

<Q>A Gram staining was done to *E.coli*, at the end of this staining technique the color of *E. coli* under the microscope is :

- <C+>Pink
- <C>Violet
- <C>Colorless
- <C>Blue
- <C>Deep violet

<Q>In the figure above (fig. A1), the arrangement of bacterial cell at (C) is known as:

<image>Picture A1.JPG

- <C>Diplococci
- <C+>Tetrads
- <C>Streptococci
- <C>Lactobacilli
- <C>Sarcina

<Q>Cloudiness is a sign that bacteria have grown in a _____ after inoculation and incubation.

- <C>Streak plate
- <C+>Nutrient broth
- <C>Nutrient Slant
- <C>Deep agar
- <C>Brain heart infusion agar

<Q>Strictly anaerobic bacteria are unable to do which one of the following?

- <C>Obtain energy from organic compounds
- <C>Use inorganic ions as an electron acceptor
- <C+>Convert hydrogen peroxide (H_2O_2) into non-toxic forms
- <C>Grow in thioglycollate broth (in a sealed container)
- <C>Growth at the bottom of the Brain heart infusion agar

<Q>You isolate five different species of bacteria (named A-E) from a certain source and study their growth under a variety of conditions. You test all isolates for growth in Brain heart infusion agar. Among the isolates you obtain, which one of the test tube in the above figure (Fig. A2) represents Aerotolerant anaerobic bacteria?

<image>Picture A2.JPG

- <C>A
- <C>B
- <C>C
- <C+>D
- <C>E

<Q>The instrument "Quebec" used in microbiology laboratory to :

- <C>Give the suitable environmental condition for the growth of microorganisms
- <C>Maintain and store the stock cultures between sub culturing periods and store the sterile media to prevent dehydration
- <C>Sterilize the heat-stable media and equipments (Pyrex glasses, thermo stable solution)
- <C>Use as repository for thermo labile solutions, antibiotics, serums, and biochemical reagents
- <C+>Counting the colonies

<Q>Which one of the following terms is used to describe the growth of the bacteria that grew at the surface of nutrient broth?

- <C>Flocculant
- <C>Sediment
- <C>Uniform fine distribution
- <C+>Pellicle
- <C>Filiform

<Q>The above figure (Fig. A3) represents which one of the following methods:

<image>Picture A3.JPG

- <C>Quadrant streaking
- <C>Continuous streaking
- <C>Surface spreading
- <C+>Radiant streaking
- <C>T- streaking

<Q>Obligate aerobes have:
<C+>Superoxide dismutase and catalase
<C>Superoxide dismutase, but not catalase
<C>Catalase, but not superoxide dismutase
<C>Neither superoxide dismutase nor catalase
<C>It depends on where the bacteria growing

<Q>The primary stain in Gram staining is:
<C>Malachite green
<C>Carbolfuchsin
<C>Safranin
<C+>Crystal violet
<C>Nigrosine

<Q>The counter stain in endospore staining is:
<C>Malachite green
<C>Carbolfuchsin
<C+>Safranin
<C>Crystal violet
<C>Nigrosine

<Q>The decolorizing agent in acid – fast staining is
<C+>3% Acid alcohol
<C>H₂O
<C>Absolute alcohol
<C>70% alcohol
<C>95% alcohol

<Q>The counter stain in Acid - fast staining is :
<C>Crystal violet
<C+>Methylene blue
<C>Carbolfuchsin
<C>Malachite green
<C>Safranin

<Q>Rod shaped bacteria are called
<C+>Bacilli
<C>Streptococci
<C>Cocci
<C>Staphylobacilli
<C>Spirilla

<Q>Some bacteria form a thick-walled _____ in response to poor nutrient conditions.
<C+>Endospore
<C>Capsule
<C>Sheath
<C>Pilus
<C>Eutospore

<Q>The “Optical characteristics” depends upon the basis of light transmission through the growth. So, in the case of incomplete light transmission, it's known as :
<C>Opaque
<C+>Translucent
<C>Transparent
<C>Opaque and transparent
<C>Translucent and transparent

<Q>The IMViC test series includes all of the followings EXCEPT:
<C>Citrate.
<C>Methyl red.
<C>Indole.
<C+>Catalase.



<C>Voges proskauer test

<Q>The bacterial species which gave K/No change on TSI is:

- <C>Lactose fermenter
- <C>Glucose fermenter
- <C+>Utilize peptone under aerobic condition
- <C>Oxidize glucose
- <C>The information is insufficient.

<Q>The process by which the SIM media is inoculated is called _____ and achieved by using _____

- <C>Stabbing, loop, respectively
- <C>Spreading method, L-shaped rod, respectively
- <C>Streaking method, Loop, respectively
- <C+>Stabbing, needle, respectively
- <C>Stabbing, swab, respectively

<Q>The above diagrams (fig. A4) shows the pattern of bacterial growth on nutrient agar slant, the test tubes which represent Echinulate and Rhizoid bacterial growth, respectively are:

<image>Picture A4.JPG

- <C>1 and 2
- <C>1 and 6
- <C>2 and 3
- <C+>2 and 6
- <C>4 and 5

<Q>The pH indicator used in Triple Sugar Iron agar (TSI) media is:

- <C>Methyl red
- <C+>Phenol red
- <C>Bromothymol blue
- <C>Kovac's reagent
- <C>Barrett's reagent

<Q>The reagent you used to test the production of Indole by bacteria is:

- <C>Bromothymol blue
- <C+>Kovac's reagent
- <C>Barrett's reagent
- <C>Methyl red
- <C> α - naphthol + 40% KOH

<Q>The media you used in the lab. To test the production of unstable acid by bacteria is:

- <C>SIM
- <C>Simmon's citrate
- <C>TSI
- <C+>MR - VP
- <C>Nutrient agar

<Q>The principle of the catalase test is that:

- <C>The enzyme produced by positive organisms reacts with a reagent in the paper strips to generate a coloured product
- <C>Positive organisms coagulate plasma
- <C>Positive organisms do not react with hydrogen peroxide
- <C+>The enzyme causes production of oxygen from hydrogen peroxide
- <C>Positive colonies alter the colour of a pH indicator in catalase reagent

<Q>In the above figure (Fig. A5) which test tube shows A / A, gas , H₂S result?

<image>Picture A5.JPG

- <C>C
- <C>D
- <C>C and D

<C>F
<C+>E

<Q>In the above figure (Fig. A6), shows the results of Methyl red - Voges proskauer (MR – VP) test for different types of bacteria. Which test tube shows " MR " positive?

<image>Picture A6.JPG

<C>A
<C+>B
<C>C
<C>D
<C>B and D

<Q>In the above figure (Fig. A7) shows the motility test of two types of bacteria, which one of the following is true about the bacteria in these test tubes?

<image>Picture A7.JPG

<C>" A " non motile
<C>" B " motile
<C>Both bacteria are motile
<C+>" A " motile while " B " non motile
<C>Both bacteria are non motile

<Q>One of the followings is not use to purify the bacteria:

<C>Quadrant method
<C>Radiant method
<C+>Surface spreading method
<C>Continuous method
<C>T - streaking

<Q>Which one of the followings is NOT a parameter use to characterized the bacterial growth on nutrient agar slant?

<C>Abundance of growth
<C>Pigmentation
<C>Forms
<C>Optical density
<C+>The region of the media where the bacteria grew

<Q>Which of the following media inhibits the growth of Gram positive bacteria?

<C+>Eosin methylene blue agar
<C>Blood agar
<C>Brain heart infusion agar
<C>Sulfide indole motility media
<C>Nutrient agar

<Q>A pure culture is

<C>The observable growth that appears in or on the medium
<C+>Free of other living things except the one being studied
<C>Holds two or more identified microorganisms
<C>Was once pure or mixed but now has microbes of uncertain identity
<C>A container that grows only a single known species of microorganism

<Q>What is the correct order of chemicals used in a gram staining procedure?

<C>Iodine, ethanol, crystal violet, safranin
<C+>Crystal violet, iodine, ethanol, safranin
<C>Crystal violet, ethanol, iodine, safranin
<C>Safranin, ethanol, iodine, crystal violet
<C>Safranin, iodine, ethanol, crystal violet

<Q>MR - positive bacteria are considered to be:
<C>VP - positive.
<C+>VP - negative.
<C>2,3 butanediol former.
<C>Unstable acid producer.
<C>Acetion producer

<Q>A Gram positive bacteria is inoculated on triple sugar iron agar, the result after "18" hours of inocubation is:
<C>A/A
<C>A/A , black colour
<C>k/no change
<C+>No growth
<C>k/k

<Q>Which of the following statements is TRUE?
<C>Since bacterial cells are mostly water, they have the same index of refraction as water.
<C>Preparing a wet mount will always kill your bacteria.
<C+>Cells that show Brownian motion are NOT motile.
<C>In bright field microscopy the specimen is illuminated by a hollow cone of light.
<C>Since bacteria are mostly water, the only way to properly visualize them is to stain them.

<Q>The reagent you used to test the production of unstable acid by bacteria is:
<C>Bromothymol blue
<C>Kovac's reagent
<C+>Barrett's reagent
<C>Methyl red
<C>Phenol red

<Q>Which one of the followings is used in Triple Sugar Iron agar as sulfur indicator?
<C>Sodium thiosulfate
<C+>Ferrous sulfate
<C>Cysteine
<C>Peptone
<C>Sucrose

<Q>The chemical that control the growth of bacteria by temporarily stopping the growth of bacteria is called:
<C>Antiseptic
<C>Disinfectant
<C+>Bacteriostatic
<C>Bactericidal
<C>Antibiosis

<Q>Bromothymol blue was incorporated into the media indicated by the above figure (Fig. A9), so the pH of the media in test tube " A " is:
<image>Picture A9.JPG
<C+>Alkaline
<C>Acid
<C>Neutral
<C>Variable
<C>Antibiosis

<Q>Bacteria were inoculated in SIM, TSI, and MR – VP, after the incubation time the results were obtained as indicated in the above figure (Fig. A10).According to the above information, which of the following inoculated media has/have contamination:
<image>Picture A10.JPG
<C>TSI
<C>SIM
<C>MR – VP
<C+>Both " SIM " and " MR – VP "
<C>Can't tell

<Q>Agar melts at:
<C>Boiling temperature
<C>60°C
<C+>42 - 44°C
<C>Room temperature
<C>Ice box temperature

<Q>Which of the following is an advantage of the colony plate count?
<C>Both dead and live cells are counted.
<C>It is an indirect method.
<C+>It determines viable cells only.
<C>Not all organisms grow on the enumeration medium

<Q>A certain bacteria were inoculated on Simmons citrate agar slants, after 48 hours of incubation the media turned to blue colour, this indicates for which one of the followings:
<C+>Production of sodium carbonate.
<C>Production of stable acids.
<C>Increase in the acidity of the media.
<C>Decrease in the pH degree

<Q>Which one of the followings is false about phenol red:
<C>Red under neutral condition
<C>pH indicator
<C>Yellow under acidic condition
<C+>Blue under alkaline condition
<C>Pink under alkaline condition

<Q>Cooling of the slide after heat-steaming is required during acid-fast staining procedure because:
<C>Mycobacterium are very difficult to fix on the slide.
<C>This is part of aseptic techniques.
<C>Cooling drives the stain into the mycobacterial cells.
<C+>It ceased the primary stain in bacterial cell

<Q>In catalase test, bacteria must be not previously inoculated in which one of the following media:
<C>Triple sugar Iron agar
<C+>Blood agar
<C>Brain heart infusion agar
<C>Sulfide – indole motility media
<C>MacConkey

<Q>One of the followings is not belongs to the others:
<C>10% KOH
<C>Gram staining
<C>Selective media for gram negative bacteria
<C+>10% H₂O₂

<Q>Following the Gram staining procedure:
<C>Gram negative bacteria are stained purple.
<C>Gram positive bacteria are stained red.
<C+>Gram positive bacteria are stained purple.
<C>Gram negative bacteria are unstained.
<C>Gram positive bacteria are unstained

<Q>The above figure (Fig 03) represents the MR-VP results for an unknown bacteria. According to these results all of the following are correct about this bacterium, EXCEPT:

<image>picture03.jpg

<C+>This bacteria is able to produce acetoin as a final product of glucose fermentation.
<C>This bacteria is one of the Enterobacteriaceae.

<C>The PH of the reaction is (4)
<C>Methyl red (MR) test result is Positive.
<C>Vogues Proskauer (VP) test result is negative.

<Q>In the above figure (fig. 04) represents two tubes containing simmon' s citrate media slant inoculated by two different types of bacteria. All of the following are correct regarding the test indicated by the arrow (A), EXCEPT:

<image>picture 04.jpg

<C>The bacteria inoculated in this tube, can not utilize citrate as a carbon and energy source .
<C+>The bacteria inoculated in this tube, produces the enzyme Citrase.
<C>This media contains sodium ions.
<C>The media contains bromothymol blue as pH indicator.
<C>There is no glucose in this media

<Q>In the above figure (fig. 05), which of the TSI tubes was inoculated with a bacteria which ferment glucose (without gas production) but neither lactose nor sucrose?

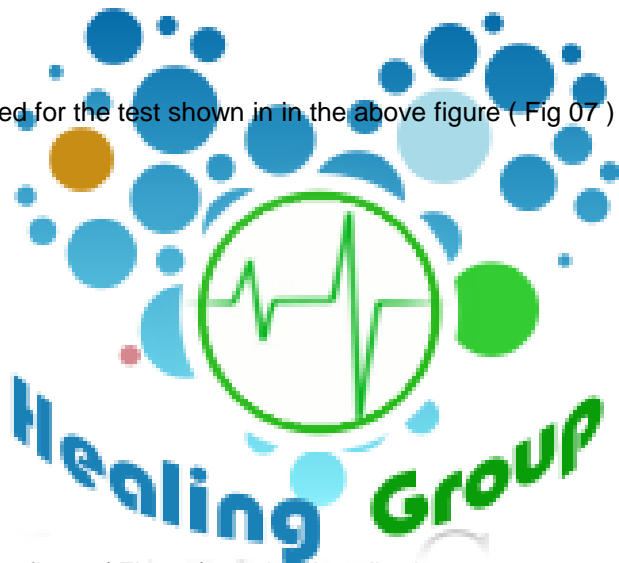
<image>Picture 05.JPG

<C>A
<C>B
<C+>C
<C>E
<C>F

<Q>The best media you must be used for the test shown in in the above figure (Fig 07) is:

<image>picture 07.jpg

<C+>Mueller Hinton Agar.
<C>Nutrient Agar
<C>Blood Agar.
<C>MacConky Agar.
<C>Brain Heart infusion.



<Q>The colonies appear in the above figure (Fig 08) can be described as:

<image>picture 08.jpg

<C+>Concentric umbonate colonies with entire margin.
<C>Circular raised colonies with undulate margin.
<C>Concentric convex colonies with undulate margin.
<C>Concentric raised colonies with entire margin.
<C>Circular drop like colonies with entire margin.

<Q>All of the following are extracellular enzymes EXCEPT:

<C>Amylase.
<C+>Catalase.
<C>Maltase.
<C>Gelatinase.
<C>Lipases.

<Q>The above figure (fig 11) represents a smear of bacteria stained through gram staining technique, according to this figure the bacteria can be described as :

<image>picture 11.jpg

<C+>Gram positive cocci arranged in clusters.
<C>Gram negative cocci arranged in clusters .
<C>Gram negative bacilli arranged in clusters.
<C>Gram positive cocci arranged in chains.
<C>Gram negative cocci arranged in chains

<Q>The plate in the above figure (Fig 12) was inoculated through:

<image>picture 12.jpg

- <C>Quadrant streaking.
- <C>Radiant Streaking.
- <C>Continuous Streaking.
- <C+>T - streaking.
- <C>Spread Plate method.

<Q>The above figure (Fig 13) shows a culture of a bacteria on nutrient agar plate, the pigment produced by this bacteria is classified as:

<image>picture 13.jpg

- <C> Pink diffusible water soluble
- <C+>Pink indiffusible water insoluble
- <C> Pink indiffusible water soluble
- <C> Pink diffusible water insoluble

<Q> The above figure (Fig 14) shows a bottle of sodium hypochlorite (bleach you use in your house-Clorox). This chemical is classified as:

<image>picture 14.jpg

- <C>Antiseptic.
- <C+>Desinfectant.
- <C>Chemotherapeutic Agent.
- <C>Antibiotic.
- <C>Synthetic Drug.

<Q>Which of the followings describe bacterial growth.

- <C>An increase in cell size
- <C>A decrease in cell mass
- <C+>An increase in cell population
- <C>A decrease in cell population
- <C>An increase in bacterial waste products in the medium.

<Q>In the figure (Fig. A8), the configuration of the colonies indicated by " C " is:

<image>picture 8A.JPG

- <C>L- form
- <C>Wrinkled
- <C+>Complex
- <C>Irregular
- <C>Round with dentate margin

<Q>The selectivity of EMB to Gram negative bacteria is back to:

- <C>High salt concentration
- <C+>Eosin and Methylene Blue
- <C>Bromthymol blue and acid fuchsin dyes
- <C>Bile salt

<Q>The pH indicator (s) in mannitol salt agar is:

- <C>Neutral red
- <C>Bromothymol blue
- <C>Crystal violet dye
- <C>Methylene blue
- <C+>Phenol red

<Q>The type of Blood agar media is:

- <C>Selective media
- <C+>Enrichment differential media
- <C>Selective differential media
- <C>General media

<C>Enrichment media

<Q>The type of nutrient agar media is:

<C>Selective media

<C>Enrichment differential media

<C>Selective differential media

<C+>General media

<C>Enrichment media

<Q>Which of the followings is NOT true about the method in the above figure (Fig 20 A)

<image>picture 20A.jpg

<C>The purpose of this method is to get pure culture with isolated colonies .

<C>It is a dilution of bacteria on the solid surface of the media.

<C>It needs low amount of inoculum.

<C+>It lacks the ability to purify the mixed bacterial culture

<Q>Gelatin hydrolysis bacteria was inoculated in a medium contains gelatin , Which one of the followings is impossible to be one of the components of the media after " 48" hours of inocubation :

<C>Serine

<C>Cysteine

<C+>Tryptophan

<C>Valine

<C>All choices except Tryptophan

<Q>The above figure (fig. 001) shows growth of different bacteria on blood agar, the type of hemolysis at (B) is:

<image>Midterm_exam_b232_formA1_fig_001.JPG

<C+> β - hemolysis

<C> α - hemolysis

<C> ∞ - hemolysis

<C>No hemolysis

<C> α and ∞ - hemolysis

<Q>The media in the above figure (fig. 003) is made from:

<image>Midterm_exam_b232_formA1_fig_003.JPG

<C>Nutrient agar and 70% blood

<C+>Nutrient agar and 7% blood

<C>Nutrient agar and 60% blood

<C>Nutrient agar and 6% blood

<C>MacConkey and 7% blood

<Q>The above figure (Fig. 002) shows the bacterial growth on mannitol salt agar, which one of the following is correct about this bacteria?

<image>Midterm_exam_b232_formA1_fig_002.JPG

<C+>Halophiles, mannitol fermenter, it's *Staphylococcus aureus*

<C>Mesophiles, mannitol fermenter, it's *E. coli*

<C>Mesophiles, lactose fermenter, it's *Staphylococcus aureus*

<C>Halophiles, lactose fermenter, it's *E. coli*

<C> Halophiles, mannitol fermenter, it could be any bacteria

<Q>The selectivity of the mannitol salt agar is back to:

<C+>High salt concentration

<C>Presence of the indicator

<C>Presence of fuchsin

<C>Both the indicators and high salt concentration

<Q>The bacteria that grew on Xylose lysine deoxycholate agar (XLD agar) which showed by the above figure(Fig.004) is:

<image>Midterm_exam_b232_formA1_fig_004.JPG

<C+>*Salmonella* species

<C>*Shigella* species

<C>*Pseudomonas aeruginosa*

<C>Klebsiella species

<C>E. coli

<Q>When *Staphylococcus epidermidis* is incubated on a Petri dish of Phenolethanol agar, individual cells grow into visible colonies. But when *Escherichia coli* is plated on this medium, it dies. In this respect phenolethanol agar is an example of:

<C>A general purpose medium

<C>A differential medium

<C+>A selective medium

<C>A defined medium

<C>A complex medium

<Q>Brain – heart infusion agar is a/an:

<C>Chemically defined medium .

<C>Enrichment medium .

<C>Differential medium .

<C+>Complex medium.

<C>Selective medium

<Q>The above figure (Fig. 005) shows growth of different types of bacteria on XLD, the bacteria at (B) is:

<image>Midterm_exam_b232_formA1_fig_005.JPG

<C>Salmonella species

<C>Shigella species

<C>Pseudomonas aeruginosa

<C>Klebsiella species

<C+>E. coli

<Q>The above figure (Fig. 006) shows bacterial growth on nutrient agar, this bacteria is:

<image>Midterm_exam_b232_formA1_fig_006.JPG

<C>Salmonella species

<C>Shigella species

<C+>Pseudomonas aeruginosa

<C>Klebsiella species

<C>E. coli

<Q>The pH indicator in Hektoen agar media is

<C>Phenol red

<C+>Bromothymol blue and acid fuchsin

<C>Crystal violet dye and acid fuchsin

<C>Neutral red

<C>Methyl red

<Q>The selectivity of MacConkey's Agar to Gram negative bacteria is back to:

<C>Bile salt only

<C+>Crystal violet and bile salt

<C>Acid fuchsin

<C>Bromothymol blue and bile salt

<C>Methylene blue

<Q>The type of chocolate agar media is:

<C+>Selective media

<C>Enrichment differential media

<C>Selective differential media

<C>General media

<C>Enrichment media

<Q>The type of Hektoen agar media is:

<C>Selective media

<C>Enrichment differential media

<C+>Selective differential media

<C>General media

<C>General differential

<Q>In the above figure (Fig. 007), What structure can't be used with high power objective lens?

<image>Midterm_exam_b232_formA1_fig_007.JPG

- <C+>4
- <C>9
- <C>10
- <C>9
- <C>7

<Q>In the above figure (Fig. 008), The part pointed at (5) is:

<image>Midterm_exam_b232_formA1_fig_008.JPG

- <C>Coarse knob
- <C+>Fine knob
- <C>Clever
- <C>Condenser
- <C>Diaphragm

<Q>The media which contains more than 1 % agar is:

- <C>Broth
- <C>Semisolid
- <C+>Solid
- <C>Soft
- <C>Liquid

<Q>The bacteria which has orange colonies on EMB will give _____ colonies on MacConkey media.

- <C>Green
- <C>Yellow
- <C+>Pink
- <C>Orange
- <C>Colorless

<Q>One of the following is correct about the colonies of lactose fermenter bacteria

- <C+>Pink on MacConkey, colored on EMB, yellow on Hektoen agar
- <C>Colorless on MacConkey, colored on EMB, yellow on Hektoen agar
- <C> Pink on MacConkey, colorless on EMB, yellow on Hektoen agar
- <C> Pink on MacConkey, colored on EMB, Colorless on Hektoen agar
- <C> Pink on MacConkey, colorless on EMB, colorless on Hektoen agar

<Q>The Type of the above media (Fig. 010), is:

<image>Midterm_exam_b232_formA1_fig_010.JPG

- <C+>General media
- <C>Enrichment media
- <C>Enrichment differential media
- <C>Selective media
- <C>Selective differential media

<Q>In any bacterial identification scheme, which one of the following procedures must be done before doing biochemical tests?

- <C>Prepare a Gram stain of the bacteria.
- <C+>Obtain a pure culture of the bacteria.
- <C>Incubate a plate of L-agar at 37 degrees C.
- <C>Examine the bacteria with a microscope.
- <C>Grow the bacteria on PEA agar.

<Q>The Vogues Proskaur test uses the same type of medium as the _____ test.

- <C>Indole
- <C+>Methyl red
- <C>Lysine decarboxylase
- <C>Phenylalanine deaminase
- <C>Amylase

<Q>You set up a ten-tube Minimum Inhibitory Concentration test where the concentration of the antibiotic in each tube is a 1/2 dilution of the previous tube. If the concentration of the antibiotic in tube 1 is 3200 micrograms per ml. What is the concentration of the antibiotic in tube 4?

- <C>3200 micrograms /ml
- <C>1600 micrograms /ml
- <C+>400 micrograms /ml
- <C>100 micrograms /ml
- <C>6 micrograms /ml

<Q>If a viable plate count of a 0.1 ml sample yields 210 colonies and the dilution factor was 10^4 , what was the concentration of cells in the original sample?

- <C> 2.1×10^4 cells/ml
- <C> 2.1×10^6 cells/ml
- <C+> 2.1×10^7 cells/ml
- <C> 210×10^4 cells/ml
- <C>210,000 cells/ml

<Q>You are attempting to identify an unknown enteric bacterium that is one of the 12 species shown in the biochemical test key that is given above(Fig 31). Your unknown bacterium is positive for the Voges-Proskauer test and positive for lactose fermentation. Which one of the following tests would allow you to unambiguously determine the identity of the unknown?

- <image>Picture 31.JPG
- <C>Arabinose fermentation
 - <C>Indole test
 - <C+>Urease test
 - <C>Dulcitol fermentation
 - <C>Esculin hydrolysis

<Q>Which one of the following statements about the Kirby-Bauer disc diffusion test for antibiotic susceptibility is true?

- <C>If the bacterium is resistant to an antibiotic there is a big clear zone around that disc.
- <C>If there is any clear zone at all around a given antibiotic disc, even a very small one, the bacterium is considered to be resistant to that antibiotic.
- <C+>The concentration of the antibiotic on the disc affect the size of any clear zone that may be seen around that disc.
- <C>If there is a big clear zone around a given antibiotic disc, that drug is not clinically useful in treating an infection caused by the bacteria being tested.
- <C>If the bacterium is susceptible to any of the antibiotics on the discs it won't grow on the agar plate at all

<Q>Which of the following is NOT a characteristic of a complex medium?

- <C>Complex media are especially helpful in growing organisms whose exact nutritional requirements are unknown.
- <C>Complex media are used for routine growth of many different species of bacteria.
- <C+>The exact chemical composition is known.
- <C>Nutrient broth and trypticase soy agar are examples of complex media.

<Q>Bacteria that grow in high salt concentrations are termed _____.

- <C>mesophiles
- <C>psychrophiles
- <C+>halophiles
- <C>barophiles

<Q>Addition of salt to a culture medium only allows the salt-tolerant bacteria to grow. This is an example of a

- <C>Complex media.
- <C>Chemically defined media.
- <C>Enriched media.
- <C>Differential media.

<Q>In a simple stain

- <C> It is possible to distinguish between different types of cells based on how they take up stain
- <C> The positively charged cell wall attracts the positively charged stain
- <C>Heat fixation is not needed
- <C+> The positively charged stain colors the negatively charged cells

<C> The slide must never contain more than two different species of bacteria

<Q>Growth media is

<C>A plate containing more than one bacterial species

<C> A carbohydrate used to make liquid media solid

<C>The increase in size of a bacterial colony

<C+>A liquid or gel designed to support bacterial growth

<C>The increase in the population of bacterial cells over time

<Q>The bacteria in the above figure (Fig. A40) would best describe as:

<image>picture 40.JPG

<C> Gram-positive, round, coccus-shaped

<C> Gram-negative, round, coccus-shaped

<C+> Gram-positive, rod-shaped

<C> Gram-negative, rod-shaped

<C> Gram-variable. More information is needed

