RNA without capsid proteins
- b. Infectious proteins with no associated nucleic acid
- c. Infectious viral DNA without capsid proteins
- d. Non- enveloped virus highly resistant to heat and chemical inactivation

26. Settings of RPMs on the face of the rheostat control on the centrifuge should be checked once:

- a. Weekly
- b. Daily
- c. Monthly
- d. Every other week

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

27. For serological testing, an acute phase blood specimen is generally:

- a. Taken within 48 hours
- b. Taken within 7 days**
- c. Taken within 14 days
- d. Taken after 14 days

28. For serological testing, a convalescent phase blood specimen is generally:

- a. Taken within 48 hours
- b. Taken within 7 days
- c. Taken within 14 days
- d. Taken after 14 days**

29. Which of the following filters can give 100% sterility?

- a. Seitz
- b. Millipore (0.22 um)**
- c. Millipore (0.5 um)
- d. A and B

30. Which of the following pathogens is not commonly transmitted by water?

- a. Salmonella
- b. Shigella
- c. Pasteurella**
- d. Vibrio

31. The filariform larva is the infective stage for:

- a. Ascaris lumbricoides, Trichostrongylus spp
- b. Ascaris lumbricoides, Strongloides stercoralis
- c. Ancylostoma duodenale, Strongloides stercoralis**
- d. Trichuris trichiura, Necator americanus

32. A stool specimen was collected at 8pm from a patient. following collection the specimen was not submitted to the laboratory until 11 pm. The laboratory technologist found larvae with a long buccal cavity and a small, reduced genital primordium in the fecal sample. The larvae are most likely:

- a. Ancylostoma duodenale**
- b. Trichuris trichiura
- c. Strongloides stercoralis
- d. Unable to determine

33. In the Philippines, the dominant liver fluke affecting cattle and buffaloes, there are only a few human cases reported locally.

- a. F. Hepatica
- b. F. Gigantica**
- c. C. Sinensis
- d. O. Felineus

34. Infection with clonorchis or opisthorchis may result from eating raw or undercooked:

- a. Aquatic vegetation
- b. Crayfish
- c. Crabs
- d. Freshwater fish**

35. The mode of transmission of Schistosomal infection is by:

- a. Ingestion of contaminated aquatic vegetation
- b. Direct penetration of the skin by cercariae**
- c. Ingestion of raw fish
- d. Mosquito bite

36. A diagnostic characteristic of the egg of S. mansoni is:

- a. A large lateral spine**
- b. A pointed terminal spine
- c. No spine
- d. A small lateral spine

37. What is a schistosomule?

- a. Cercaria
- b. Cercaria minus tail**
- c. Free- swimming cercaria
- d. Metacercariae

38. Which of the following organs of the body is most often involved in extraintestinal amoebiasis?

- a. Lungs
- b. Kidneys
- c. Pancreas
- d. Liver**

39. Mature cysts of entamoeba polecki have how many nuclei/

- a. 2
- b. 8
- c. 1**
- d. 0

40. Which of the following would have a double- walled, wrinkled cyst form?

- a. Naegleria fowleri
- b. Entamoeba hartmanni
- c. Acanthamoeba castellani**
- d. Dientamoeba fragilis

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

41. Which flagellate can be a pathogen of the small intestines?

- a. **Giardia**
- b. Trichomonas
- c. Chilomastix
- d. Strongloides

42. Which of the following is the intracellular form of the blood and tissue flagellates?

- a. Crithidial
- b. **Leishmanial**
- c. Trypanosomal
- d. Leptomonad

43. In which type of malaria is there synchronized rupture of the red blood cells every 72 hours?

- a. P. Vivax
- b. **P. Malariae**
- c. P. Ovale
- d. P. Falciparum

44. Plasmodium vivax and plasmodium ovale are similar because they:

- a. **Exhibit Schuffner’s dots and have a true relapse in the life cycle**
- b. Have no malarial pigment and multiple rings
- c. Commonly have applique forms in the red cells
- d. Have true stippling, do not have a relapse stage and infect old red cells

45. Babesia is an organism that has been implicated in disease from both splenectomized and nonsplenectomized patients. morphologically, the parasites resemble:

- a. **Plasmodium falciparum rings**
- b. Leishmania donovani mastigotes
- c. Plasmodium vivax developing rings
- d. Trypanosoma cruzi trypomastigotes

46. What type of blood specimen is preferred for preparing blood smears for protozoa?

- a. **Finger puncture**
- b. Venipuncture
- c. Arterial puncture
- d. Plasma

47. To detect stippling, prepare blood films from venipuncture within:

- a. 1 to 2 minutes
- b. **30 minutes to 1 hour after being drawn**
- c. 2 hours after being drawn
- d. 5 to 10 minutes

48. The demonstration of retinochoroiditis and cerebral calcifications in a newborn would result in whcih of these laboratory requests?

- a. Casoni skin test
- b. MHA- ABS test for congenital syphilis
- c. Ramon flocculation test
- d. **Titer of toxoplasma abs**

49. Preferred specific gravity of zinc sulfate solution for the flotation method is:

- a. 1. 01
- b. 1. 04
- c. **1. 18**
- d. 1. 48

50. Corn meal agar test is used to identify Candida albicans through the organism’s production of:

- a. **Chlamydospore**
- b. Urease
- c. Germ tube
- d. Inositol

51. This presumptive test for Candida uses serum.

- a. **Germ tube test**
- b. Latex agglutination
- c. Hair perforation test
- d. Chlamydospore test

52. In order to demonstrate of the encapsulated yeast Cryptococcus neoformans in wet preparations of patient specimens, what should be used?

- a. Methylene blue
- b. **India ink**
- c. Malachite green
- d. Safranin

53. Which of the following is diagnostic for chromoblastomycosis?

- a. Flowerette conidia
- b. Asteroid body
- c. **Sclerotic body**
- d. Germ tube

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

54. Rose gardener’s disease:

a. Sporotrichosis

b. Histoplasmosis

c. Coccidioidomycosis

d. Blastomycosis
55. Which of the following media identifies species of Aspergillus?

a. Urease medium

b. Rice agar

c. Czapek’s agar

d. Blood agar
56. Which of the following parasite larva can be isolated in sputum?

a. Paragonimus westermani

b. Entamoeba histolytica

c. Taenia saginata

d. Ascaris lumbricoides
57. The following are techniques used for detection of parasitic infection and their corresponding causative agent. Which of the following is correctly matched?

a. Harada Mori Technique and Capillaria philippinensis

b. Xenodiagnosis and Leishmania

c. Knott’s Technique and Microfilariae

d. Sellotape Method and Trichuris trichiura
58. Proper collection of a sample for recovery of Enterobius vermicularis includes collecting:

a. A 24-hour urine collection

b. A first morning stool with proper preservative

c. Capillary blood

d. A scotch tape preparation from the perianal region
59. Diphylobothrium latum adult resembles the adult form of:

a. Paragonimus westermani

b. Echinococcus granulosus

c. Taenia saginata

d. Spirometra
60. Second intermediate host of Paragonimus westermani:

a. Snail

b. Fish

c. Freshwater crab

d. Vegetation
61. The definitive host to Plasmodium is the:

a. Tsetse fly (Glossina)

b. Sandfly (Phlebotomus)

c. Mosquito (Female Anopheles)

d. Reduviid bug (Male Triatoma)
62. Cytomegalovirus isolation is best accomplished using:

a. Monkey kidney cells

b. A549 cells

c. Human embryonic fibroblasts

d. Embryonated hen’s eggs
63. Enteroviruses can be differentiated from rhinoviruses by:

a. Size

b. Ether stability

c. Ribonuclease treatment

d. Acid resistance
64. Which of the following is a suitable transport medium for bacteria and virus?

a. Phosphate buffered sucrose (2SP)

b. Hank’s balanced salt solution

c. Eagles minimum essential medium

d. Stuart’s medium
65. Lysostaphin susceptibility is a test used to differentiate:

a. Staphylococcus spp. from Micrococcus spp.

b. Streptococcus spp. from Staphylococcus spp.

c. Staphylococcus spp. from Pseudomonas spp.

d. Streptococcus spp. from Micrococcus spp.
66. Prosthetic heart valve endocarditis is most commonly caused by this staphylococcal species:

a. S. aureus

b. S. epidermidis

c. S. saprophyticus

d. S. pyogenes
67. Which Staphylococcus spp. is resistant to 5µg novobiocin?

a. S. aureus

b. S. epidermidis

c. S. saprophyticus

d. S. pyogenes
68. .In the β-lactamase chromogenic cephalosporin method, which of the following indicates a positive reaction?

a. Production of acid

b. Reduction of nitrates

c. Color change

d. Turbidity

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

69. A medical technologist cultured a specimen from a suspected cystic fibrosis patient. After 24 hours of incubation, the MT noticed colonies which were spreading and flat, with serrated edges and a metallic sheen. There was a characteristic corn taco-like odor. Identify the bacteria

- a. Klebsiella pneumoniae

b. Escherichia coli
- c. Staphylococcus aureus

d. Pseudomonas aeruginosa

70. Serratia strains are readily differentiated from Klebsiella on the basis of their:

- a. Failure to produce gas from inositol

b. Slowness and reluctance to ferment lactose
- c. Rapid gelatin liquefaction

d. All of the above

71. Diagnosis of typhoid fever can be confirmed best by culture of:

- a. Stool

b. Urine
- c. Bone marrow

d. Blood

72. Cultures of Staphylococcus supplies which of the following for cultures of Haemophilus?

- a. III factor

b. I factor
- c. X factor

d. V factor

73. String test is used for the diagnosis of which bacteria?

- a. Stenotrophomonas maltophilia

b. Elizabethkingia meningoseptica
- c. Vibrio cholerae

d. Campylobacter jejuni

74. Which diphtheroid has the same morphology as Corynebacterium diphtheriae on blood agar plate (BAP)?

- a. C. ulcerans

b. C. minutissimum
- c. C. jeikeium

d. C. urealyticum

75. Mycobacterium tuberculosis is best differentiated from Mycobacterium bovis by:

- a. Growth rate

b. Niacin and nitrate reduction tests
- c. Hydrolysis of Tween 80

d. Catalase test at 68oC

76. Woolsorter’s disease is caused by the ___ form of anthrax.

- a. Gastrointestinal

b. Cutaneous
- c. Pulmonary

d. Urinary

77. Which anaerobic, gram-positive rods produce terminal “lollipop” spores?

- a. Clostridium tetani

b. Eubacterium lentum
- c. Clostridium butyricum

d. Bacteroides ureolyticus

78. In water bacteriology, the following are used as confirmatory test media except:

- a. Lactose broth

b. Endo agar
- c. Eosin methylene blue agar

d. Brilliant green lactose broth

79. Optochin test for S. pneumonia?

- a. <10 mm zone of inhibition in 6mm disk

b. >14mm zone of inhibition in 6mm disk
- c. <14mm zone of inhibition in 6mm disk

d. >16mm zone of inhibition in 6mm disk

80. Best Quality control in parasitology Laboratory

- a. Slides with ova and adult

b. Hanging drop from preserved stools
- c. Parasitology atlas

d. all of these

81. How is water bacteriology reported?

- a. CFU

b. Colonies/ml
- c. MPN/100ml

d. IU/ml

82. Incubation period for fungal development in bone marrow and CSF?

- a. 14 days

b. 7 days
- c. 28 days

d. 20 days

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

- 83. What is the step before hybridization in FISH?**
- a. Combination of target and probe
 - b. Labeling of the probe
 - c. Denaturation of probe and target sequences
 - d. Visualization of target sequences
- 84. What is the denaturation temperature in PCR?**
- a. 55 C
 - b. 72 C
 - c. 94 C
 - d. 100 C
- 85. The enzyme ligase joins the Okazaki fragments of the _____.**
- a. Template strand
 - b. Lagging strand
 - c. Leading strand
 - d. Primer fragments
- 86. How does RNA differ from DNA?**
- a. RNA has uracil and DNA has thymine
 - b. RNA does not contain nucleotides and DNA does
 - c. DNA resides in the cytoplasm of the cell and RNA is in the nucleus
 - d. DNA has a messenger form and RNA does not
- 87. What is the pre-analytical part of Microbiology testing?**
- a. Standardization of parasite naming
 - b. QC using slides
 - c. Proper storage of reagents and stains
 - d. Identify Patient
- 88. Evaporation of formalin in FECT**
- a. Systematic error
 - b. Random error
 - c. Clerical error
 - d. Total error
- 89. How to validate the test result of AST?**
- a. Parallel testing with a new method
 - b. Parallel testing with another personnel
 - c. Testing with a reference reagent
 - d. Testing with a reference organism
- 90. Which of the following describes the correct way to select organisms for QC?**
- a. They should represent the most fastidious organisms for which the medium was designed.
 - b. They should be organisms that will grow most easily.
 - c. They should be immediately removed from the freezer.
 - d. Streaking should be done only once after their removal from the freezer.
- 91. Susceptibility tests must be quality controlled daily EXCEPT when?**
- a. An automated system is in use
 - b. Controls have been in an acceptable range for 6 months
 - c. Precision is demonstrated for 20 or 30 consecutive days
 - d. A new antimicrobial agent is added
- 92. The laboratory must perform QC on all of the following media, EXCEPT:**
- a. Complex media
 - b. Media made by the laboratory
 - c. Media with a history of failure
 - d. All media obtained from a commercial source
- 93. What should be done when interpreting the zone size of a motile, swarming organism?**
- a. The swarming should be ignored
 - b. The results of the disk diffusion method are invalid
 - c. The swarming area should be measured as the growth boundary
 - d. The isolate should be retested after diluting to a 0.5 McFarland standard
- 94. Storage temp for viral specimens**
- a. -20C
 - b. 4C
 - c. 20C
 - d. -70C

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

95. If processing is delayed, fungal specimens is stored at:

- a. 37 C
- c. RT
- b. Ref
- d. -20C

96. Which of the following is INCORRECT regarding steam sterilization?

- a. Dry heat
- c. Wet heat
- b. 15 psi
- d. 121 deg C

97. What causes the death of organisms in autoclave?

- a. Pressure
- c. Both
- b. Heat
- d. Neither

98. What is the most effective method for sterilization and waste disposal?

- a. Ionizing radiation
- c. Autoclave
- b. Filtration
- d. Formaldehyde vapor

99. The presence of residual chlorine in drinking water means:

- a. Safe for consumption
- b. Sufficient amount of chlorine was added initially to the water
- c. Water is contaminated with coliform
- d. Overchlorination

100. Not a reservoir

- a. Environment
- b. Vector
- c. Human
- d. Animal

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

1. How do you identify the taxonomy that is composed of similar species that have several important features in common but differ sufficiently to still maintain their status as individual species?

- a. Genus

b. Family
- c. Order

d. Kingdom

2. Mechanism that is mediated by viruses, by which DNA from two bacteria come in one cell for recombination.

- a. Transduction

b. Mutation
- c. Transformation

d. Conjugation

3. Culture media

- a. Autoclave

b. Membrane filtration
- c. Both

d. Neither

4. Parasite found in the urine

- a. S. haematobium

b. S. mansoni
- c. S. japonicum

d. S. intercalatum

5. A 32-year-old male tourist traveled 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. Taenia solium

6. Which schistosome is characterized by, finely tuberculate integument?

- a. S haematobium

b. S. mansoni
- c. S. japonicum

d. All of the above

7. Which of the following protects bacteria from attacks by cells of human defense system- resists phagocytosis and desiccation?

- a. Plasmid

b. Pilus
- c. Capsule

d. Plasma Membrane

8. The Ixodes tick is a transmission factor for which of the following organisms?

- a. Trichomonas vaginalis

b. Leishmania donovani
- c. Babesia

d. Plasmodium

9. Identify the bacteria being decribed:

- Pear shaped shape Elementary bodies
- Glycogen inclusion absent
- Round or dense inclusion

- a. C. pneumoniae

b. C. trachomatis
- c. C. psittaci

d. Rickettsia

10. Identify the bacteria being described:

- Glycogen positive
- SXT- susceptible
- Round elementary body

- a. C.psittaci

b. C.trachomatis
- c. C.pneumoniae

d. T. spiralis

11. What is detected in specimen that is refrigerated without preservatives?

- a. Antigen

b. Antibody
- c. Ova and parasite

d. Trophozoites

12. Which technique to be used for the identification of large trematode egg?

- a. Floatation

b. Sedimentation
- c. Filtration

d. Brine floatation

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

13. Which laboratory method is best used when there are only few parasites present in stool?

a. Concentration method

b. Molecular

c. Serological

d. Direct microscopy
14. Microfilaria that Circulate in the blood in 24 hour-period without significant change in their number.

a. Non periodic

b. Subperiodic

c. Diurnal

d. Nocturnal
15. Which protozoa should be reported to the clinicians?

a. Endolimax nana

b. Entamoeba coli

c. Entamoeba dispar

d. Dientamoeba fragilis
16. What is NOT considered a Critical/panic value in a Microbiology laboratory?

a. Positive acid fast stain

b. S. pyogenes in a surgical wound

c. Positive blood cultures

d. Negative blood smear for malaria
17. The mode of transmission of this organism is direct skin penetration. Which organism is referred to?

a. Strongyloides stercoralis

b. Entamoeba coli

c. Entamoeba hartmanii

d. Gardia lamblia
18. Which of the following is the best technique to identify D. fragilis in stool specimen?

A. Formalin concentration

B. Trichrome-stained smear

C. Modified acid fast

D. Giemsa
19. In thioglycollate broth medium, flocculation is observed, what would be the probable microorganism?

a. obligate aerobes

b. obligate anaerobes

c. gram positive cocci

d. facultative anaerobe
20. Which of the following microorganisms exhibit a mushroom-like odor?

a. P. multocida

b. H. influenzae

c. S. aureus

d. P. aeruginosa
21. Which of the following microorganisms exhibit a burnt chocolate like odor?

a. E.corrrodens

b. C.defficille

c. Serratia odorifera

d. Proteus
22. What type of specimen where trphozoites and cyst can be found?

a. Watery

b. Soft

c. Formed

d. Any consistency
23. Which of the following parasites causes cholangiocarcinoma?

a. Fasciola

b. Chlonorchis

c. Echinicoccus

d. Paragonimus
24. Color brown color on Bap, what is the type of hemolysis?

a. Alpha

b. Beta

c. Zeta

d. Gamma
25. The most important virulence factor and determines the type of group A B-hemolytic streptococci

a. C- carbohydrate

b. M- protein

c. Protein A

d. Protein S
26. How does herpes is transmitted?

a. Sharing of soap

b. Skin to skin

c. Sharing of utensils

d. Skin to skin
27. Standard serologic procedure for the identification of Leptospira

a. Microscopic agglutination test

b. ELISA

c. PCR

d. Enzyme immune assay

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

28. Acid fast, non-spore forming gram positive bacilli that is niacin and nitrate positive.

- a. M.tuberculosis

b. M. fortuitum
- c. M. intracellulare

d. M.bovis

29. Parasite associated with food borne trematode infection.

- a. Fasciola

b. Echinococcus
- c. Schistosoma

d. Dracunculus

30. Person responsible for interpreting Zone of inhibition in diffusion disks?

- a. Chief MedTech

b. Physician
- c. Nurse

d. Intern

31. Method of identification for single strains of bacteria

- a. Phage typing

b. Disk diffusion
- c. Biochemical

32. Nontuberculous colonies that develop pigment in the dark or light, and take longer than 7 days to appear on solid media are known as ____.

- a. Photochromogens

b. Nonphotochromogens
- c. Schotochromogens

d. rapid grower

33. The method that gives an antimicrobial a concentration resulting in a 99.9% reduction in CFU/ml compared with the organism concentration in the original inoculum is recorded as ____.

- a. MBC

b. ESBL
- c. MIB

d. MIC

34. Which is the CORRECT sequence of the Gram staining procedure?

- a. crystal violet, safranin, iodine, alcohol

b. crystal violet, alcohol, iodine, safranin
- c. crystal violet, iodine, alcohol, safranin

d. crystal violet, iodine, safranin, alcohol

35. The purpose of mordant in GS

- a. Acts as secondary stain

b. Dye fixative
- c. Reinforcing stain

d. For differentiation

36. which of the following differentiates Gram negative from Gram positive during staining?

- a. Component of their Cell wall

b. Endotoxin
- c. Exotoxin

d. Pilli

37. Which of the following staining method for acid fast organism is the so-called cold method?

- a. Kinyoun method

b. zeihl-neelsen method
- c. truant’s method

d. Spergler’s

38. The first larval stage of a trematode which is hatched from an egg often ciliated and free-swimming is

- a. Rediae

b. Cercaria
- c. Miracidium

d. Metacercaria

39. Which of the following beta-hemolytic Streptococci gives a positive hippurate test?

- a. Streptococcus pyogenes

b. Streptococcus agalactiae
- c. Streptococcus anginosus

d. Streptococcus pneumonia

40. Which is not used to describe morphology of fungi?

- a. Verrucose

b. Rugose
- c. Glabrous

d. Umbonate

41. A fungal culture is seen as furrowed or convoluted, what is an appropriate term to describe this?

- a. Verrucose

b. Umbonate
- c. Rugose

d. Cottony

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

42. A part of the compound microscope that gathers and focuses light from the illuminator into the specimen being viewed is the ____

- a. iris diaphragm
- b. lens
- c. aperture
- d. condenser

43. An organism with the BCM test below is suggestive of:

- a. E. tarda
- b. P. vulgaris
- c. S. typhi
- d. P. mirabilis

44. Sixty percent of the trophozoite of D. fragilis have

- a. 2 nuclei
- b. 3 nuclei
- c. 1 nucleus
- d. No nuclei

45. An organism that causes chancroid and which appears as small gram negative coccobacilli is ____.

- a. H. ducreyi
- b. Gardnerella vaginalis
- c. Treponema pallidum
- d. N. gonorrhoea

46. Which one of the following specimen request is acceptable?

- a. Feces for anaerobic culture.
- b. Foley catheter tip submitted for aerobic culture.
- c. Rectal swab submitted for direct smears for gonococci.
- d. Urine for culture for acid fast bacilli.

47. All these aerobes have cell walls containing mycolic acid, EXCEPT:

- a. Nocardia
- b. Rhodococcus
- c. Corynebacterium
- d. Streptomyces

48. A patient diagnosed with staphylococcus aureus infection, has a leg ulcer and diabetes. The organism is said to be resistant to methicillin, what other antibiotic should be tested?

- a. Erythromycin
- b. Clindamycin
- c. Gentamycin
- d. Vancomycin

49. A patient has been diagnosed with STD, microscopic examination of has been made to a lesion present on his scrotum, the microbiologist noticed a corkscrew motility, which of the following is the probable microorganism?

- a. N.gonorrhoeae
- b. T.pallidum
- c. L. monocytogenes
- d. B.burgdorferi

50. Which of the following is being described?

- Motility negative
- Nitrate negative
- No Broth on BAP

- a. B.pertusis
- b. B.parapertusis
- c. B.bronchyseptica
- d. B.thermophilus

51. A lymphatic filarial parasite resembling W. bancrofti that do not typically cause lymphadenitis in the genital regions is

- a. Ancylostoma spp.
- b. Brugia spp.
- c. E. vermicularis
- d. T. spiralis

52. Specimen for filarial

- a. Blood
- b. CSF
- c. stool
- d. urine

53. What is the best protection against serious aerosol droplet infection?

- a. Well fit mask and goggles
- b. Gown and gloves
- c. N 95mask
- d. Adequate handwashing

54. Total Exhaust Biosafety Cabinets:

- a. CLASS I
- b. CLASS IIA
- c. CLASS IIB1
- d. CLASS IIB2

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

55. Total Exhaust Biosafety Cabinets:

- a. CLASS I

b. CLASS IIA
- c. CLASS IIB1

d. CLASS IIB2

56. Which of the following is/are classified under biosafety level 2?

- a. Bacillus subtilis

b. Coxiella burnetti
- c. Toxoplasma

d. Arbovirus

57. Which of the following is used as an isolation media for fungal culture?

- a. Sabouraud’s dextrose agar

b. Schaedler agar
- c. Todd-Hewit

d. Bordet-gengou agat

58. Which of the following Automated antimicrobial susceptibility tests uses a software called Advanced Expert System (AES)?

- a. Vitek

b. Walkaway system
- c. Phoenix system

d. All of the above

59. Causative agent of bubonic plague

- a. Yersinia enterocolitica

b. Shigella sonnei
- c. Yersinia pestis

d. Shigella boydii

60. _____ is the removal of pathogenic microorganisms so items are safe to handle or dispose of

- a. Sterilization

b. Disinfection
- c. Aseptic

d. decontamination

61. Infective stage of T. cruzi is _____

- a. Promastigote

b. Amastigote
- c. Epimastigote

d. Trypomastigote

62. In African sleeping sickness, which one has a faster rate of progression?

- a. T. b. rhodensiense

b. T. b. gambiense
- c. T.cruzi

d. All of the above

63. A gram negative bacilli that produces exotoxin A. it is associated with cystic fibrosis patients

- a. P.aeruginosa

b. B. cepacia
- c. B. pseudomallei

d. B. mallei

64. A zoonotic infection primarily affecting horses and causes severe local supportive or acute pulmonary infections in humans.

- a. B.pseudomallei

b. B. cepacia
- c. B.mallei

d. P.aeruginosa

65. An organism that is characterized by dry, wrinkled and have a deep pink color on ashdown medium and is also characterized by bipolar bodies.

- a. Pseudomonas aeruginosa

b. Yersinia pestis
- c. Burkholderia pseudomallei

d. Burkholderia mallei

66. An organism capable of causing opportunistic infection in humans but usual pathogen of horses and related animals.

- MAC- NLF
- NITRATE- POS
- OXIDASE- POS

- a. Acinetobacter baumanii

b. B. mallei
- c. B. pseudomallei

d. S.maltophilia

67. When is the best time to collect specimen for malaria?

- a. After the height of fever

b. At the height of fever
- c. Anytime of the night

d. Anytime of the day

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

68. Which of the following organisms is/are the organism probable of the BCM test below?

- a. **Proteus spp**

b. Salmonella spp
- c. Shigella

d. Campylobacter

69. Standard inoculum used in agar dilution.

- a. **1.0X10^4**

b. 1.5 X10^8
- c. 1.0X10^8

d. 1.5X10^4

70. Inoculum concentration of E.coli suspension for the preparation of McFarland Standard.

- a. **1.5 X10^8 CFU/ml**

b. 5.0 X10^5 CFU/m
- c. 1.0X10^6 CFU/ml

d. 1.0 X10 ^4 CFU/ml

71. Which of the following can be used as a sample for C.dificille toxin?

- a. **stool**

b. Blood
- c. Food

d. Urine

72. Hanging drop method is used to identify_____

- a. **Motility**

b. Hemolysis
- c. Biochemical reaction

d. Growth pattern

73. Which temperature range does a mesophile is able to live?

- a. **30 to 40°C**

b. 100-125°C
- c. 0-4°C

d. 4-15°C

74. Which of the following parasites inhabit the large intestines?

- a. **Enterobius vermicularis**

b. Ascaris lumbricoides
- c. Ancylostoma duodenale

d. Strongyloides stercoralis

75. Which of the following organism is being described?

- Phenylalanine deaminase: GREEN

• H2S: BLACK

• Indole: RED RING
- a. Proteus mirabilis

b. **Proteus vulgaris**
- c. Morganella morganii

d. Providensia spp

76. Food-borne botulism in adults is a result of

- a. **Ingestion of preformed toxin**

b. Ingestion of spores
- c. Spores contaminating wounds

d. All of the choices

77. If there will be a delay in the processing of cultures, a CSF specimen must be kept at

- a. Refrigerator temp.

b. Room temp.
- c. Freezer temp.

d. **Incubator temp**

78. Which technique is most widely used for the confirmation of infection with human immunodeficiency virus (HIV)?

- a. **Western blot assay**

b. ELISA
- c. Complement fixation

d. Polymerase Chain Reaction

79. Which of the following is the causative agent of HEM?

- a. E. histolytica

b. N.fowleri
- c. **A.cantonensis**

d. N.meningitidis

80. How long is the cellophane tape used in pinworm identification?

- A. **4 inch/10 cm**

B. 5 inch
- C. 6 inch

D. 7 inches

81. What is the ratio of stool to preservative?

- a. 3:1

b. 1:1
- c. **1:3**

d. 2:1

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

82. A method best used for the recovery of coccidian oocyst mainly Cryptosporidium, Cyclospora and Cytoisospora?

- a. Brine floatation
- b. Formalin ether concentration
- c. Sheather’s sugar floatation
- d. Kato-katz technique

83. Layers after centrifugation of FECT tube

- a. Ether, fecal Debris, Formalin, Sediments
- b. Fecal debris, ether, formalin, sediments
- c. formalin, fecal debris, ether, sediments
- d. Ether, Formalin, fecal Debris, Sediments

84. An outbreak of mild intestinal distress, sleeplessness, perianal itching, and anxiety has broken out among preschool children in a private home. The most likely cause of this condition is

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

85. In order to rule out pinworm infection, how many consecutive scotch tape preparations should show a negative result?

- a. 1 to 3
- b. 4 to 6
- c. 6 to 10
- d. 5 to 10

86. A sexually active 24-year-old woman complains of vaginal itching and a malodorous purulent vaginal discharge. To verify your tentative diagnosis of trichomoniasis, you should include which of the following in your workup?

- a. Specific serologic test
- b. Ova and parasite fecal smear
- c. Wet mount of vaginal fluid
- d. Stool culture

87. A 37-year-old sheep farmer from Australia presents with upper right quadrant pain and appears slightly jaundiced. A stool exam was negative for ova and parasites but a CT scan of the liver reveals a large 14-cm cyst that appears to contain fluid. Which of the following parasites should be considered?

- a. Toxoplasma gondii
- b. Taenia solium
- c. Clonorchis sinensis
- d. Echinococcus granulosus

88. Malonate test positive color is?

- a. Yellow
- b. Blue
- c. Red
- d. Green

89. The second intermediate host of P. westermani is _____

- a. Crabs or cray fishes
- b. Fresh water fish
- c. Fresh water vegetation
- d. Snail

90. Using NATIONAL STANDARD REPORTING SCALE, 12 AFB/OIF in at least 20 fields is seen. How do you report this?

- a. 1+
- b. 2+
- c. 3+
- d. 4+

91. Which of the following specimen is recommended for the detection of B. pertussis?

- a. Nasal swab
- b. Nasopharyngeal swab
- c. Throat swab
- d. Anal swab

92. Trophozoites of what protozoan parasite have the following characteristics:

- I. small, delicate nuclear karyosomal chromatin
- II. fine, even peripheral chromatin
- III. progressive motility with hyaline, fingerlike pseudopods

- a. E. coli
- b. E.histolytica
- c. D.fragilis
- d. T.vaginalis

93. The head of this roundworm contains four rows of cephalic hooklets. The body is covered with transverse rows of spines that diminish anteriorly to posteriorly

- a. Gnathostoma spinigerum
- b. Ancylostoma duodenale
- c. Parastrongylus cantonensis
- d. Parastrongylus costaricensis

94. Which of the following is not included?

- a. oX-19
- b. Ox-K
- c. OX-2
- d. OX-12

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

95. Identify the organism.

- OX-2: NEGATIVE
- OX- 19: NEGATIVE
- OX-K: NEGATIVE

- a. O. tsutsugamushi
- b. R.ricketsii

- c. R.thyphi
- d. R.akari

96. Identify the organism:

Gram negative bacilli

IMVC - - + +

LOA + + -

- a. Klebsiella pneumoniae
- b. Klebsiella oxytoca

- c. Enterobacter aerogenes
- d. Enterobacter cloaceae

97. Which of the following has been recommended as an effective disinfectant for drinking water?

- a. Sodium hypochlorite
- b. Chlorine

- c. Iodine
- d. Alcohol

98. What method of Antimicrobial Susceptibility testing is based on the determination of an inhibition zone proportional to the bacteria susceptibility to the antimicrobial present in the disk?

- a. Disk diffusion
- b. Broth dilution

- c. Agar dilution
- d. Gradient strips

99. Used to measure the zone of inhibition around the disk

- a. Tape measure
- b. Ruler

- c. Meter stick
- d. Caliper

100. Kirby-Bauer Disk Diffusion Agar Depth:

- a. 3mm
- b. 4mm

- c. 2mm
- d. 5mm

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

1. K/A, gas positive, H2S positive

- a. E.coli
- c. Pseudomonas
- b. Shigella
- d. **Salmonella**

2. Most Enterobacteriaceae give _____ MR and VP reaction

- a. **Opposite**
- c. Variable
- b. Similar
- d. Indeterminate

3. Which of the following indicators is/are used in Mac-Conkey agar

- a. Phenol red
- c. Bromthymol blue
- b. **Neutral red**
- d. Eosin methylene blue

4. What type of infection mimics acute viral enteritis, bacillary bacterial poisoning and traveler's diarrhea where the dysentery, diarrheic stools lack blood, mucus, and cellular exudate?

- a. Cryptosporidiosis
- c. Balantidiosis
- b. **Giardiasis**
- d. Sarcocysticosis

5. Identify the trematode: Operculated, immature egg.

- a. **Echinostoma**
- c. Clonorchis
- b. Schistosoma
- d. Opistorchis

6. Which of the following shows hammered copper shiny surface colonies on SBA?

- a. B.anthraxis
- c. C.burnetti
- b. **Y. pestis**
- d. B.psuedomallei

7. What specimen is obtained from a patient when performing Schlichter test?

- a. **Serum**
- c. Exudate
- b. Stool
- d. Throat swab

8. Using toluidine blue method, what is the positive color in DNase test?

- a. Clearing
- c. **Pink**
- b. No clearing
- d. Green

9. Which of the following is a confirmatory test for congenital HIV and congenital syphilis respectively?

- a. Western blot, PCR
- c. Western blot, RIA
- b. **PCR, Western blot**
- d. PCR, RIA

10. Which of the following shows antigenic variation?

- a. American trypanosomiasis
- d. N.meningitidis
- b. B.recurrentis
- e. T pallidum
- c. Influenza virus
- f. **AOTA**

11. Which of the following conditions is transmitted through the bite of an assassin bug?

- a. West African sleeping sickness
- c. Visceral leishmaniasis
- b. Cutaneous leishmaniasis
- d. **American trypanosomiasis**

12. All of the ff. organism contains the enzyme Beta-galactosidase, except?

- a. Citrobacter
- c. coli
- b. **Proteus**
- d. Hafnia

13. Identify the organism given the following biochemical reactions:

- i. H2S (+)
- c. Escherichia
- ii. Urea (-)
- d. Enterobacter
- iii. LDC (-)
- a. Proteus
- b. **Citrobacter**

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

14. Which of the following shows bipolar staining (bipolar bodies) characteristics?

- a. L.monocytogenes
- c. B. melitensis
- b. C.granulomatis**
- d. V. cholera

15. Which of the following culture media is used to induce capsule formation of B.anthraxis?

- a. Phenylethyl alcohol (PEA) agar
- c. Bicarbonate agar**
- b. Polymixin Lysozyme EDTA thallous acetate (PLET)
- d. Egg yolk agar

16. Which of the following organism is being described?

- oxidase positive
- does not ferment carbohydrates, but many strains oxidize glucose
- growth at 42°C
- a. Pseudomonas aeruginosa**
- c. Pseudomonas putida
- b. Acinetobacter
- d. Haemophilus

17. This gram-negative bacillus, which is oxidase positive and does not ferment carbohydrates, is frequently found in human bite infections

- a. Escherichia coli
- c. Chromobacterium violaceum
- b. Neisseria meningitidis
- d. Eikenella corrodens**

18. A gamma- hemolytic streptococcus that blackens bile esculin agar but does not grow in 6.5% NaCl broth is most likely?

- a. Group B
- c. Group D Streptococcus**
- b. Enterococcus
- d. Streptococcus pneumoniae

19. An organism gave the following reaction

TSI: yellow /yellow , cracks and elevation of the agar is seen, no blackening Indole: RED RING
MOTILE
Urease: PINK
VP: YELLOW

- a. Klebsiella pneumoniae
- c. Escherichia coli**
- b. Shigella dysenteriae
- d. Enterobacter cloacae

20. Which of the following cestode is a pseudophyllidean?

- a. E.granulosus
- c. H.nana
- b. T.solium
- d. D.latum**

21. A Gram stain from a gum lesion showed what appeared to be amoebae. A trichrome smear showed amoebae with a single nucleus and partially digested PMNs. The correct identification is:

- a. Trichomonas tenax
- c. Entamoeba gingivalis**
- b. Entamoeba histolytica/E. dispar
- d. Entamoeba polecki

22. Anticoagulant often used for viral culture and for isolation of Mycobacterium spp. in the blood:

- a. CITRATE
- c. Heparin**
- b. EDTA
- d. SPS

23. All of the following specimens should be kept in a sterile container EXCEPT

- a. Wound swab**
- c. Body fluids
- b. CSF
- d. Urine

24. Plating media for CSF collected from shunt:

- a. BAP
- c. BAP, CAP
- b. CAP
- d. BAP, CAP, Thio**

25. Before the collection of sputum, you should instruct the patient to:

- a. Rinse mouth and do not gargle
- c. Rinse mouth or gargle with Listerine
- b. Rinse mouth or gargle with water**
- d. Rinse mouth or gargle with Colgate 360

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

26. Which of the following has not been isolated in sputum?

a. **HBV**

b. Paragonimus

c. M. tuberculosis

d. S. pneumoniae
27. SPECIMEN FOR OVA AND PARASITE DETECTION SHOULD BE PLACED IN WHAT TYPE OF CONTAINER?

a. Glass container

b. Paper-board container

c. **Bicarbonate agar**

d. Egg yolk agar
28. What is the number of bacteria needed to cause turbidity in broth culture and to be seen with an unaided eye?

a. 10^2 organisms/mL

b. 10^4 organisms/mL

c. **10^6 organisms/mL**

d. 10^8 organisms/mL
29. When examining body fluids by direct microscopic examination, if one organism is seen per oil immersion field, how many organisms per milliliter of specimen are present?

a. 55

b. 75

c. **10^5**

d. 10^8
30. CSF

a. **Centrifuge**

b. G/S

c. India ink

d. Acridine orange
31. Todd Hewitt broth containing colistin and nalidixic acid

a. **LIM broth**

b. Thioglycolate broth

c. GN broth

d. All of the above
32. SDA is a _____ medium

a. selective

b. **nutritive**

c. differential

d. enrichment
33. THE D-zone susceptibility test is used to test inducible resistance On S .aureus strains demonstrating an initial antibiotic susceptibility profile of:

a. Erythromycin sensitive, clindamycin sensitive

b. **Erythromycin resistant, clindamycin sensitive**

c. Erythromycin resistant, clindamycin resistant

d. Erythromycin sensitive, clindamycin resistant
34. Specimens for the detection of Gonorrhea include:

I. Gastric washing

II. Genital swab

III. Joint fluid

a. I, II

b. I, III

c. **I, II, III**

d. I, IV
35. Which organisms are plum coccobacilli that may resist decolorization and may be mistaken for Neisseria spp?

a. **Acinetobacter spp.**

b. Bordetella spp.

c. Stenotrophomonas spp.

d. Burkholderia spp
36. Incubation of which organism at 25 degrees celcius produces a characteristic yellow pigment?

a. **Cronobacter sakazakii**

b. Plesiomonas shigelloides
37. Host cells, such as red and white blood cells (phagocytes) appear what color after gram staining procedure?

a. Violet

b. Colorless

c. **Pink**

d. Brown
38. The transport medium for Vibrio cholerae can be

a. **Venkatraman-Ramakrishnan medium**

b. Selenite F broth

c. Tetrathionate broth

d. Nutrient broth

MICROBIOLOGY & PARASITOLOGY EXAM

a. **Bile salts**
b. Azide

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

51. Which of the following bacteria is being described:

Sucrose NEG

Urease POS

MotilityPOS

Ornithine NEG

- a. Yersinia pestis
- b. Yersinia enterocolitica

- c. Y. pseudotuberculosis
- d. Nota

52. Which of the following is being described

Growth at 37’C

Nalidixic sensitive

Cephalotin resistant

Hippurate hydrolysis positive

- a. Campylobacter jejuni
- b. Campylobacter coli

- c. Campylobacter fetus
- d. NOTA

53. It is typically the key to identification of Serratia marcescense

- a. DNase
- b. Prodigiosin

- c. ONPG
- d. Lipase

54. A medical technologist performed a Zinc sulfate centrifugal flotation on a stool sample, the SG of the zinc sulfate should be set at?

- a. 1.018
- b. 1.18
- c. 1.020
- d. 1.21

55. Which of the following is used as a skin test for Chlamydia?

- a. Dick’s test
- b. Francis tes
- c. Foshay test
- d. Frei test

56. Also known as Dwarf Intestinal Fluke.

- a. Echinostoma ilocanum
- b. Fasciola hepatica
- c. Fasciolopsis buski
- d. Heterophyes heterophyes

57. Which of the following organism can be acquired by eating dairy products and with contact with animal tissues and can be diagnosed by serology or culture?

- a. Francisella tularensis
- b. Brucella spp
- c. Yersinia pestis
- d. Pasteurella multocida

58. This bacterium requires carbon dioxide for growth. It cannot grow in the presence of thionine but can in the presence of basic fuchsin. It causes abortion in cattles.

- a. Brucella abortus
- b. Brucella mellitensis
- c. Brucella suis
- d. Brucella canis

59. A rapid indole test is performed on the lactose fermenter, with a positive result. This organism can be presuptively identified as?

- a. Enterobacter cloacae
- b. Escherichia coli
- c. Proteus mirabilis
- d. Klebsiella pneuminiae

60. Which substance interferes with stool sample testing?

- a. Cooking oil
- b. Mineral oil
- c. Calcium
- d. Hair dye

61. Infection of which of the following species is/are considered as medical emergencies?

- a. Plasmodium vivax
- b. Plasmodium knowlesi
- c. Plasmodium falciparum
- d. Plasmodium ovale
- e. Two of the above

62. Swelling of the can is caused primarily by?

- a. gas forming, anaerobic spore formers
- b. gas forming, aerobic spore formers
- c. both (a) and (b)
- d. none of these

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

63. A gram negative bacilli is observed having a hazy blanket of growth on the surface that extends well beyond the streak lines, this organism is probably?

- a. **Proteus vulgaris**
- b. Yersinia
- c. Yeast
- d. Klebsiella pneumoniae

64. This bacteria produces a characteristic pigment

- a. Bacillus cereus
- b. **Serratia marcescens**
- c. Eikinella corrodens
- d. Pseudomonas aeruginosa

65. Which organism will BEST be identified using the following laboratory tests?

- Gram stain examination
- Reverse CAMP test
- Lecithinase
- Hemolysis

- a. **Clostridium perfringens**
- b. Streptococcusagalactiae
- c. Bacillus anthracis
- d. Bacillus cereus

66. The hair baiting test is used to differentiate which two species of Trichophyton that produce red colonies on Sabouraud’s agar plates?

- a. **T. mentagrophytes and T. rubrum**
- b. T. tonsurans and T. schoenleinii
- c. T. tonsurans and T. violaceum
- d. . T. verrucosum and T. rubrum

67. A positive indole test indicates the presence of which bacterial enzymes?

- a. β-galactosidase
- b. **tryptophanase**
- c. hyaluronidase
- d. β-galactoside permease

68. What is the positive reaction in the Nagler test?

- a. **Inhibition of lecithinase reaction**
- b. Double zone of hemolysis
- c. Inhibition of growth without anti-toxin
- d. Arrowhead hemolysis

69. Gram (+) cocci, catalase (-), alpha hemolytic colonies were isolated. What should be your next test?

- a. Perform PYR hydrolysis
- b. Perform CAMP test
- c. Perform bile esculin
- d. **Perform Taxo P**

70. A technologist is reading a Gram stain from a CSF and observe small structures suggestive of gram□negative coccobacilli. Chemistry and hematology CSF results that would indicate bacterial meningitis include:

- a. WBC increased, glucose increased, protein increased
- b. WBC decreased, glucose decreased, protein decreased
- c. **WBC increased, glucose decreased, protein increased**
- d. WBC decreased, glucose increased, protein decreased

71. A med-tech reviewee came in with high fever, malaise, and constipation that persisted over a week. She recalls that the fever began slowly and climbed to 41°C. A physical exam reveals an enlarged spleen and tender abdomen with rose-colored spots. Laboratory isolation of a bacterium that produces H₂S and is motile is revealed. Which organism is the most likely cause of her condition?

- a. EHEC
- b. ETEC
- c. Shigella flexneri
- d. **Salmonella typhi**

72. Which of the following is a Mcfarland satandard composition?

- a. **99.5mL of 1% H2SO4 + 0.5mL of 1.175% BaCl2**
- b. 0.5 mL of 1.175% H2SO4 + 99.5 mL of 1% BaCl2
- c. 0.05 mL of 1% H2SO4 + 99.5mL of 1.175% BaCl2
- d. 99.5mL of 1% H2SO4 + 0.5mL of 1.75% BaCl2

73. A bulls eye colony appearance is observed in a CIN medium, in order to identify it whether it is a Yesinia or Aeromonas, what test should be used?

- a. **Oxidase**
- b. PAD
- c. Oxidase and PAD
- d. No need because bulls eye colony is exclusive to Yersinia

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

74. Key test to differentiate Aeromonas and Plesiomonas from vibrio is?

- a. **NaCl requirement and mannitol fermentation**
- b. Glucose and oxidase
- c. Gelatin liquefaction
- d. Inositol

75. Positive result of the salt tolerance test?

- a. Turbidity
- b. Yellow
- c. green
- d. **2 of the above**

76. Species of Corynebacterium that is reverse CAMP test positive.

- I. C diphtheriae
- II. C ulcerans
- III. C pseudotuberculosis
- IV. C pseudodiphtheriticum
- V. C amycolatum
- a. I,II,III
- b. I,II,IV
- c. I,IV
- d. **II,IV**

77. 3 species of the Corynebacterium are positive in tinsdale (brown halo around the colonies). Which of the following tests differentiate them from each other?

- a. CAMP reaction and Urease
- b. **Urease and glycogen hydrolysis**
- c. Glycogen hydrolysis and CAMP
- d. CAMP and starch hydrolysis

78. A medical technologist received a pea size stool sample for a OP detection, what method should be done on the said specimen?

- a. Reject
- b. Proceed with the testing but state that the quantity is not sufficient (QNS)
- c. **Do direct fecal smear**
- d. Proceed with concentration technique to make sure that more parasite is seen.

79. Colistin–nalidixic acid agar (CNA) is used primarily for the recovery of:

- a. Neisseria species
- b. Enterobacteriaceae
- c. Pseudomonas aeruginosa
- d. **Staphylococcus aureus**

80. The porphyrin test for H. influenzae would be _____ because the organism _____ biosynthesizes heme.

- a. **Negative; cannot**
- b. Positive; cannot
- c. Negative; can
- d. Positive; can

81. Which forms of infection are caused by Bacillus anthracis?

- a. Injectional
- b. Inhalation
- c. Gastrointestinal
- d. Cutaneous
- e. **All of the above**

82. A commercial fisherman who had red sores on his hands was seen by his physician. Biopsy and culture of one of the lesions was performed. The culture grew an organism with the characteristics listed. What is the most likely organism?

- Nonhemolytic on SBA
- Gram-positive bacilli, no spores observed.
- Catalase-negative
- Hydrogen-sulfide-production-positive
- Growth in gelatin resembled a test-tube brush at 22°C
- a. Rhodococcus equi
- b. Listeria monocytogenes
- c. Lactobacillus acidophilus
- d. **Erysipelothrix rhusiopathiae**

83. Which species. often grow embedded beneath the surface of solid media, therefore, transferring colonies with a loop is ineffective.

- a. **Mycoplasma**
- b. Erysipelothrix
- c. Nocardia
- d. Streptomyces

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

84. _____ is the causative agent of the zoonosis erysipelas, seen primarily in pigs (rose disease), and is characterized by fever, skin lesions, arthritis, and sudden death.
- a. Streptococcus agalactiae
 - b. Streptococcus pyogenes
 - c. Erysipelothrix rhusiopathiae
 - d. Staphylococcus aureus
85. A spirochete that stains easily and can be visualized by bright field microscopy.
- a. Borrelia
 - b. Treponema
 - c. Leptospira
 - d. All of them are not stain easily. Dark field should be used.
86. A spirochete that has the ability to bind plasminogen and urokinase-type plasminogen activator to its surface. This binding could convert plasminogen to plasmin, which is a potent protease and could facilitate tissue invasion.
- a. Borrelia burgdorferi
 - b. Borrelia recurrentis
 - c. Treponoma pallidum
 - d. Leptospira interrogans
87. Which of the following statements about stool preservation is correct?
- a. Trophozoites will regain their motility in a warm slide containing warm saline and iodine.
 - b. Formed stool needs to be well broken up and mixed well with the preservative.
 - c. Liquid stools may be refrigerated overnight without considerable loss of important. stages.
 - d. Formaldehyde may be buffered with ZnSO4 to preserve morphology of amebic trophozoites.
88. A hyperemic edema of the larynx and epiglottis that rapidly leads to respiratory obstruction in young children is most likely to be caused by____
- a. H. influenzae
 - b. Neisseria meningitidis
 - c. K. pneumoniae
 - d. M. pneumoniae
89. What the working principle of autoclave?
- a. 121°C; 15-20 mins.; 15 psi
 - b. 121°C; 30 mins.; 15 psi
 - c. 132°C; 30–60 minutes; 25 psi
 - d. 130°C; 30–60 minutes; 25 psi
90. What is the Negative control for optochin disk?
- a. Streptococcus pneumoniae
 - b. Streptococcus pyogenes
 - c. Streptococcus agalactiae
 - d. Micrococcus luteus
91. EM rash is associated with____
- a. Bull ‘eye rash
 - b. Bull’s eye hemolysis on BAP
 - c. Bull’s eye colonies on CIN
 - d. Mycoplasma
92. Why blood agar plates are lysed to become chocolate agar?
- a. To support strict aerobic and anaerobic growth only
 - b. To provide X and V factors
 - c. To enhance hemolytic patterns
 - d. To enhance hardening of the agar
93. All of the following requires praziquantel as a treatment of choice, except.
- a. Fasciola spp.
 - b. Clonorchis
 - c. Opisthorchis
 - d. None
94. The unique cultivation method that involves the use of intermediate host to isolate a parasitic organism from a human host.
- a. Harada-mori
 - b. Coproculture
 - c. PCR
 - d. Xenodiagnoses
95. Which is not transmitted by sexual intercourse?
- a. G. lamblia
 - b. G vaginalis
 - c. B coli
 - d. E histolytica
96. Which is the main transmission of head lice?
- a. Airborne
 - b. Direct
 - c. Sexual
 - d. Black magic (barang)

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

97. Which of the following is the most specific, reliable ang gold standard test for syphilis?

- a. FTA-ABS
- c. MHA-TP
- b. TPI**
- d. VDRL/RPR

98. Yellow color is observed in a Cary Blair transport media is indicative of?

- a. random change change in pH
- c. **the buffering capacity is exceeded**
- b. bacterial contamination

99. Material used for nasopharyngeal swab tip?

- a. Flocked cotton
- c. Flocked gauze
- b. Flocked nylon**
- d. Cotton flocked gauze

100. Which of the following microorganism gives a positive result for CAMP?

- a. Streptococcus agalactiae
- c. Listeria monocytogenes
- b. Arcanobacterium
- d. All of the above**

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

1. The figure A is indicative of?

a. **Streptococcus agalactiae**

b. Arcanobacterium

c. Listeria monocytogenes

d. ALL
2. A medical technologist is examining a urethral discharge and observed gram-negative intracellular diplococci. What is the possible microorganism?

a. **Neisseria gonorrhoeae**

b. Chlamydia trachomatis

c. Gardnerella vaginalis

d. Trichomonas vaginalis
3. Which microorganism is being described?

• Gram positive coccobacilli

• Lipophilic

• GS—v forms and palisade

a. **Corynebacterium urealyticum**

b. Corynebacterium diphtheriae

c. Corynebacterium ulcerans

d. Corynebacterium pseutotuberculosis
4. SSA is a modification of what agar?

a. **Desoxycholate agar**

b. Blood agar

c. MCconkey agar

d. Chocolate agar
5. When is the optimal time to collect for blood culture?

a. **Before administration of antimicrobial**

b. After the height of fever

c. Anytime

d. Whenever possible
6. New Taenia species?

a. Taenia sollum

b. Taenia saginata

c. **Taenia asitica**

d. Taenia multiceps
7. Which of the following parasite shows rosette formation in its uterus?

a. **Diphylobothrium latum**

b. Taenia saginata

c. Taenia sollum

d. Parastrongylus cantonensi
8. Which of the following parasite/s is/are capable of autoinfection?

a. Taenia sollum

b. Capillaria philippinensis

c. Enterobius vermicularis

d. **All of the above**
9. Which test/s differentiate/s proteus vulgaris and proteus mirabilis?

a. **Indole**

b. Oxidase

c. PAD

d. Urease
10. Which test/s identify Group A streptococcus?

a. **PYR hydrolysis**

b. Bile esculin

c. CAMP

d. Growth at 6.5% NaCl
11. Common preservative for stool examination.

a. **Formalin**

b. Zinc sulfate

c. PVA

d. Iodine
12. What is the term when water is safe to drink and can be used for cooking?

a. **Potable**

b. Filtered

c. Distilled
13. which of the following has a virulence factor aflatoxin?

a. **Aspergillus**

b. Histoplasma

c. Cryptococcus

d. Coccidioides

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

14. Which of the following Haemophilus species shows no hemolysis in Bap and is xylose positive, glucose positive, and lactose negative?

- a. Haemophilus influenza
- b. Haemophilus parainfluenzae
- c. Haemophilus ducreyi
- d. Haemophilus haemolyticus

15. Which of the following microorganisms require increased concentration of Carbon dioxide?

- a. Haemophilus
- b. Helicobacter
- c. Either
- d. Neither

16. A term used to describe a microorganism that grow with reduced oxygen and increased CO2.

- a. Capnophiles
- b. Microaerophile
- c. Aerotolerant
- d. Aerobes

17. Which of the following describes a parasite that has both female and male sexes?

- a. Hermaphrodite
- b. Apolytic
- c. Craspedote
- d. Anapolytic

18. Which of the following is used to stain the uterine branches of Taenia species?

- a. India ink
- b. Gram staining
- c. Giemsa
- d. Trichrome

19. A stab was made on semi solid agar. Where does the bacteria grow?

- a. at the bottom
- b. in the middle
- c. at the stabbed area
- d. at the sides

20. In order for a sputum specimen to be acceptable for culture (Mtb), the specimen must have:___

- a. < 10 squamous epithelial cells and > 25 PMNs
- b. >10 squamous epithelial cells and > 25 PMNs
- c. < 10 squamous epithelial cells and < 25 PMNs
- d. < 10 squamous epithelial cells and < 25 PMNs

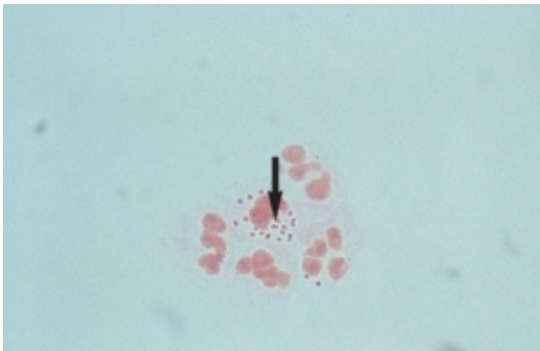
21. Which is the Most common cestode in humans with infection prevalence highest among children and in warm climates with poor sanitation facilities?

- a. Taenia sollum
- b. Echinococcu granulosus
- c. Diphylobothrium latum
- d. Hymenelopsis nana

22. It defines as larger than normal number of diseased or infected individuals that occurs over a relatively short period.

- a. Outbreak
- b. Pandemic
- c. Endemic
- d. Epidemic

23. identify



- a) Neisseria
- b) Bacteroides
- c) Staphylococcus
- d) Streptococcus

24. A man who had been wading while fishing in the Gulf of Mexico developed painful swellings that evolved into vesicles and bullae (image). These lesions became necrotic, and the man developed septicemia, severe sepsis, and multiorgan dysfunction syndrome. Which of the following is the most likely cause of this man’s infection?

- a. Pseudomonas aeruginosa
- b. Staphylococcus aureus
- c. Streptococcus pyogenes
- d. Vibrio parahaemolyticus
- e. Vibrio vulnificus

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

25. Smaller; convex, grows upward more than outward; creamy, white, dull surface; usually displays tiny projections at the base of the colony after 24 hours of incubation.

- a. **Candida albicans (yeast)**

b. Staphylococcus organisms
- c. Streptococcus agalactiae

d. Streptococcus pyogenes

26. Moderate growth of a β -hemolytic, gray colony is seen on a vaginal culture from a 25-year-old pregnant woman. The colonies are growing on the BAP and CHOC, but the MAC is negative for growth. The colonies are described as large with small, diffuse zones of β -hemolysis. This type of hemolysis is noticed when a colony is removed with a loop. A presumptive identification of this organism would be:

- a. Streptococcus pyogenes (group A)

b. Staphylococcus aureus
- c. **Streptococcus agalactiae (group B)**

d. Streptococcus pneumoniae

27. What would you suspect if you noticed “puffballs” growing in the broth medium?

- a. **Streptococci**

b. Pseudomonas aeruginosa
- c. Yeast

d. Enterics

28. This organism is acquired by tick bite.

- a. Treponema pallidum

b. **Borrelia burgdorferi**
- c. Borrelia recurrentis

d. Leptospira interrogans

29. What is the probable organism- pertaining to the black colonies pointed in arrow C (XLD agar)

- a. **Salmonella**

b. E.coli
- c. Klebsiella

d. Shigella

30. MacConkey agar – identify what’s on arrow B.

- a. Lactose fermenter

b. **Non-lactose fermenter**
- c. H2S positive

d. H2s negative

31. The image below is shown. Microscopic morphology and Biochemical reactions are the following

- Gram pos cocci

- Catalase negative

- Bacitracin resistant

- CAMP positive
- a. Group A streptococcus

b. **Group B streptococcus**
- c. Group C streptococcus

d. Staphylococcus

32. This group consists of gram-positive cocci that are natural inhabitants of the intestinal tracts of humans and animals. They are nonhemolytic or α -hemolytic, although some strains show β -hemolysis. sometimes exhibit a pseudo catalase reaction—weak bubbling in the catalase test. Are frequent causes of nosocomial infections

- a. Streptococci

b. **Enterococci**
- c. Staphylococci

d. Enteric

33. Structural protein/s of SARS-COV-2 include/s

- a. M protein

b. E protein

c. S protein
- d. **All of the above**

e. 2 of the above

34. What is the probable organism?



- a. **S.aureus**

b. S.pyogenes
- c. S.agalactiae

d. S.pneumoniae

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

35. Identify the ova below

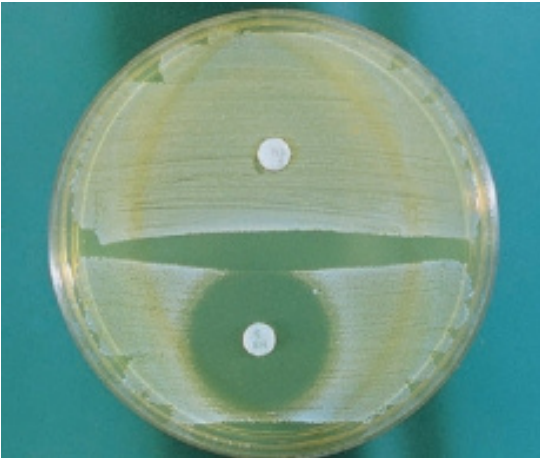


- a. **Trichuris trichiura**

b. Hookworm egg
- c. Enterobius vermicularis

d. Ascaris lumbricoides

36. What organism is probable in the upper result of the novobiocin test below?



- a. Staphylococcus saprophyticus

b. **S. epidermidis**
- c. Micrococcus spp.

d. Streptococcaceae

37. Gram negative rod with colonies below in EMB agar

- a. **E. coli**

b. P. aeruginosa
- c. Eikinella

d. Streptococci

38. A stool specimen submitted by a 50 year old patient. What is a possible etiologic agent?

- a. **Vibrio**

b. Campylobacter
- c. E. coli

d. S. aureus

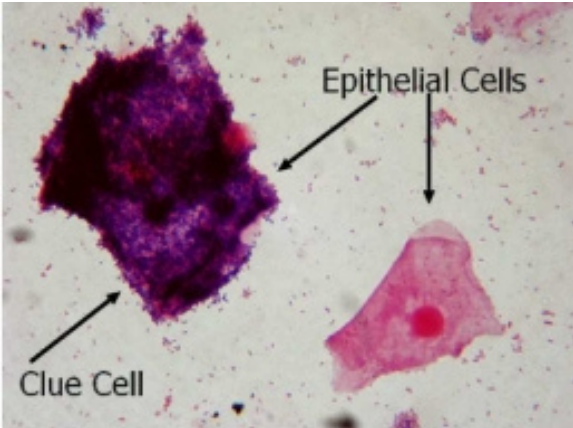
39. Asymptomatic neurosyphilis is under what stage?

- a. Primary

b. **Secondary**
- c. Tertiary

d. Latent

40. This is diagnostic of?



- a. **G.vaginalis**

b. Gonorrhea
- c. Syphilis

d. Chlamydia

41. Identify the microorganism based on the biochemical test below

- TSI: A/A

Urease pos

Indole neg

MR neg
- VP pos

Citrate pos

Non-motile

H2S neg

- a. P.vulgaris

b. **K pneumoniae**
- c. E cloacae

d. S marcescens

MEDICAL TECHNOLOGY LICENSURE EXAM PREPARATION IN THE PHILIPPINES

MICROBIOLOGY & PARASITOLOGY EXAM

42. Identify the microorganism based on the BCM test below

- | | |
|------------|-------------|
| TSI: A/A | Indole pos |
| VP neg | MR pos |
| H2S neg | Citrate neg |
| Urease neg | LDC pos |
| PAD neg | |

- a. **E. coli**

b. P vulgaris
- c. S typhi

d. Y enterocolitica

43. Transport media for V cholerae

- a. Stuart

b. Amies
- c. **Cary-Blair**

d. VTM

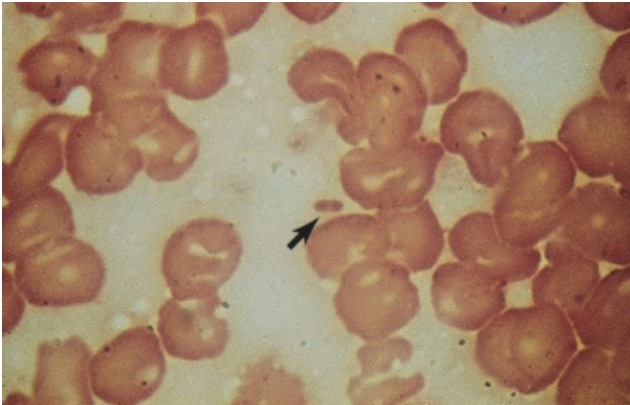
44. Forms spores except

- a. B anthracis

b. B subtilis
- c. B cereus

d. **B fragilis**

45. Identify the structure pointed in the arrow



- a. **Y. pestis**

b. C.perfringens
- c. Bacillus sp.

d. Cornynebacterium

46. Which of the following is correctly matched?

1. Beta hemolysisà complete destruction of RBC

2. Alpha hemolysis à complete destruction of RBC

3. Gamma hemolysisà partial destruction of RBC
- Gamma hemolysis à greening of the agar
- a. **1**

b. 2
- c. 3

d. 4

47. Where should the light source be situated when reading the hemolytic pattern on a BAP

- a. Left side

b. **Above**
- c. Behind

d. Right side

48. Which of the following match is correct?

- a. Leptospirosis: acquired through kissing

b. **R prowazekii: acquired through lice**

c. Lyme disease: acquired through contact with urine of rodent

d. V cholerae: acquired through sexual contact

49. True about actinomyces

- a. Gram pos cocci, aerobic

b. Gram neg cocci, aerobic
- c. **Gram pos bacilli, facultative anaerobe**

d. Gram neg bacilli, facultative anaerobe

50. Common name of T trichiura

- a. Pinworm

b. Threadworm
- c. Gian intestinal fluke

d. **Whipworm**

51. Specimen of choice for detecting rotavirus

- a. Throat swab

b. Urine sample
- c. Bronchoalveolar lavage

d. **Fecal sample**

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52. TCBS agar

- a. **Vibrio**

b. Salmonella
- c. Shigella

d. Plesiomonas

53. The only known human tapeworm with an operculum is?

- a. **D latum**

b. H nana
- c. G lamblia

d. S haematobium

54. If the ova of this parasite are ingested by humans, the oncosphere form can migrate through the body via the blood stream, resulting in the condition known as cysticercosis

- a. E histolytica

b. C sinensis
- c. **T solium**

d. H nana

55. MOT of Paragonimus westermanii

- a. Ingestion of undercooked fish

b. **Ingestion of undercooked crabs/ cray fish**
- c. Ingestion of undercooked of ant

d. Ingestion of undercooked plat or vegetation

56. Ova recovered from the stool are routinely used to diagnose infection caused by all of the following except

- a. A lumbricoides

b. N americanus
- c. T trichiura

d. **S stercoralis à rhabditiform larva**

57. Which of the following specimens would be best for identifying B cereus as the cause of an outbreak of food poisoning

- a. Blood

b. Stool samples
- c. **Food**

d. Rectal swab

58. Which of the following Schistosoma ova is correctly matched to its characteristic appearance

- a. S japonicumà large sinuous terminally spined egg

b. S mansonià large lateral spine, unoperculated

c. **S haematobiumà large terminal spine, unoperculated**

d. S indicumà large lateral spine, unoperculated, embryonated

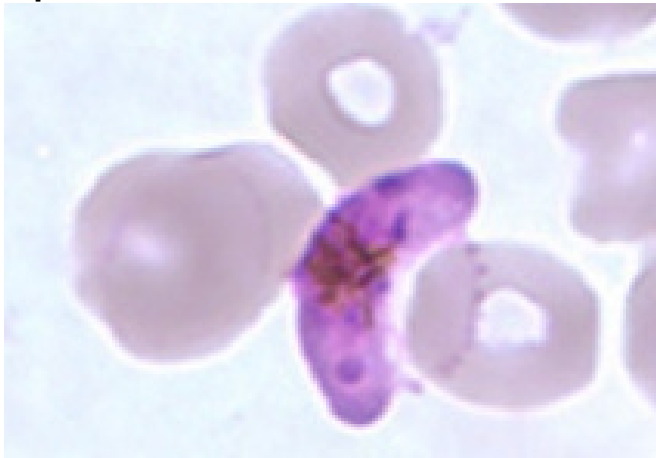
59. In pinworm infection, where does the female worm lays egg?

- a. Small intestine

b. Large intestines
- c. **Perianal region**

d. Skeletal muscle

60. Identify the parasite seen in the picture



- a. P vivax ring stage

b. P malariae trophozoite
- c. **P falciparum gametocyte**

d. P ovale schizont

61. Identify the result.

- a. Motile

b. **Nonmotile**

c. Invalid

d. Slightly motie



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62. T solium is an example of a tapeworm. A tapeworm is a

- a. Trematode
- b. Cestode
- c. Protozoa
- d. Nematode

63. What is the purpose of adding 0.025% to 0.050% SPS to nutrient broth media for the collection of blood cultures?

- a. Inhibits phagocytosis and complement
- b. Promotes formation of a blood clot
- c. In enhances growth of anaerobes
- d. It functions as a preservative.

64. MSA is a selective differential for

- a. Staphylococcus spp
- b. Enterococcus spp
- c. Gram-positive cocci
- d. Streptococcus spp

65. A throat culture was taken from a 6-year old boy with a gray pseudomembrane covering his oropharynx. It is catalase positive, isolated in CT medium and is subculture on tyinsdale medium, it grew as black colonies with brown halo. When you perform gram stain what is its possible morphology?

- a. Gram-positive branching bacilli
- b. Gram positive bacilli in irregular clublike shape
- c. Gram, positive cocci in chains
- d. Gram positive cocci in grape like clusters

66. Necator americanus rhabditiform latvae can be differentiated from strongyloides stercoralis rhabditiform larvae by?

- a. Length of the notched tail
- b. Length of the head region
- c. Segmentation
- d. Size of the genital primordium

67. Not seen in PBS

- a. Loa loa
- b. S masoni
- c. Plasmodium
- d. Trypanosoma

68. Not classified as a sign, except

- a. Swelling
- b. Redness
- c. Malaise
- d. Fever

69. Which of the following concentration of alcohol is the most effective germicide?

- a. 75%
- b. 100%
- c. 25%
- d. 45%

70. Parasitemia refers to

- a. Parasites in the blood
- b. Parasitic invasion which results in injury and reaction to injury
- c. Parasite living the surface of the host
- d. AOTA

71. Method of choice for recover of anaerobic bacteria in deep abscess

- a. Cotton swab in abscess area
- b. Scalpel’s swab used for debridement
- c. Skin snips in the surface
- d. Needle aspirate for surface decontamination

72. What characteristic oral finding, often described as small white spots resembling grains of sand, is pathognomonic for a specific viral infection and typically precedes the onset of a maculopapular rash? Refer to the picture below.

- a. Koplik spots
- b. Herman spots
- c. Vesicular rash
- d. Slapped cheek rash



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73. Which of the following a gram staining characteristic of Actinomycetes?

- a. Gram pos. Cocci
- b. Gram pos. Bacilli**
- c. Gram Neg cocci
- d. Gram neg bacilli

74. Organisms belonging to the genus Neisseria are described as which of the following?

- a. Gram-positive diplococci
- b. Gram-negative diplococci**
- c. Gram-negative coccobacilli
- d. Gram negative bacilli

75. Gram positive bacilli except?

- a. Mycobacterium
- b. Diphtheria
- c. Yersinia**
- d. Actinomycetes

76. Which of the following structure/s cover/s Paramecium spp?

- a. Flagella
- b. Cilia**
- c. Spikes
- d. NOTA

77. Which of the following is a gram positive cocci under the microscope and in blood agar plate shows mall, round, smooth, and glistening colonies with a mucoid or slightly mucoid consistency shown below

- a. Streptococcus pneumoniae**
- b. Staphylococcus aureus
- c. P. aeruginosa
- d. Y.pestis

78. TCA happens in?

- a. Mitochondria**
- b. ER
- c. GA
- d. Cytoplasm

79. The organism most commonly associated with otitis media infections is associated with which of the following positive test results?

- a. Coagulase
- b. VP
- c. Optochin**
- d. Bacitracin

80. The following identifies the most common cause of neonatal sepsis and meningitis.

- a. CAMP test**
- b. Coagulase
- c. PYR
- d. 6.5% Nacl

81. The lowest concentration of antimicrobial agent that visibly inhibit the growth of the organism being tested known as the:

- a. Minimum inhibitory concentration (MIC)**
- b. Minimum bactericidal concentration (MBC)
- c. Agar disk diffusion test
- d. Dilution test

82. Happens during microorganism resistance EXCEPT

- a. ag-ab complex**
- b. reduced penetration of membrane protein
- c. reduced antimicrobial therapy
- d. bypassing the membrane protein

83. All of the following are spiral-shaped, EXCEPT:

- a. Clostridium botulinum**
- b. Helicobacter pylori
- c. Treponema pallidum
- d. Vibrio cholerae

84. Organisms that have a cell wall containing large amounts of lipid material belong to the genus:

- a. Chlamydia
- b. Mycobacterium**
- c. Mycoplasma
- d. Leptospira

85. A fastidious gram-negative bacillus was isolated from a case of periodontal disease, which upon dark-field examination was noted to have a gliding motility. The most likely identification of this etiologic agent would be

- a. Capnocytophaga**
- b. Kingella
- c. Plesiomonas
- d. Chromobacterium

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86. Growth in a 48-hour gelatin stab culture that shows lateral filamentous growth resembling a test tube brush. This is mostly characteristic of which organism

- a. Streptobacillus moniliform
- c. Gram Neg cocci
- b. Erysipelothrix rhusiopathiae
- d. Gram neg bacilli

87. Cycloserine-cefoxitin-fructose agar (CCFA) is used for the recovery

- a. Yersinia enterocolitica
- c. Clostridium perfringens
- b. Yersinia pestis
- d. Clostridium difficile

88. Which single test best separates Klebsiella oxytoca from Klebsiella pneumoniae

- a. urease
- c. citrate
- b. lactose
- d. indole

89. Which of the following tests would be appropriate in the diagnosis of a mycobacterial infection

- a. Anton test
- c. Elek test
- b. Frei test
- d. PPD tes

90. Which spore type and location is found on Clostridium tetani

- a. Round, subterminal spores
- c. Oval, subterminal spores
- b. Oval, terminal spores
- d. Round, terminal spore

91. A gram-negative bacillus was recovered from the urine of a child with a history of recurrent urinary tract infections. The organism was oxidase negative, lactose negative, urease positive, and motile. The most likely identification of this agent would be

- a. Proteus mirabilis
- c. Pseudomonas aeruginosa
- b. Escherichia coli
- d. Klebsiella pneumonia

92. Haemophilus influenza biogroup aegyptius, which is associated with cases of acute conjunctivitis, is chracterized by all of the following reactions except:

- a. Indole negative
- c. Ornithine negative
- b. X factor negative
- d. V factor positive

93. Which one of the following disease process involves erythrogenic tox

- a. Syphilis
- c. Cutaneous anthrax
- b. Leprosy
- d. Scarlet fever

94. Special culture medium for isolation and identification of Cryptococcus neoform

- a. Czapek-Dox agar
- c. Niger seed agar
- b. SDA with cycloheximide
- d. Cornmeal agar-Tween 80

95. Thick walled structure containing spores that is a characteristic feature of Coccidioides imm

- a. cleistothecium
- c. vesicle
- b. perithecium
- d. spherule

96. The ELEK test is for the detection of

- A. Corynebacterium diphteria toxin, in vitro
- C. Colstridium bolulinum toxin in vitro
- B. Corynebacterium diptheriae toxin in vivo
- D. Clostridium bololinum in vivo

97. Select the media of choice for recovery of Vibrio cholerae from a stool specime

- A. MacConkey agar and thioglycolate media
- C. Blood agar and selenite broth
- B. TCBS and alkaline peptone water
- D. Cycloserine-cefoxitin-fructose agar

98. A mucoid, lactose positive colony type on MacConkey agar that is indole-negative and citrate posit

- A. Escherichia coli
- C. Proteus vulgaris
- B. Klebsiella pneumoniae
- D. Serratia marcesc

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99. Ethylhydrocupreine hydrochloride is used to differentiate
- A. Catalase positive Streptococcus spp. from catalase negative Staphylococcus spp.
 - B. Streptococcus pneumoniae from alpha-hemolytic streptococci
 - C. Enterobacteriaceae from non-enterobacteriaceae
 - D. Group D streptococci from Group D nonenteroc

100. The best medium for culture of Francisella tularensis
- A. Bordet-Gengou Medium
 - B. Cystine Blood Agar
 - C. Thayer-Martin
 - D. Loeffler’s Medium