**DIFFERENTIAL TEST MEDIA**

16. Which type of media is best for storing bacteria cultures for an extended period?

|  |  |
| --- | --- |
| A. | Petri Plate Media |
| B. | Broth Media |
| **C.** | **Slant Media** |
| D. | Semi-solid Deep Agar Media |

17. What enzyme is the Indole test assaying for?

|  |  |
| --- | --- |
| A.. | Indolase |
| B. | Amylase |
| **C.** | **Tryptophanase** |
| D. | Casinase |
| E. | Kovacase |

18. What two results indicate a positive Simmons citrate test? Select the most correct answer.

|  |  |
| --- | --- |
| A. | Growth on the slant |
| B. | Color change from blue to green |
| C. | Color Change from green to blue |
| D. | No color change |
| E. | A & B |
| F. | A & D |
| G. | A & C |
| **H.** | **F or A & C** |

19. A positive phenol red glucose indicated by a red to yellow color change and a bubble in the Durham tube indicates

|  |  |
| --- | --- |
| A. | Citrate fermentation |
| **B.** | **Carbohydrate fermentation** |
| C. | Mixed acid fermentation |
| D. | Acetoin fermentation |

20. List the name of the test media used for the IMViC battery, the purpose of each test and any reagents required. (12 points, 1 point for each cell)

|  |  |  |
| --- | --- | --- |
| **TEST** | **PURPOSE** | **Reagent (s)** |
| I  **Indole** | **Test for production of tryptophanase** | **Kovacs** |
| M  **Methyl Red** | **Test for mixed acid fermentation** | **Methyl red** |
| V  **Voges-Proskauer** | **Test for Acetoin production by testing for intermediate product 2,3 Butanediol** | **A and B or alpha-naphthal & potassium hydroxide** |
| C  **Citrate** | **Test for use of Citrate as sole carbon source** | **None** |

21. What does the SIM media test for?

|  |  |
| --- | --- |
| A. | Mixed acid production from glucose fermentation |
| B. | Carbohydrate fermentation |
| C. | Sulfur production, Idole production, Methanol production |
| **D.** | **Sulfur production, Indole production, Motility** |

28. You are given a sample of unknown bacteria by Professor Putricide after he has been captured and agrees to cooperate. You complete a gram stain on the sample to determine whether or not it is gram negative or gram positive, and under the microscope, you see pink rods. Your professor then tells you to streak the sample onto a PEA plate. Will the bacteria grow? Why or why not?

a. No, because pink bacteria indicate that the sample is gram positive, and PEA plates do not grow gram positive bacteria

b. Yes, because pink bacteria indicate that the sample is gram negative, and PEA plates grow gram negative bacteria

**c. No, because pink bacteria indicate that the sample is gram negative, and PEA plates do not grow gram negative bacteria.**

d. Yes, because pink bacteria indicate that the sample is gram positive, and PEA plates grow gram positive bacteria.

29. You want to know what the oxygen requirements of the sample are. Which pair of media should you use to determine the oxygen requirements?

1. Tryptose Soy Agar and Tryptose Soy Broth
2. **Brewer’s Agar and Fluid Thioglycollate Media**
3. Sulfur Indole Motility Media and Brewer’s Agar
4. Phenol Red and Tryptose Soy Agar

30. What is the term for a bacterium with very specific nutrient requirements that are required for them to grow? “Tough to please?”

1. **Fastidious**
2. Resistant
3. Pathogenic
4. Defined

31. What does the acronym “IMViC” stand for?

1. Indole, Methyl Red, Vogues-Proskauer, Catalase
2. Indole, Motility, Vogues-Proskauer, Catalase
3. Indole, Media, Vogues-Proskauer, Citrate
4. **Indole, Methyl Red, Vogues-Proskauer, Citrate**

32. The metabolism of each of the following cannot be tested for by the phenol red test **EXCEPT**

1. **Carbohydrates**
2. Nucleic Acids
3. Proteins
4. Lipids

33. Match the following tests with their reagents. (2 points)

|  |  |  |
| --- | --- | --- |
| **C & d** | Vogues-Proskauer (2 answers required) | 1. Kovac’s Reagent |
| **b** | Methyl Red | 1. Methyl Red |
| **a** | Indole | 1. Alpha-Naphthol |
| **e** | Catalase | 1. Potassium Hydroxide (KOH) |
|  |  | 1. Hydrogen Peroxide |