20 = 11/70 X 0.3

Mid-CLS-417-34-1 first SEMESTER 1433/34H

STUDENT NAME:..... St.Number:.....

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a. PMNs, normal glucose b. PMNs, low glucose
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37. **Which of the following is NOT a characteristic of *Legionella pneumophila*?**
A)Fastidious Gram(-) rods survive within protozoa & WBCs (intracellulare-MO).
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A) Optochin disk sensitive;Bile Esculine (-,-) B) glucose (+); maltose positive; ONPG (-)
C) Pyr positive; Bile Esculine (-,-) D) CAMP test positive; Bile Esculine (-,-)

II-COMPLETE ALL of The Followings:

1. Polio viruses is transmitted among human by..Ingestion..but rabies by..animal bite
2. Herpes simplex virus I causes recurrent cold sores but Rhinoviruses causes..common cold
3. The medium used in testing Elick's test (diphtheria-exotoxin) is...T.S.A.....medium.
4. Sputum-specimens can be differentiated from mere saliva by doing ..Gram &staining count PMLs & Epith cells per microscopic-High Power Fields
5. Crystals in acidic urine such as..Uric..Sa..& in alkaline urine such as..Triple.Ph.
6. BCG vaccination of MTB is a living attenuated cells of animal Mycobacterium bovis
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8. Dimorphic fungi show yeast form at..37..C and filamentious form at...25.....C
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16. Causes of aseptic meningitis as viruses and PUO as..chronic infection..Chlamydia, Brucella
17. Rheumatic fever is caused by (2words genus and species)..S. pyogenes
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Is the oxidase test positive (+) or negative (-) for the following organisms (4 points):

Pseudomonas aeruginosa(+),Neisseria meningitidis(+)Moraxella catarrhalis(+)Yersinia pestis(-)

/4

III- CHOOSE only (ONE)of the followings:

I- Aerobic or facultatively anaerobic, pleomorphic, none-spore forming gram-positive bacilli ,that appear parallel ("V" L, or "Y" arrangements) gives black colonies in presence of potassium tellurite ,catalase (+), non motile .Cells contain metachromatic granules; Lysogenic bacteriophage encodes for potent exotoxin in virulent strains .

A-Possible organism is (2 words)..Corynebacterium diphtheriae

B-possible antibiotics are ..penicillin and diseases control is by.....Dpt.....

/5

II- From a Para nasal swab a Very small, nonmotile, strictly aerobic, fastidious, gram-negative coccobacillus that does not grow on common laboratory media without supplementing with charcoal, starch, blood, or albumin to absorb toxic substances; Oxidizes amino acids, but does not ferment carbohydrates; Fimbriae present, but not primarily involved in adherence; Exotoxin and hemagglutinin mediate attachment , oxidase (+) and Urease (-)

A-Possible organism is (2words..Bordetella pertussis

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Mid-CLS-417-34-1 first SEMESTER 1433/34H

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(a) The pertussis toxin is a lymphocytosis promoting factor.
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d. violent coughing causes high B/P& only the lymphocytes can survive.

17. **What bacteria is likely to cause pneumonia in a child with cystic fibrosis?**
a. E. coli or Haemophilus influenzae. b. H. influenzae or Staph. aureus.
c. E. coli or Streptococcus pyogenes (d) S. aureus or Pseud. aeruginosa.

18. **Most cases of clinical tuberculosis among health workers present as:**
A. progressive primary pulmonary TB. (B) reactivation 2ndry pulmonary TB.
C. extra-pulmonary TB. D. miliary TB.

19. **The advantage of CULTURING -GA (Beta) hemolytic Streptococci over using the rapid** Lancefield serological-test for Group A Strept. in the diagnosis of pharyngitis is:
(a) The rapid tests are more specific b. The rapid tests are less specific.
c. GAS-Culture is more sensitive. D. Culture of the organism is less sensitive.

20. **Which of the following statements is TRUE in diagnosing Strep-throat pharyngitis?**
a. Throat-swab direct-Lancefield (gpA-), the patient (have no strep throat)
b. Diagnosis can easily be made by symptomlogy and case history.
(c.) Bacitracin (S)(culture-based) or Lancefield (rapid test) confirm GAS.
d. Normal alpha hemolytic colonies makes the GAS-culture impossible.

21. **Which in this series is the correct order of positive results for *Salmonella typhi* first week of infection(symptoms)?**
(a) blood, stool, urine b). stool, urine, blood
c). stool, blood, urine d). urine, blood, stool

22. **What is the appropriate anticoagulant for Blood Cultures?**
(A) Sodium polyanethol sulfonate (SPS) because it inhibits phagocytosis and complement
B. EDTA because it inhibits bacterial enzymes by chelating calcium and magnesium
C. Sodium heparin because it inhibits thrombin formation
D. Sodium fluoride because it inhibits glycolysis by the bacteria

23. **A gram-positive, pleomorphic small rod was isolated from a CSF** specimen. The organism produced a beta-hemolytic colony on blood agar and blue tinge colony on light on nutrient agar , catalase-positive, tumbling motility at 27 C , and dark colonies on bile esculin. The likely organism is:
A) *Haemophilus influenza* B) *Escherichia coli*
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24. **Spinal fluid was collected from a cancer patient undergoing chemotherapy suspected** of having meningitis. The CSF contained many WBCs and many intracellular and extracellular gram-negative encapsulated rods. Likely the organism could be?
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C) *Neisseria meningitidis* (D) *Klebsiella pneumoniae*

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a). + CAMP test: Streptococcus agalactiae
b). + coagulase test: Staph. Epidermidis
(c) resistance to novobiocin: Staph. saprophyticus
d). negative PYR = Enterococcus

26. **A sputum culture shows many alpha hemolytic colonies, Which test should** BE PERFORMED to determine if they are potential pathogens or normal flora?.
(a) Bile esculin slant b) bile-Sodium desoxycholate c) SXT disk d) PYR test

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Mid-CLS-417-34-1 first SEMESTER 1433/34H

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    b. Diagnosis can easily be made by symptomlogy and case history.
    c. Bacitracin (S)(culture-based) or Lancefield (rapid test) confirm GAS.
    d. Normal alpha hemolytic colonies makes the GAS-culture impossible.
21. **Which in this series is the correct order of positive results for *Salmonella typhi* first week of infection(symptoms)?**
    a). blood, stool, urine b).stool, urine, blood
    c). stool, blood, urine d). urine, blood, stool
22. **What is the appropriate anticoagulant for Blood Cultures?**
    A. Sodium polyanethol sulfonate (SPS) because it inhibits phagocytosis and complement
    B. EDTA because it inhibits bacterial enzymes by chelating calcium and magnesium
    C. Sodium heparin because it inhibits thrombin formation
    D. Sodium fluoride because it inhibits glycolysis by the bacteria
23. **A gram-positive, pleomorphic small rod was isolated from a CSF** specimen. The organism produced a beta-hemolytic colony on blood agar and blue tinge colony on light on nutrient agar , catalase-positive, tumbling motility at 27 C , and dark colonies on bile esculin. The likely organism is:
    A) *Haemophilus influenza* B) *Escherichia coli*
    C) *Listeria monocytogenes* *D.Lactobacilli*
24. **Spinal fluid was collected from a cancer patient undergoing chemotherapy suspected** of having meningitis. The CSF contained many WBCs and many intracellular and extracellular gram-negative encapsulated rods. Likely the organism could be?
    A) *Listeria monocytogenes* B) *Corynebacterium diphtheriae*
    C) *Neisseria meningitidis* D) *Klebsiella pneumoniae*
25. **A Gram (+), catalase (+)cocci grows from a urine culture.** Which of the following tests/IDs for this organism are correct?
    a). + CAMP test:Streptococcus agalactiae
    b). + coagulase test: Staph. Epidermidis
    c). resistance to novobiocin: Staph. saprophyticus
    d). negative PYR = Enterococcus
26. **A sputum culture shows many alpha hemolytic colonies,Which test should** BE PERFORMED to determine if they are potential pathogens or normal flora?.
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27. **A 45 year old male who works in a meat-packing factory presents to a hospital** with history of intermittent fever, chills, sweats and malaise for the past few days. Small faintly staining gram negative rods are isolated from blood culture. The lab findings are :CO_2 required, fails to grow in thionin but grows in basic fuchsin,& Urease(+) ; likely the organism is :
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a.Streptococcus pneumoniae is never isolated from sputum.
b.50% of patients with pneumococcal pneumonia have negative sputum cultures.
c.The sputum became contaminated with saliva.
d.Strept. pneumoniae is an obligate intracellular & cannot be cultured.

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a. more than 128 serotypes b.optimum temperature is 35 C& labile to acidic-pHs
c.cause common cold(URTI) d.Frequently cause diarrhea in young children

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a.The patient has taken antibiotic- treatment before urine examination.
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c.Ureaplasma, or Chlamydia-urinary tract infections D).All of above

32. **The primary virulence factor of Corynebacterium diphtheriae is :**
a. Survive within macrophages B. Capsule C. Endotoxin D. Exotoxin

33. **Bubonic plague is transmitted by :**
a. respiratory secretions b.fecal/oral route c.flea-bites d.contaminated blood

34. **The causative agent of pneumonic plague is:**
a)Yersinia pestis b.Streptococcus pneumonia c.H. influenza d.B.anthracis

35. **The primary virulence factor of Haemophilus influenzae type b is:**
a.capsule b.pili c. neurotoxin d. ability to grow in macrophage

36. **In tubercular meningitis, the predominant form of WBCs and glucose level is:**
a. PMNs, normal glucose b. PMNs, low glucose
c. lymphocytes,& moderate low glucose d. Lymphocytes, high glucose

37. **Which of the following is NOT a characteristic of *Legionella pneumophila*?**
A)Fastidious Gram(-) rods survive within protozoa & WBCs (intracellulare-MO).
B).Requires L-cysteine for growth C) can grow on MAC medium, at 42°C

38. **All are true for Mycobacterium tuberculosis EXCEPT:**
A)It becomes resistant to antibiotics at a high rate.
B. Slow growth(3-6wks) before colonies appear on LJ medium
C)It contains a small amount of lipid in its cell wall, therefore it is not Gram-stained
D) The antigen in the skin test is a protein extracted from the MTB organism.
E) The majority of PPD positive individuals do not develop the tuberculosis disease.

39. **What is the common causative agent of acute osteomyelitis :?**
a.Staphylococcus aureus b.Streptococcus pyogenes c.Epidermophyton

40. **CSF of a patient with typical meningeal symptoms reveals WBC (primarily** lymphocytes), normal glucose, CRP(+) and slightly elevated protein.
Possible agent:
a.Extracellular bacteria. b.Tuberculosis. c.Fungi. d.Viruses.

41. Which virus is most likely to infect B lymphocytes?

a.Human immunodeficiency virus b.Epstein Barr virus
c. Human T cell leukemia virus d.none of the above

42. A 9-year-old child is admitted with symptoms of meningitis. A Gram stain of the cerebrospinal fluid reveals gram-positive cocci in chains and in pairs. After 24 hours of incubation, alpha-hemolytic, small, gray, moist colonies with a concave center are found on the Blood A Plate and CHOC. Which of the following biochemical results would be most representative of this isolate?

A) Optochin disk sensitive;Bile Esculine (-,-) B) glucose (+); maltose positive; ONPG (-)
C) Pyr positive; Bile Esculine (-,-) D) CAMP test positive; Bile Esculine (-,-)

II-COMPLETE ALL of The Followings:

1. Polio viruses is transmitted among human by.....but rabies by.....
2. Herpes simplex virus I causes recurrent cold sores but Rhinoviruses causes...
3. The medium used in testing Elick's test (diphtheria-exotoxin) is.....medium.
4. Sputum-specimens can be differentiated from mere saliva by doing ..... & count PMLs & Epith cells per microscopic-High Power Fields
5. Crystals in acidic urine such as.....& in alkaline urine such as.....
6. BCG vaccination of MTB is a living .....cells of animal Mycobacterium..
7. In tuberculin test, the PPD antigen is obtained from cells of human Mycobacterium .....
8. Dimorphic fungi show yeast form at.....C and filamentious form at.....C
9. Bacteroids and pneumocystis carini causes ..... in HIV patients
10. By patient Age ,RSV causes pneumonia in .....but GBS causes pneumonia in .....
11. Name the media used for culturing sputum: .....
12. Bactec automation blood cultures is based on production of .....gas by growing cells
13. Vitek II/Microscan Blood cultures give organism .....& MICs for antibiotics in 8 hrs
14. Toxic Shock syndrome is usually caused by... ....., which gives (+) coagulase & DNase
15. Neonatal meningitis is usually by.GBS ,which gives CAMP(...) and hippuricase (...)
16. Causes of aseptic meningitis as viruses and PUO as.....
17. Rheumatic fever is caused by (2words genus and species).....
18. Honeymoon cystitis is caused by (2words genus and species)..... .....
19. Acute gingivitis is caused by ....

Is the oxidase test positive (+) or negative (-) for the following organisms (4 points):

Pseudomonas aeruginosa(...);Neisseria meningitidis(...)Moraxella catarrhalis(...)Yersinia pestis(...)

III- CHOOSE only (ONE)of the followings:

I- Aerobic or facultatively anaerobic, pleomorphic, none-spore forming gram-positive bacilli ,that appear parallel ("V" L, or "Y" arrangements) gives black colonies in presence of potassium tellurite ,catalase (+), non motile .Cells contain metachromatic granules; Lysogenic bacteriophage encodes for potent exotoxin in virulent strains .

A-Possible organism is (2 words)..... .....

B-possible antibiotics are .....and diseases control is by.....

II- From a Para nasal swab a Very small, nonmotile, strictly aerobic, fastidious, gram-negative coccobacillus that does not grow on common laboratory media without supplementing with charcoal, starch, blood, or albumin to absorb toxic substances; Oxidizes amino acids, but does not ferment carbohydrates; Fimbriae present, but not primarily involved in adherence; Exotoxin and hemagglutinin mediate attachment , oxidase (+) and Urease (-)

A-Possible organism is (2words .....

B- Disease control is by.....which is prepared from

Mid-CLS-417-34-1 first SEMESTER 1433/34H

STUDENT NAME: Riyadh Khasheeah St.Number: 4.2.2.1.a2.178

1-Choose SINGLE best ANSWER

1. **Common contaminants of blood cultures:**
   a.Gram-negative rods (b)Coagulase-negative staphylococci
   c.*Staphylococcus aureus* d.Anaerobes
2. **A common cause of preschool children-meningitis is**
   a.GB streptococci b. Listeria monocytogenes (c) H.influenzae d. N.meningitidis
3. **When urine specimen kept at room temperature for >than 2 hours after collection, then** sent to the laboratory for culture, the specimen will be:
   a.Diluted (b)rejected c.processed d.inoculated
4. **Which protein is predominantly responsible for attachment of the influenza virus to** susceptible epithelial cells located in the upper respiratory tract?
   a.Neuraminidase (b)Hemagglutinin c.Nucleoprotein d.Fusion protein
5. ***The route of transmission for Hepatitis B, C, and D viruses is.**
   a.airborne (b) parenteral-injections c.fecal-oral d. contaminated food
6. ***Proteus vulgaris and Pr. mirabilis give on CLED medium :**
   a. No growth b. Growth but with swarming (c) Growth without swarming
7. ***Media containing growth-inhibitors as salts, dyes or antibiotics are called:**
   (a)selective b.enriched c.differential d.biochemical e.enrichment
8. ***All are true statement for Candida albicans EXCEPT:**
   a. It can be differentiated from others by sugar assimilation
   b. Grows on most laboratory media with large whitish colonies
   c. With serum, It gives positive Germ tube test (GTT) at 37 C
   (d) DO not form chlamydospores on corn meal agar
9. **Which of the following antigens, used for Salmonella -Sero-grouping :**
   a. O antigen (polysaccharide part of LPS) b.H antigen (flagellar protein)
   b. Vi antigen (polysaccharide envelope) (c) K antigen (polysaccharide)
10. **Which is/are function(s) of transport media?**
    (a)prevent drying conditions b.provide peptones for metabolism
    c.maintain a neutral pH d.provide energy for growth
11. **Why is charcoal added to culture media?**
    (A). to inhibit saprophytic fungi B. to provide a source of vitamin B
    C. to act as a detoxifying agent. D. to enhance pigment production of fungi
12. **Which pairs of tests/organisms (Quality Control) result is CORRECT:?**
    a.ONPG - Shigella sonneii (+) E.coli (-)
    b.DNAse - Staphylococcus aureus (+) Moraxella catarrhalis (-)
    (c)Catalase- S. aureus (+) Streptococcus agalactiae (-)
    d.oxidase - Escherichia coli (+) Acinetobacter calcoaceticus (-)
13. **Streptococcus agalactiae(GBS) is differentiated from other streptococci by:**
    a.Inhibition of growth by bacitracin b.Fermentation of lactose
    (c)Production of CAMP factor (d)Growth in 6.5% salt broth
14. **India ink-staining of CSF from an HIV+ patient -showed an oval to** Spherical budding cells, capsulated ,Urease (+) . Likely organism is:
    a.Blastomyces dermatitidis b.Blastomyces tularensis
    (c)Coccidioides immitis (d)Cryptococcus neoformans
15. **Which of the following statements best describes *Pseudomonas aeruginosa*?**
    a.oxidase positive, polar flagella, ferments glucose(F+), does not reduce nitrate
    b.oxidase negative, polar flagella, oxidizes glucose(O+), does not reduce nitrate
    (c)oxidase positive, polar flagella, oxidizes glucose(O+), reduces nitrate

16. **Increased Cell- lymphocytes in the blood in whooping cough is due to:**
a.The pertussis toxin is a lymphocytosis promoting factor.
b.The bacteria grow in the lymphocytes and turns on their reproductive rate
c.The bacteria grow in the PMN's and kills them, so lymphocytes are high.
d.violent coughing causes high B/P& only the lymphocytes can survive.

17. **What bacteria is likely to cause pneumonia in a child with cystic fibrosis?**
a.E. coli or Haemophilus influenzae. b.H.influenzae or Staph.aureus.
c.E. coli or Streptococcus pyogenes d.S.aureus or Pseud. aeruginosa.

18. **Most cases of clinical tuberculosis among health workers present as:**
A.progressive primary pulmonary TB. B.reactivation 2ndry pulmonary TB.
C.extra-pulmonary TB. D.miliary TB.

19. **The advantage of CULTURING -GA (Beta) hemolytic Streptococci over using the rapid** Lancefield serological-test for Group A Strept.in the diagnosis of pharyngitis is:
a.The rapid tests are more specific b.The rapid tests are less specific.
c.GAS-Culture is more sensitive. D.Culture of the organism is less sensitive.

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5. Crystals in acidic urine such as..uric acid....& in alkaline urine such as..phosphate amorphous
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9. Bacteroids and pneumocystis carini causes .brain abscess.. in HIV patients
10. By patient Age ,RSV causes pneumonia in neonate.....but GBS causes pneumonia in .child
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18. Honeymoon cystitis is caused by (2words genus and species)..... .....
19. Acute gingivitis is caused by fusobacterium.....

Is the oxidase test positive (+) or negative (-) for the following organisms (4 points):

Pseudomonas aeruginosa(+),Neisseria meningitidis(+)Moraxella catarrhalis(+)Yersinia pestis(-)

III- CHOOSE only (ONE)of the followings:

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A-Possible organism is (2words_..bordetella..pertussis)

B- Disease control is by.vaccination which is prepared from

Key 34 – 1

KING SAUD UNIVERSITY
COLLEGE OF APPLIED MEICAL SCIENCES
DEPARTMENT OF CLINICAL LABORATORY SCIENCES

FINAL EXAM 1ist SEMESTER 1433/1434H

COURSE TITLE: Microbiology practice CLS 417

COURSE INSTRUCTIOR: PROF. DR. T. EL-KERSH

DAY / DATE: SUNDAY 24/02/1434H(6/01/2013)

TIME ALLOWED: 2 hours

X

STUDENT NAME _____

STUDENT NUMBER _____

SIGNATURE _____

No:174-3

Sec.A-Final Exam CLS-417 1st Semester 1433/1434H

Student Name:.....Student No:.....

1-Chose SINGLE BEST ANSWER:

1. Undulant fever is caused by:
   a.members of the genus Borrelia b.members of the genus Haemophilus
   c.members of the genus Yersinea d.members of the genus Brucella
2. Yersinia pestis that causes bubonic plague also causes:
   a.black plague b.sylvatic (forest) plague
   c. pneumonic plague d. septicaemic plague e. all the above
3. Rheumatic fever is caused by:
   a.Staphylococcus aureus b.Hemophilus aegyptis
   c.Streptococcus pyogenes d.Neisseria meningitidis
4. To identify Strept.pneumoniae on BA medium, susceptibility to ----------.disk is used:
   a.Novobiocin b.Bacitracin c.optochin d. metronidazole
5. Susceptibility to Methacillin is tested on all hospital strains of :
   a. liptospira interrogans b.E.coli c.Enterococcus fecalis d. S.aureus
6. Members of Enterobacteriaceae which gives on TSI (A slant/A butt g(-)H2S(-) are:
   a.Lactose fermentor b.Lactose non-fermentor c. late Lactose(+)
7. All of the following are true about the normal flora EXCEPT:
   A) Found in a significant percentage of healthy people.
   B) Induces immunity that might cross-react with other pathogens.
   C) Prevents infection by pathogens entering the mucosal surfaces.
   D) Does not cause disease.
   E) Contaminates some cultures making identification of pathogens difficult.
8. Botulism can be acquired by :
   a.improperly canned foods b.spores contaminated honey in infants
   c.spores contaminated wounds. d.All the above
9. From an ear swab with green-pus, a gram(-)rods, bipolar-motile,(O+/F-),grow on McConkey(NLF).Catalase & Oxidase (+) ,Possibly the organism is :
   a.Strep. pneumoniae b.S.aureus c.H.influenzae d.Pseudomonas aeruginosa
10. Which of the followings is a specific serological test for syphilis?
    a.Weil- felix agglutination b.RPR c.VRDL d.TPHA
11. Mycobacterium TB can rapidly be detected in various-specimens by culturing on:
    a.LJ medium b.Middlebrook 7.agar c.MIGT d. Chocolate agar
12. Gardenerella vaginalis in HVS –specimen is identified by :
    a-Its growth in streaks on Gardenerella –double Human RBCs agar
    b. It is Gram variable , sulfa & metronidazole-sensitive (S) but ® to SPS
    c. Absence of PMNs in MB-stain of swab-saline extract turned fishy with KOH
    d. Presence of clue-cells in swab-saline extract. E. All the above
13. A direct HVS- smear revealed Gram(-) diplococcal cells in side and out side PMNs cells .Which medium should be inoculated to isolate this organism?:
    a. Blood agar + Co2 *b. TM Agar +CO2*
    c. BCYE +cephalosporin *d. Chocolate agar +CO2*
14. A CSF specimen was taken from a suspected patients with Neisseria meningitidis the best medium to culture the organism is :
    a.Blood Agar plus CO2 b. chocolate Agar +CO2
    c. Chocolate agar +VCN(Thayer Martin medium) +CO2
15. *Immobilization of motile bacteria in a rice water stool is used to detect:
    a.Campylobacter jejuni b.E.coli c. Vibrio cholerae d.Proteus mirabilis

d e c d d d d d c e b b c

15

16. *If LF colonies on McConkey were isolated from stool of <2 years old child were Indole and MR (+) but VP& citrate (-) , and agglutinated with enteropathogenic-antisera of this pathogen. The organism is likely:

a.Campylobacter jejuni *b. E.coli*
c.Enterococcus fecalis *d. V.parahemolyticus*

17. *Recent virus infection is diagnosed by the demonstration in serum-specimen of which immune globulin antibodies:

a. Ig A b.Ig G c.IgM d.IgD

18. A 70-year-old female patient was readmitted to a local hospital with fever and chills following cardiac surgery at a major teaching institution. A Gram-positive cocci in chain grew from the blood cultures within 24 hours. Initial tests indicated that this isolate catalase negative,& resistant to penicillin. The most likely organism is:

a. *Streptococcus pneumoniae* *b. Neisseria*
c. Group A streptococcus d. Enterococcus

19. In the above case further testing revealed that the isolate possessed the group D antigen, it was not β-lactamase-positive, but was resistant to vancomycin. The most likely identification of this isolate is

a. *Enterococcus faecalis* *b. Enterococcus durans*
c. Enterococcus cassiflavus *d. S. pneumoniae*

20. The treatment of choice for the isolate in above question is:

a. Gentamicin b.Gentamicin and ampicillin
c. Ciprofloxacin d.Rifampin

21. Which of the following is the predominant flora of the mouth that is the major cause of dental caries?

a. α-hemolytic viridans streptococci b. *Lactobacillus* *c.S. epidermidis*

22. *M. tuberculosis* in the sputum of patients with tuberculosis. After digestion of the sputum, isolation is best accomplished using

a.Sheep blood agar b. Löffler's medium c.Thayer-Martin agar
d. Thiosulfate citrate bile salts sucrose medium e. Löwenstein-Jensen medium

23. *C. diphtheriae* may be difficult to isolate from the nasopharynx without the use of special media. The medium of choice is

a. Sheep blood agar/or chocolate agar b. Löffler's /or Tinesdales medium
c. Thayer-Martin agar /or Thiosulfate citrate bile salts sucrose medium
d. Löwenstein-Jensen medium

24. *V. cholerae,* the causative agent of cholera, is best isolated after APW enrichment on:

a. Sheep blood agar/or chocolate agar b. Löffler's /or Tinesdales medium
c. Thayer-Martin agar d. Thiosulfate citrate bile salts sucrose medium

25. The therapy of choice for Clostridium difficile- pseudomembranous enterocolitis is

a. Penicillin b.Ampicillin c. Erythromycin d. Vancomycin

26. The most common human -portal of entry for *C. tetani,* the cause of tetanus, is the:

a. dirty wounds of Skin b. Gastrointestinal tract
c. Respiratory tract d. Genital tract

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   c. Develop late in infants born to infected mothers for at least one year.
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   c.Grows rapidly as compared with staphylococcus d. high (60 %)lipids in its cell wall

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   a. *N. meningitidis*, group A b.*N. meningitidis*, group C
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   c.Neisseria meningitidis d.Neisseria gonorrhoea

34. **HUMAN is the only Reservoir for All of the following bacteria** (EXCEPT):
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42. **The vaccine to prevent disease caused by Bordetella pertussis is:**
   a. attenuated vaccine b. whole killed cells and/or acellular protein vaccine
   c.a toxoid d.capsular polysaccharide

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a.Bacillus anthracis – cytotoxin b.Vibrio cholerae – enterotoxin
c.Clostridium tetani – neurotoxin d.Streptococcus pyogenes – endotoxin

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a. eye swab –gram staining b.eye swab for iodine staining of inclusion bodies
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C 48. A CSF-specimen, revealed WBC (primarily lymphocytes), normal glucose, &moderately elevated protein. This would indicate meningitis of type?:
a. bacterial b. fungal c. viral d. Mycobacteria

B 49. Which of the following is mismatched?
A.xenograft – transplant between different species
B.allograft – transplant between twins
C.autograft – transplant tissue from one part of the body to another
D.isograft – transplant between genetically identical people

D 50. HLA (human leukocyte antigens)
A.are used for tissue typing B.are responsible for allograft rejection
C.are determined by major histocompatibility complex genes D.all of the above

12

b 51. Humoral immunity is transferable & it is associated with:
a. T lymphocytes & specific cytokines
b.B lymphocytes & specific antibodies c. all of above

a 52. Cell-mediated immunity, is none transferable & it is associated with:
a. T lymphocytes & their specific cytokines to regulate other immune cells
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A 53. *Neisseria gonorrhoeae* has which of the following biochemical characteristics?
A) glucose +, maltose –, sucrose –, lactose –
B) glucose +, maltose +, sucrose –, lactose +
C) glucose +, maltose +, sucrose –, lactose –
D) glucose –, maltose –, sucrose –, lactose –

C 54. Yersinia enterocolitica is :
a) motile at 37° c, nonmotile at 25° c b) biochemically inactive
c) nonmotile at 37° c, motile at 25° c d) oxidase-positive and ornithine-positive

55. Put at LEFT the English letter for target action of following drugs(5degrees):

C	Aminoglycoside	A. Cell wall synthesis
A	Ampicillin	B. Folic acid metabolism
B	Trimethoprim	C. Protein synthesis
E	Ciprofloxacin	D.mRNA polymerse
D	Rifampin	E. DNA gyrase

5

56. . Beta-lactamase is:
a) an enzyme produced by penicillin-sensitive *staphylococcus aureus*
b) the active part of the penicillin molecule
c) an enzyme that confers susceptibility to penicillin
d) an enzyme that inactivates penicillin

57. Plasmodium malaria causes malaria in human & it is transmitted by bites of:
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Section II. Quantitative relationships :Qs: 1 through 9: Put A (at LEFT) if 1 is > 2 and B if 2 is > 1,and C if 1/2 is 50/50 (at LEFT) in-front of Q number.

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Section-III-BONUS-Questions 1-7. Indicate the MOST IMPORTANT VIRULENCE FACTOR listed on the right for each of the ORGANISMS listed on the left. Each lettered choice may be used once, more than once or not at all .

1.	*Treponema pallidum*	A. Anti-phagocytic capsule
2.	*Bacteroide fragilis*	B. Production of exotoxins
3.	*Shigella,EHEC & EIEC*	C. Growth in cells & Invasion of tissues
4.	*Brucella spp*	D. Survive in WBCs
5.	*V.cholerae or ETEC*	E All of the above
6.	*Chlamydia trachomatis*	
7	*Clostridium perfringenes*	

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KING SAUD UNIVERSITY
COLLEGE OF APPLIED MEICAL SCIENCES
DEPARTMENT OF CLINICAL LABORATORY SCIENCES

FINAL EXAM — 1st SEMESTER 1433/1434H

22.4

~~COURSE~~ TITLE: Microbiology practice CLS 417

30

~~COURSE~~ INSTRUCTIOR: PROF. DR. T. EL-KERSH

DAY / DATE: SUNDAY 24/02/1434H(6/01/2013)

TIME ALLOWED: 2 hours

STUDENT NAME ABDULLAH HAJED AL HARBI

STUDENT NUMBER 428 101 643

SIGNATURE _____

No:17+3

Sec.A-Final Exam CLS-417 1st Semester 1433/1434H

Student Name:.....Student No:.....

I-Chose SINGLE BEST ANSWER:

1. Undulant fever is caused by:
   a.members of the genus Borrelia b.members of the genus Haemophilus
   c.members of the genus Yersinea (d)members of the genus Brucella
2. Yersinia pestis that causes bubonic plague also causes:
   a.black plague b.sylvatic (forest) plague
   c. pneumonic plague d. septicaemic plague (e)all the above
3. Rheumatic fever is caused by:
   a.Staphylococcus aureus b.Hemophilus aegyptis
   (c)Streptococcus pyogenes d.Neisseria meningitidis
4. To identify Strept.pneumoniae on BA medium, susceptibility to ----------.disk is used:
   a.Novobiocin b.Bacitracin (c)optochin d. metronidazole
5. Susceptibility to Methacillin is tested on all hospital strains of :
   a. liptospira interrogans b.E.coli c.Enterococcus fecalis (d)S.aureus
6. Members of Enterobacteriaceae which gives on TSI (A slant/A butt g(-)H2S(-) are:
   a.Lactose fermentor b.Lactose non-fermentor (c)late Lactose(+)
7. All of the following are true about the normal flora EXCEPT:
   A) Found in a significant percentage of healthy people.
   B) Induces immunity that might cross-react with other pathogens.
   C) Prevents infection by pathogens entering the mucosal surfaces.
   (D) Does not cause disease.
   E) Contaminates some cultures making identification of pathogens difficult.
8. Botulism can be acquired by :
   a.improperly canned foods b.spores contaminated honey in infants
   c.spores contaminated wounds. (d)All the above
9. From an ear swab with green-pus, a gram(-)rods, bipolar-motile,(O+/F-),grow on McConkey(NLF),Catalase & Oxidase (+) ,Possibly the organism is :
   a.Strep. pneumoniae b.S.aureus c.H.influenzae (d)Pseudomonas aeruginosa
10. Which of the followings is a specific serological test for syphilis?
    a.Weil- felix agglutination b.RPR c.VRDL (d)TPHA
11. Mycobacterium TB can rapidly be detected in various-specimens by culturing on:
    (a)LJ medium b.Middlebrook 7.agar c.MIGT d. Chocolate agar
12. Gardenerella vaginalis in HVS –specimen is identified by :
    a-Its growth in streaks on Gardenerella –double Human RBCs agar
    b. It is Gram variable , sulfa & metronidazole-sensitive (S) but ® to SPS
    c. Absence of PMNs in MB-stain of swab-saline extract , turned fishy with KOH
    d. Presence of clue-cells in swab-saline extract. (E)All the above
13. A direct HVS- smear revealed Gram(-) diplococcal cells in side and out side PMNs cells .Which medium should be inoculated to isolate this organism?:
    a. Blood agar + Co2 *b. TM Agar +CO2*
    (c)BCYE +cephalosporin *d. Chocolate agar +CO2*
14. A CSF specimen was taken from a suspected patients with Neisseria meningitidis the best medium to culture the organism is :
    a.Blood Agar plus CO2 b. chocolate Agar +CO2
    (c)Chocolate agar +VCN(Thayer Martin medium) +CO2
15. *Immobilization of motile bacteria in a rice water stool is used to detect:
    a.Campylobacter jejuni b.E.coli (c.)Vibrio cholerae d.Proteus mirabilis

16. *If LF colonies on McConkey were isolated from stool of <2 years old child were Indole and MR (+) but VP& citrate (-) , and agglutinated with enteropathogenic-antisera of this pathogen. The organism is likely:

a.Campylobacter jejuni (b.) *E.coli*
c.Enterococcus fecalis *d. V.parahemolyticus*

17. *Recent virus infection is diagnosed by the demonstration in serum-specimen of which immune globulin antibodies:

a. Ig A (b.) Ig G c.IgM d.IgD

18. A 70-year-old female patient was readmitted to a local hospital with fever and chills following cardiac surgery at a major teaching institution. A Gram-positive cocci in chain grew from the blood cultures within 24 hours. Initial tests indicated that this isolate catalase negative,& resistant to penicillin. The most likely organism is:

a. *Streptococcus pneumoniae* *b. Neisseria*
c. Group A streptococcus (d.) Enterococcus

19. In the above case further testing revealed that the isolate possessed the group D antigen, it was not β-lactamase-positive, but was resistant to vancomycin. The most likely identification of this isolate is

(a.) *Enterococcus faecalis* *b. Enterococcus durans*
c. Enterococcus cassiflavus *d. S. pneumoniae*

20. The treatment of choice for the isolate in above question is:

a. Gentamicin (b.) Gentamicin and ampicillin
c. Ciprofloxacin d.Rifampin

21. Which of the following is the predominant flora of the mouth that is the major cause of dental caries?

(a.) α-hemolytic viridans streptococci b. *Lactobacillus* *c.S. epidermidis*

22. ***M. tuberculosis*** in the sputum of patients with tuberculosis. After digestion of the sputum, isolation is best accomplished using

a.Sheep blood agar b. Löffler's medium c.Thayer-Martin agar
d. Thiosulfate citrate bile salts sucrose medium (e.) Löwenstein-Jensen medium

23. *C. diphtheriae* may be difficult to isolate from the nasopharynx without the use of special media. The medium of choice is

a. Sheep blood agar/or chocolate agar (b.) Löffler's /or Tinesdales medium
c. Thayer-Martin agar /or Thiosulfate citrate bile salts sucrose medium
d. Löwenstein-Jensen medium

24. *V. cholerae,* the causative agent of cholera, is best isolated after APW enrichment on:

a. Sheep blood agar/or chocolate agar b. Löffler's /or Tinesdales medium
c. Thayer-Martin agar (d.) Thiosulfate citrate bile salts sucrose medium

25. The therapy of choice for Clostridium difficile- pseudomembranous enterocolitis is

(a.) Penicillin b.Ampicillin c. Erythromycin d.Vancomycin

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KING SAUD UNIVERSITY
COLLEGE OF APPLIED MEICAL SCIENCES
DEPARTMENT OF CLINICAL LABORATORY SCIENCES

FINAL EXAM 1st SEMESTER 1433/1434H

17.2

COURSE TITLE: Microbiology practice CLS 417

30

COURSE INSTRUCTIOR: PROF. DR. T. EL-KERSH

DAY / DATE: SUNDAY 24/02/1434H(6/01/2013)

TIME ALLOWED: 2 hours

STUDENT NAME نواف خلف العتيبي

STUDENT NUMBER ٤٢٧١٠١١٨١

SIGNATURE

No:17+3

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(2) The number of community-acquired urinary tract infections that are due to *Proteus*.

A 8 (1) The number of annual cases of Campylobacter jejuni recovered from blood-cultures
(2) The number of annual cases of Campylobacter fetus recovered from blood-cultures.

C 9 (1) The role of a large animal reservoir in the transmission of *Salmonella enteritidis*.
(2) The role of a large animal reservoir in the transmission of Salmonella typhi.

Section-III-BONUS-Questions 1-7. Indicate the MOST IMPORTANT VIRULENCE FACTOR listed on the right for each of the ORGANISMS listed on the left. Each lettered choice may be used once, more than once or not at all .

D 1.	*Treponema pallidum*	A. Anti-phagocytic capsule
C 2.	*Bacteroide fragilis*	B. Production of exotoxins
B 3.	*Shigella,EHEC & EIEC*	C. Growth in cells & Invasion of tissues
A 4.	*Brucella spp*	D. Survive in WBCs
C 5.	*V.cholerae or ETEC*	E All of the above
B 6.	*Chlamydia trachomatis*	
D 7.	*Clostridium perfringenes*	

Sec.A-Final Exam CLS-417 1st Semester 1433/1434H

Student Name:.....Student No:.427011181

I-Chose SINGLE BEST ANSWER:

1. **Undulant fever is caused by:**
   a.members of the genus Borrelia b.members of the genus Haemophilus
   c.members of the genus Yersinea (d)members of the genus Brucella
2. **Yersinia pestis that causes bubonic plague also causes:**
   a.black plague b.sylvatic (forest) plague
   c. pneumonic plague d. septicaemic plague (e) all the above
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   (a)Staphylococcus aureus b.Hemophilus aegyptis
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4. **To identify Strept.pneumoniae on BA medium, susceptibility to ----------.disk is used:**
   a.Novobiocin b.Bacitracin (c)optochin d. metronidazole
5. **Suseeptibility to Methacillin is tested on all hospital strains of :**
   a. liptospira interrogans b.E.coli c.Enterococcus fecalis (d.)S.aureus
6. **Members of Enterobacteriaceae which gives on TSI (A slant/A butt g(-)H2S(-) are:**
   (a)Lactose fermentor b.Lactose non-fermentor c. late Lactose(+)
7. **All of the following are true about the normal flora EXCEPT:**
   A) Found in a significant percentage of healthy people.
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   D) Does not cause disease.
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8. **Botulism can be acquired by :**
   (a)improperly canned foods b.spores contaminated honey in infants
   c.spores contaminated wounds. d.All the above
9. **From an ear swab with green-pus, a gram(-)rods, bipolar-motile,(O+/F-),grow on** McConkey(NLF),Catalase & Oxidase (+) ,Possibly the organism is :
   a.Strep. pneumoniae b.S.aureus c.H.influenzae (d.)Pseudomonas aeruginosa
10. **Which of the followings is a specific serological test for syphilis?**
    a.Weil- felix agglutination b.RPR c.VRDL (d.)TPHA
11. **Mycobacterium TB can rapidly be detected in various-specimens by culturing on:**
    (a)LJ medium b.Middlebrook 7.agar c.MIGT d. Chocolate agar
12. **Gardenerella vaginalis in HVS –specimen is identified by :**
    a-Its growth in streaks on Gardenerella –double Human RBCs agar
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    c. Absence of PMNs in MB-stain of swab-saline extract , turned fishy with KOH
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    a. Blood agar + Co2 *b. TM Agar +CO2*
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a.Campylobacter jejuni (b) *E.coli*
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17. *Recent virus infection is diagnosed by the demonstration in serum-specimen of which immune globulin antibodies:

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(a) Gentamicin b.Gentamicin and ampicillin
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   a. can be effectively prevented by proper screening of expectant mothers.
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   c.Grows rapidly as compared with staphylococcus d. high (60 %)lipids in its cell wall

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   a. red to reddish color b. black colonies surrounded by brownish hallow
   c.green color with black hallow d. As mercury drops

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   a. Exotoxin that stop protein synthesis b.Endotoxin that stop protein synthesis
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   a. Corynebacterium diphtheria and normal diphtheroides
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   c.Clostridium tetani. D.*Fusobacterium nucleatum*

39. ***One of the first infections that present with AIDS patients is:**
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   a. attenuated vaccine b.whole killed cells and/or acellular protein vaccine
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a.Bacillus anthracis – cytotoxin b.Vibrio cholerae – enterotoxin
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49. **Which of the following is mismatched?**
A.xenograft – transplant between different species
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50. **HLA (human leukocyte antigens)**
A.are used for tissue typing B.are responsible for allograft rejection
C.are determined by major histocompatibility complex genes D.all of the above

51. **Humoral immunity is transferable & it is associated with:**
a. T lymphocytes & specific cytokines
b.B lymphocytes & specific antibodies c. all of above

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53. ***Neisseria gonorrhoeae* has which of the following biochemical characteristics?**
A) glucose +, maltose –, sucrose –, lactose –
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C) glucose +, maltose +, sucrose , lactose
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54. **Yersinia enterocolitica is :**
a) motile at 37° c, nonmotile at 25° c b) biochemically inactive
c) nonmotile at 37° c, motile at 25° c d) oxidase-positive and ornithine-positive

55. Put at LEFT **the English letter for target action of following** drugs(5degrees):

C	Aminoglycoside	A. Cell wall synthesis
A	Ampicillin	B. Folic acid metabolism
E	Trimethoprim	C. Protein synthesis
B	Ciprofloxacin	D.mRNA polymerse
D	Rifampin	E. DNA gyrase

56. . **Beta-lactamase is:**
a) an enzyme produced by penicillin-sensitive *staphylococcus aureus*
b) the active part of the penicillin molecule
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57. **Plasmodium malaria causes malaria in human & it is transmitted by bites of:**
a.mosquitoes b. sand fly c. Tsetse fly D.Ticks

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KING SAUD UNIVERSITY
COLLEGE OF APPLIED MEICAL SCIENCES
DEPARTMENT OF CLINICAL LABORATORY SCIENCES

FINAL EXAM 30 1ist SEMESTER 1433/1434H

COURSE TITLE: 30 Microbiology practice CLS 417

COURSE INSTRUCTIOR: PROF. DR. T. EL-KERSH

DAY / DATE: SUNDAY 24/02/1434H(6/01/2013)

TIME ALLOWED: 2 hours

STUDENT NAME طارق معلي البلوي

STUDENT NUMBER ٤٤٨١٠١٣٥٢

SIGNATURE

No:17+3

Sec.A-Final Exam CLS-417 1ist Semester 1433/1434H

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B Trimethoprim	C. Protein synthesis
E Ciprofloxacin	D.mRNA polymerse
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b) the active part of the penicillin molecule
c) an enzyme that confers susceptibility to penicillin
(d) an enzyme that inactivates penicillin

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(a) mosquitoes b. sand fly c. Tsetse fly D.Ticks

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a. Hydrocephaly b. Micro-cephaly (c) eye lesions of retinitis d. mental retardation

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(a) Plasmodium species b. Toxoplasma gondii
c. Giardia lamblia d. Entamoeba histolytica

Section II. Quantitative relationships :Qs: 1 through 9: Put A (at LEFT) if 1 is > 2 and B if 2 is > 1,and C if 1/2 is 50/50 (at LEFT) in-front of Q number.

--- A 1 (1) The ability of Bacteroides fragilis to grow in presence of high bile salt concentration
(2) The ability of E coli to grow in presence of high bile salt concentration

B 2 (1) The ability of*C tetan-toxin* to block the release of the neurotransmitter glycine,GABA
(2) The ability ofc. *tetani-toxin* to block the release of the neurotransmitter acetylcholine

C 3 (1) The relative glucose/lactose concentration in TSI agar medium .
(2) The relative glucose/lactose concentration in KI agar medium .

A 4 (1) The average number of *Salmonella typhi* cells to cause disease in human adult.
(2) The average number of Shigella spp. to cause disease in human adult.

A 5 (1) The number of *Bacteroides* species found on the skin of a healthy human adult.
(2) The number of *Staphylococcus* species found on the skin of a healthy human adult.

B 6 (1) The number of annual nosocomial infections due to C.tetatini .
(2) The number of annual nosocomial infections due to C.difficile .

A 7 (1) The number of community-acquired urinary tract infections that are due to *E. coli*.
(2) The number of community-acquired urinary tract infections that are due to *Proteus*.

B 8 (1) The number of annual cases of Campylobacter jejuni recovered from blood-cultures
(2) The number of annual cases of Campylobacter fetus recovered from blood-cultures.

A 9 (1) The role of a large animal reservoir in the transmission of *Salmonella enteritidis*.
(2) The role of a large animal reservoir in the transmission of Salmonella typhi.

Section-III-BONUS-Questions 1-7. Indicate the MOST IMPORTANT VIRULENCE FACTOR listed on the right for each of the ORGANISMS listed on the left. Each lettered choice may be used once, more than once or not at all .

D 1.	*Treponema pallidum*	A. Anti-phagocytic capsule
A 2.	*Bacteroide fragilis*	B. Production of exotoxins
C 3.	*Shigella,EHEC & EIEC*	C. Growth in cells & Invasion of tissues
D 4.	*Brucella spp*	D. Survive in WBCs
B 5.	*V.cholerae or ETEC*	E All of the above
C 6.	*Chlamydia trachomatis*	
E 7	*Clostridium perfringenes*	

King Saud University
Deanship of Admission and Registration
Edugate
Time : 12:38
Date: 07/01/2013

جامعة الملك سعود
عمادة شؤون القبول والتسجيل
البوابة الالكترونية
الوقت : 12:38
التاريخ : 1434/02/25
صفحة 1 من 1

رصد الدرجات
الفصل الأول 1434/1433

الفرع	الرياض- طلاب	المقرر	ميكروبيولجيا ممارسة
المرحلة	البكالوريوس	النشاط	محاضرة
رقم الشعبة	417 كلن	الرقم	676

م	رقم الطالب	اسم الطالب	(٥٠) (٤١)	(٢٥) (١٠)	المجموع	التقدير
1	425101049	طارق بن علي بن مساعد الغامدي	----	----	----	ع
2	427101181	نواف بن خلف بن جحيش الغبيوي العتيبي	41	19	60	د
3	428100745	عبدالله بن سعد بن سعيد الزهري الغامدي	35	27	62	د
4	428101240	سليمان بن حمد بن عبدالله ال محمدليث الصيعري	40	28	68	د+
5	428101353	طارق بن مفلح بن عبدالله السحيمي البلوي	57	38	95	أ+
6	428101496	عائض بن سعد بن عايض ناهس	46	14	60	د
7	428101693	عبدالله بن هاجد بن سليم السليمي الحربي	46	30	76	ج+
8	428102178	رياض بن سعيد بن حسن خشيعه	48	22	70	ج
9	428103039	عبدالرزاق بن محمد بن صالح البهيجان	50	35	85	ب+
10	429101244	معاذ بن خالد بن عبدالله شديد	42	23	65	د+
11	429101296	علي بن عبدالرحمن بن عبدالله آل فريج	43	29	72	ج
12	429103690	فارس بن خالد بن ابراهيم القدهي	56	39	95	أ+
13	429103979	عايد بن قاسم بن محمد الشمري	49	32	81	ب
14	429105209	يوسف بن محمد بن عبدالله العيسى	57	38	95	أ+
15	429105601	عمر بن سعد بن علي القحطاني	6	0	6	هـ
16	429401372	حسين بن مشبب بن حسين الخريب	48	32	80	ب
17	429401562	محمد بن سعيد بن محمد الدوسري	56	36	92	أ
18	429421201	عبدالمجيد بن محمد بن علي السيف	40	25	65	د+

اسم أستاذ المقرر : طلعت عبدالمنصف محمد القرش
التوقيع : .....

اسم رئيس القسم : .....
التوقيع : .....