

*Test Bank for Koneman's Color Atlas
and Textbook of Diagnostic
Microbiology 7th Edition by Procop,
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Chapter 01: Introduction to Microbiology Part I: The Role of the Microbiology Laboratory in the Diagnosis of Infectious Diseases: Guidelines to Practice and Management

1. Which emerging pathogen was recognized as late as 2013?
 - A. *Legionella*
 - B. Hepatitis C virus
 - C. Ebola virus
 - D. Chikungunya virus
 - E. Hantaan virus

2. When organisms exist together and neither benefit nor are damaged, it is termed:
 - A. parasitism.
 - B. symbiosis.
 - C. mutualism.
 - D. commensalism.
 - E. predatorism.

3. When two organisms live together and one benefits at the expense of the other (i.e., one lives off the other), this situation is:
 - A. parasitism.
 - B. symbiosis.
 - C. mutualism.
 - D. commensalism.
 - E. phoresis.

4. Virulence is **best** defined as:
 - A. the sum of the characteristics that increase the ability of a microorganism to cause disease.
 - B. that which requires the production of endotoxins.
 - C. that which requires the production of exotoxins.
 - D. the ability of a microorganism to produce hydrolytic enzymes.
 - E. that which necessitates the production of a capsule.

5. *Rickettsia*, *Ehrlichia*, and *Anaplasma* are examples of which group of organisms?
 - A. Opportunistic pathogens
 - B. Nosocomial pathogens
 - C. Obligate intracellular pathogens
 - D. Facultatively intracellular pathogens
 - E. Free-living pathogens

6. Which type of cell is the primary cell of response in acute inflammation?
 - A. Plasma cell
 - B. Macrophage
 - C. T cell
 - D. Dendritic cell
 - E. Neutrophil

7. Which microorganism is characterized primarily by an acute inflammatory response?

- A. *Treponema pallidum*
- B. *Mycobacterium avium*
- C. *Coccidioides immitis*
- D. *Staphylococcus aureus*
- E. *Histoplasma capsulatum*

8. Which of the following represents the final phase of the diagnostic cycle?

- A. The physician examines the patient.
- B. Electronic or written orders are submitted.
- C. The specimen is received in the laboratory.
- D. The requested tests are performed.
- E. The physician interprets the report and institutes therapy.

9. Which is true regarding tissue or aspirate specimens compared with swab specimens?

- A. Swab specimens are generally considered superior to tissue or aspirate specimens.
- B. Swab specimens are equivalent to deep biopsy or aspirate specimen when assessing wounds.
- C. Swabs are generally considered inferior to tissue or aspirate, particularly if potentially contaminating microbiota is present.
- D. Tissue and aspirate specimens should be avoided at all costs, as they are patient dissatisfiers.
- E. Swab specimens are unacceptable to collect pharyngeal specimens for group A *Streptococcus* testing.

10. When cultures are ordered, what other test should usually also be performed?

- A. Serologic studies
- B. Molecular studies
- C. Antigen-detection assays
- D. A complete blood count
- E. A direct examination (i.e., smears/Gram's stain, etc.)

11. A respiratory specimen contaminated with squamous epithelial cells is received in the laboratory. Which of the tests ordered should be rejected?

- A. The mycobacterial culture
- B. The fungal culture
- C. The influenza RT-PCR request
- D. The aerobic bacterial culture
- E. The *Pneumocystis* PCR or smear

12. It has been suggested that which of the following tests be discontinued because of lack of sensitivity and specificity?

- A. The acid-fast stain for mycobacteria
- B. Gram's stain
- C. Bacterial antigen-detection tests on CSF
- D. Midstream-collected urine culture
- E. Respiratory cultures from sputa

13. What two cell types are evaluated in Murray and Washington's assessment of sputum specimens?

- A. Plasma cells and epithelial cells
- B. Neutrophils and epithelial cells
- C. Lymphocytes and neutrophils
- D. Lymphocytes and plasma cells
- E. Neutrophils and plasma cells

14. What is the advantage of fluorochrome staining?

- A. It has greater sensitivity than Ziehl–Neelsen staining for mycobacteria.
- B. It has greater specificity than Ziehl–Neelsen staining for mycobacteria.
- C. It has both a greater sensitivity and specificity compared with Ziehl–Neelsen staining for mycobacteria.
- D. Smears can be assessed at a lower initial magnification.
- E. It preferentially highlights rapidly growing mycobacteria.

15. Lactophenol cotton blue is used predominantly in which preparation?

- A. Fluorochrome staining
- B. Culture assessment in mycology
- C. Direct examination in virology
- D. Real-time PCR
- E. The fourth-generation HIV assay

16. Which of the following medium is selective for (i.e., enhances the growth of) gram-positive bacteria?

- A. Cefsulodin, Irgasan, Novobiocin (CIN) agar
- B. Colistin, Nalidixic acid (CNA)
- C. Eosin methylene blue (EMB)
- D. Hektoen enteric agar (HE)
- E. Mycobiotic agar

17. Although the smelling of culture plates is discouraged, sometime one can detect the odor of particular bacteria when working up cultures. Which organism characteristically smells like bleach?

- A. *Citrobacter*
- B. *Alkaligenes*
- C. *Clostridium*
- D. *Eikenella*
- E. *Pseudomonas*

18. Which rapid test is useful for the preliminary grouping of a gram-positive coccus as a *Staphylococcus*?

- A. Bacitracin disk susceptibility
- B. A positive CAMP test
- C. Optochin susceptibility
- D. Catalase positivity
- E. Hippurate hydrolysis

19. The L-pyrrolidonyl- β -naphthylamide (PYR) test is most commonly used for the rapid identification of which organism?

- A. *Listeria*
- B. *Enterococcus*
- C. *Micrococcus*
- D. *Escherichia*
- E. *Trichosporon*

20. Which test should be performed in a prompt manner because a delayed result in an infected patient could lead to death?

- A. CSF PCR for herpes simplex virus
- B. HIV genotyping
- C. Malaria smear
- D. Urine culture
- E. Stool ova and parasite microscopic examination

Answer Key

1. D
2. D
3. A
4. A
5. C
6. E
7. D
8. E
9. C
10. A
11. D
12. C
13. B
14. D
15. B
16. B
17. D
18. D
19. B
20. C