2012 Clinical Microbiology Laboratory
**Competency Assessment Instrument**

Name: _____ Date: _____

Instructions: Answer the questions in each of the sections in which you have been trained. Circle the most correct answer to each question.

**Specimen Processing:**

1. The Sunquest test code for a KOH preparation of fingernail clippings is:

    a. REI
    b. FUNSKN
    c. KOHSKN
    d. COHSM

2. The correct Sunquest function code for crediting a test for any reason is:

    a. CR
    b. MDE
    c. REI
    d. CRW

3. A BBL™ CHROMagar MRSA II Agar plate should be inoculated whenever a request is received to screen for the presence methicillin-resistant *S. aureus* (MRSA) from a swab of the:

    a. Throat.
    b. Rectum.
    c. Nares.
    d. Axilla.

4. A CIN Agar Plate should be inoculated whenever a request is received to screen a stool specimen for the presence of :

    a. *E. coli* O157:H7
    b. *Yersinia pestis.*
    c. *Clostridium difficile.*
    d. *Yersinia enterocolitica*.

5. A Foley Catheter tip should be rolled across the surface of a Blood Agar Plate and then placed into a TSB Broth.

    a. True.
    b. False

**Bacteriology:**

1. The MRSA nasal screening culture result depicted in the figures to the right should be reported as:

   a. Heavy *Staphylococcus aureus* (MRSA) isolated.
   b. Few *Staphylococcus aureus* (MRSA) isolated.
   c. No MRSA detected.
   d. Heavy *Staphylococcus epidermidis* (MRSE) isolated.

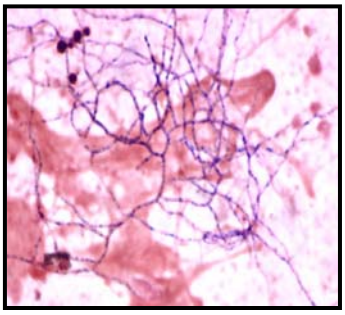
2. Based on this gram stained smear, the most likely organism is:

   a. *Propionibacterium* species.
   b. *Bacillus* species.
   c. Crystalline elements (Gram stain artifact).
   d. *Leptotrichia* species.

3. The Shiga toxin assay result depicted in the figure to the right should be reported as:


   a. Shiga toxin Assay: Negative.
   b. Shiga toxin Stx1 Detected.
   c. Shiga toxin Stx1 and Stx2 Detected.
   d. Shiga toxin Stx2 Detected.

4. Based on this gram stained smear of expectorated sputum, the most likely organism is:



   a. *Propionibacterium* species.
   b. *Nocardia* species.
   c. Crystalline elements (Gram stain artifact).
   d. *Lactobacillus* species.

5. The figure to the right illustrates the typical urea reaction of:


   a. *Enterobacter intermedium.*
   b. *Pseudomonas alcaligenes.*
   *c. Raoultella (Klebsiella) ornithinolytica*
   d. *Shigella* species

**Virology:**

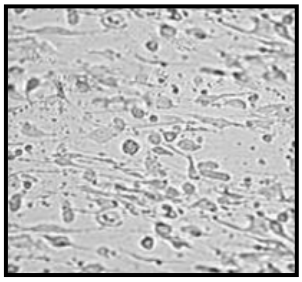
1. When adding tissue culture maintenance media to cell cultures, the media should be:

    a. At refrigerator temperature (2-8° C).
    b. At ambient or incubator temperature (22 - 37° C).
    c. At 45° C.
    d. At -25° C.

2. One of the differential characteristics of the herpes family of viruses is growth rate. The typical growth rate for Herpes simplex virus (HSV) is:

    a. 1 –3 days.
    b. 5 – 28 days.
    c. 7 – 21 days.
    d. 9 days.

3. The figure to the right illustrates the typical cytopathic effect on MRC-5 cells of:

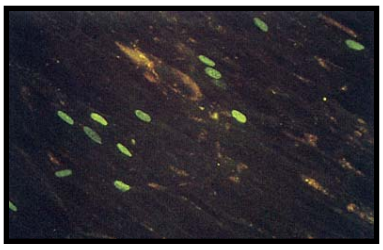


    a. Parainfluenza Type 2 virus.
    b. Influenza A virus.
    c. Herpes simplex virus.
    d. Measles Virus.

4. Cytotoxic chemicals that may be present in clinical specimens can be differentiated from viral agents by:

    a. Observing a decrease in CPE with increasing dilution (i.e., serial passages).
    b. Observing an increase in CPE with increasing dilution (i.e., serial passages).
    c. Observing a decrease in CPE with filtration.
    d. Observing a decrease in CPE after exposure to a low pH (pH ≤ 3.0)

5. The figure to the right illustrates a typical CMV FA reaction on MRC-5 cells. The test should be interpreted as:



    a. Positive for Cytomegalovirus.
    b. Negative for Cytomegalovirus.

***C. difficile* and Non-Donor Serology:**

1. The IFA assay used for the detection of IgG antibody to Varicella-zoster virus may be performed on:

    a. Serum only.
    b. Serum and EDTA plasma.
    c. EDTA plasma only.
    d. Citrated plasma only.

2. When performing a cryptococcal antigen test on CSF, it is recommended that the specimen be heated in a boiling water bath for 5 minutes. This step minimizes:

    a. Interference from rheumatoid factor.
    b. Interference from electromagnetic sources.
    c. Interference from background beta emissions.
    d. Non-specific interference.

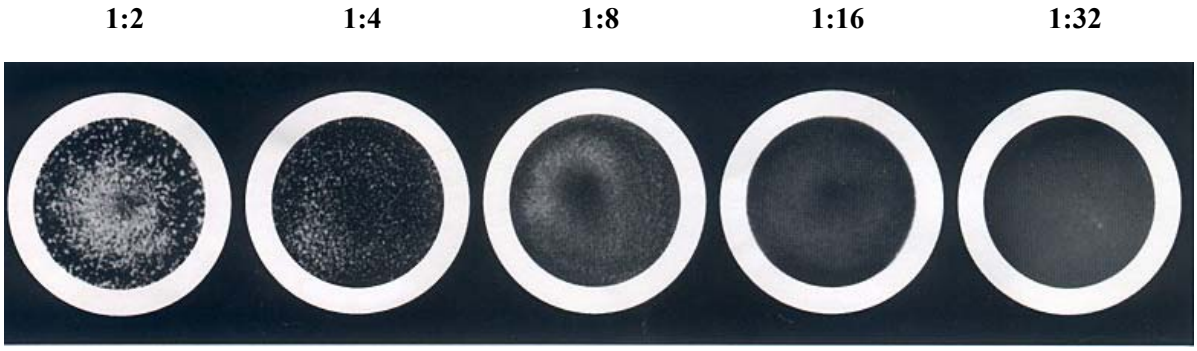
3. A cryptococcal antigen test should be reported as "Positive with Nonspecific Interference" whenever:

    a. The titer with Detection Latex is ≥ 4 times the titer with Control Latex.
    b. The titer with Detection Latex is ≤ 4 times the titer with Control Latex.
    c. The titer with Control Latex is ≥ 4 times the titer with Detection Latex.
    d. The titer with Control Latex is ≤ 4 times the titer with Detection Latex.

4. On occasion a non-specific "film" reaction is encountered while performing HSV or VZV IFA antibody assays. This "filming" reactions is caused by:

    a. Excess protein in the test sample.
    b. Excess hemoglobin in the test sample.
    c. Excess anticoagulant in the test sample.
    d. Excess lipid in the test sample.

5. The cryptococcal antigen titer reactions depicted below would be reported as:



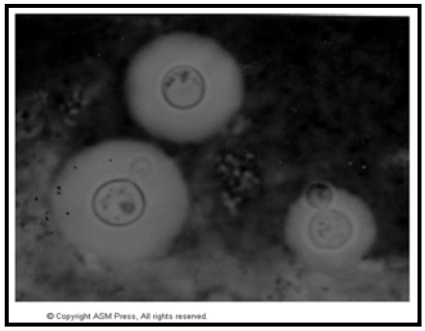

    a. Negative.
    b. Positive (Reactive), 1:2.
    c. Positive (Reactive), 1:8.
    d. Positive (Reactive), 1:32.

**Mycology/Mycobacteriology/Parasitology:**

1. The figure at the right illustrates the typical wet mount morphology of:

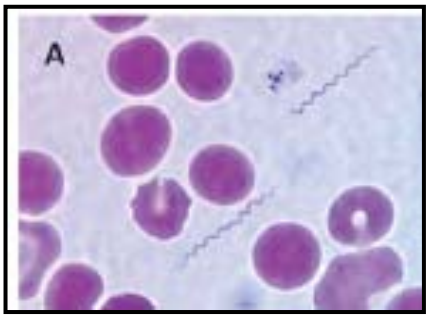
   a. *Curvularia* species
   b. *Stachybotrys* species.
   c. *Bipolaris* species.
   d. *Exserohilum* species.

2. The figure at the right illustrates the typical India ink morphology of:



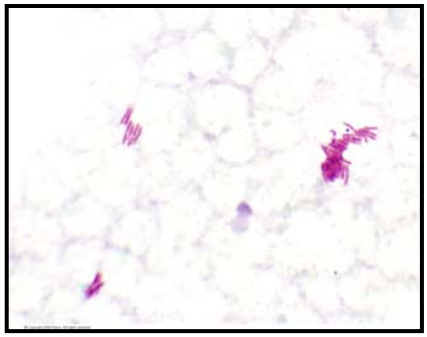

   a. *Candida tropicalis*.
   b. *Cryptococcus neoformans*.
   c. *Aspergillus* species.
   d. *Malassezia* species.

3. The figure at the right illustrates the typical Giemsa smear morphology of:



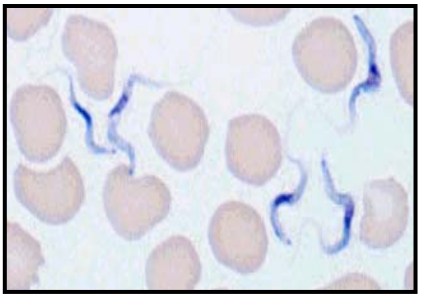

   a. *Isospora* species.
   b. *Babesia* species.
   c. *Plasmodium malariae*.
   d. *Borrelia* species.

4. The acid-fast bacilli seen in the carbol fuchsin AFB smear of expectorated sputum in the figure to the right should be reported as:



   a. No acid-fast bacilli seen.
   b. Rare or 1+ acid-fast bacilli seen.
   c. Few or 2+ acid-fast bacilli seen.
   d. Numerous or 3+ acid-fast bacilli seen.

5. The figure at the right illustrates the typical Giemsa smear morphology of:



   a. *Babesia microti*.
   b. *Brugia malayi*.
   c. *Trypanosoma* species.
   d. *Wuchereria bancrofti*.
   e. *Epicoccum* species.

2012 Clinical Microbiology Laboratory
Competency Assessment Instrument
**Answer Sheet**

Name: _____ Date: _____

Instructions: Answer the questions in each of the sections in which you have been trained. Fill in the circle of the most correct answer to each question.

**Specimen Processing:**

| | A | B | C | D |
|---|---|---|---|---|
| **1** | ○ | ○ | ○ | ○ |
| **2** | ○ | ○ | ○ | ○ |
| **3** | ○ | ○ | ○ | ○ |
| **4** | ○ | ○ | ○ | ○ |
| **5** | ○ | ○ | ○ | ○ |

***C. difficile* and Non-Donor Serology:**

| | A | B | C | D |
|---|---|---|---|---|
| **1** | ○ | ○ | ○ | ○ |
| **2** | ○ | ○ | ○ | ○ |
| **3** | ○ | ○ | ○ | ○ |
| **4** | ○ | ○ | ○ | ○ |
| **5** | ○ | ○ | ○ | ○ |

**Bacteriology:**

| | A | B | C | D |
|---|---|---|---|---|
| **1** | ○ | ○ | ○ | ○ |
| **2** | ○ | ○ | ○ | ○ |
| **3** | ○ | ○ | ○ | ○ |
| **4** | ○ | ○ | ○ | ○ |
| **5** | ○ | ○ | ○ | ○ |

**Mycology/Mycobacteriology/Parasitology:**

| | A | B | C | D |
|---|---|---|---|---|
| **1** | ○ | ○ | ○ | ○ |
| **2** | ○ | ○ | ○ | ○ |
| **3** | ○ | ○ | ○ | ○ |
| **4** | ○ | ○ | ○ | ○ |
| **5** | ○ | ○ | ○ | ○ |

**Virology:**

| | A | B | C | D |
|---|---|---|---|---|
| **1** | ○ | ○ | ○ | ○ |
| **2** | ○ | ○ | ○ | ○ |
| **3** | ○ | ○ | ○ | ○ |
| **4** | ○ | ○ | ○ | ○ |
| **5** | ○ | ○ | ○ | ○ |